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Blaming the Addicted Brain

Building bridges between criminal law and neuroscientific perspectives on addiction

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1 Introduction

Addiction and criminal law, unfortunately, cross paths frequently.[1] Although crimes committed by addicted defendants are often property crimes, related to financing drug use, substance abuse is also very much associated with violence.[2] The connection between delinquency and addiction is also shown by looking at the disproportionally large number of addicts in correctional facilities: in the Netherlands, this is estimated to be 60 per cent.[3] Consequently, addiction frequently enters the legal arena. Despite such a large population of addicted individuals, or perhaps because of it, addiction remains difficult to conceptualise and define. This is neither new nor controversial: it seems that, historically, there has not been a consistent explanation of the phenomenon either.[4] In the last two decades, advancements in the neurosciences have attracted much attention and provided new insights into the effects of prolonged substance use on the brain. As a result, there is more knowledge than ever on the potential causes and consequences of addiction. Yet this does make it difficult for legal professionals to address a defendant's addiction in court. If the conceptualisation of addiction itself is not clearly defined, how should the effects of addiction be assessed in light of criminal liability? And does this new, neuroscientific body of research change anything for current legal practices?

It would be too hasty to assume that neuroscientific perspectives regarding addiction would straightforwardly change the law's views towards the criminal liability of addicted defendants. It is not the (addicted) brain that is on trial, but a person influenced by a much more complex interplay of capacities and circumstances leading to criminal behaviour. Moreover, the empirical nature of the neurosciences does not provide clear-cut solutions to the normative questions that the law asks. Consequently, the title of this thesis 'blaming the addicted brain' is a somewhat provocative figure of speech. Yet it is important to emphasize that there is much potential for the knowledge about addiction and the neuroscientific perspectives of addiction to *inform* legal professionals about the nature of

1 A meta-analysis addressing the co-occurrence of delinquency and drug use showed that users are 3 to 4 times more likely to commit crimes compared to non-drug users. See Bennett, Holloway and Farrington, 'The statistical association between drug misuse and crime: A meta-analysis' (2008) 13 Aggression and Violent Behavior 107-118.

2 In a recent study, combining 32 meta-analyses into one large meta-meta-analysis, the authors confirmed yet again a relationship of medium effect between alcohol, illicit drugs and violence. See Duke and others, 'Alcohol, drugs, and violence: A meta-meta-analysis' (2018) 8 Psychology of Violence 238-249.

3 Lammers and others, 'Middelengebruik en criminaliteit: een overzicht' (2014) 56 Tijdschrift voor Psychiatrie 32-39.

4 See, for instance, Heyman, *Addiction: A disorder of choice* (Harvard University Press: Cambridge, MA 2009) or for a brief overview, see Table 1 of Van den Brink, 'Uit de kliniek: Verslaving een chronisch recidiverende hersenziekte' (2009) 17 Tijdschrift voor Bedrijfs- en Verzekeringsgeneeskunde 155-160.

the defendant's behaviour and mental capacities. Moreover, insights about addiction may lead to an evaluation of the legal standards for criminal liability for addicted defendants. Hence, central to this thesis is the way in which addiction currently impacts criminal liability assessments: i.e. what the current legal standards are that deal with addicted defendants, and whether these are compatible with current knowledge about addiction (fuelled by developments in the neurosciences). By using Dutch criminal law as the underlying framework, universal questions regarding the nature of addiction, the requirements for criminal liability, and the potential relevance of the neurosciences are covered. The central research question, which I explain in further detail in section 1.2, is: how may addiction influence the criminal liability of addicted offenders and in what manner may the neuroscientific perspective of addiction inform and affect this?

Naturally, some legal questions (including doctrinal, theoretical matters) are specifically concerned with mental states, which are informed by practical assessments from psychological/behavioural, cognitive and neuroscientific disciplines (in short 'BCN-sciences').[5] These BCN-based empirical tools and their outcomes, in turn, inform on ultimately normative questions regarding criminal liability. Consequently, there is a continuous interplay between disciplines, which I aim to connect in the context of criminal cases in which addiction plays a central role. Each chapter of this study contributes to exploring and answering theoretical and practical questions about the role of addiction in criminal law. Not a minor topic: discussions on substance dependency and criminal liability have many caveats, as the next section illustrates. A straightforward explanation for the role of addiction in establishing criminal liability is thus not possible. An interdisciplinary approach is required, yet these disciplines speak their own language and a direct application of findings from the one field cannot simply be copy-pasted onto the other. This thesis aims to provide a bridge between these disciplines in an attempt to provide a balanced and nuanced perspective of such a complex problem. Now, allow me to illustrate the various legal and neuropsychological problems related to addressing the criminal liability of addicted defendants, based on the case of Avi C.

1.1 The intricacies of addiction and criminal liability: a case law example

In August 2005, 47-year old Avi C. attempted to kill his girlfriend before killing her two children of two and four years old in Tolbert, the Netherlands.[6] Avi C. had been suffering

5 In the remainder of this study, I use this term as a collective noun to refer to these disciplines, often as a way to oppose the normative character of the criminal legal disciplines.

6 The legal details of this case are further discussed in chapter 4. Other authors who discussed this case include: Bijlsma, 'Drank, drugs en culpa. Zelfintoxicatie en culpa in causa: pleidooi voor een voorzienbaarheidseis'

from a psychosis, induced by the use of amphetamines, a stimulant commonly referred to as speed.[7] The substance use was not incidental, as he had used amphetamines daily for the last one and a half years. Upon examination by the behavioural experts, this resulted in a formal diagnosis of addiction and a paranoid psychosis. Interestingly, however, four experts were consulted, and all four came to different conclusions regarding the interplay of disorders and the degree of accountability (the Dutch insanity defence equivalence). Especially whether or not the defendant's addiction took away the voluntariness of the substance use, and thus the culpability of causing the psychosis, was subjected to debate.[8] Some experts, additionally, used neuroscientific evidence to discuss the addiction as a brain disease. The element that the experts did agree upon, however, was that until that day in August, Avi C. had never experienced psychotic symptoms and he was unaware that amphetamines could have such effects.[9] After some judgments were remanded between the Court of Appeal and the Supreme Court, in the final decision Avi C. was sentenced to 15 years in prison and mandatory – and potentially indefinite – psychiatric inpatient treatment (TBS).[10] Later, this case became known as the 'Tolbert case'.

This infamous Tolbert case provides a good example of a range of issues that underlie the assessment of addiction in criminal law. Although these topics are much more nuanced than I make it seem now, this brief outline provides a preliminary insight into the complex problems that such cases bring about. In addition, it may serve as an introduction to the various themes that are discussed in this thesis. First and most straightforward is the fundamental legal question about the specific requirements for criminal liability: what is needed to establish criminal liability, and related, how may these be mitigated, aggravated, or even negated by mental disorders. As a second point, exactly because oftentimes an interplay between substance use, addiction and other comorbid mental disorders, it is relevant to address what happens if these mental disorders are 'culpably caused'. In other words, if the defendant bears an anterior responsibility for causing the disorder, and how this – what is known as 'prior fault' – affects the legal consequences.

Avi C.'s case illustrates these first two topics. His attorney had argued for a lack of intent as well as for a lack of blameworthiness by appealing to the Dutch equivalent of the insanity defence (the 'non-accountability defence').[11] This demonstrates the broader legal

(2011) 6 Delikt en Delinkwent 654-678; Oei, 'Vrije wil, verantwoordelijkheid, toerekeningsvatbaarheid' in T. I. Oei and G. Meynen (eds), *Toerekeningsvatbaarheid: Over vrije wil, wetenschap & recht* (Wolf Legal Publishers Nijmegen, NL 2011) de Ruiter, 'Culpa in causa bij amfetaminepsychose: wisselende perspectieven' (2011) 3 GZ-psychologie 24-29.

7 For a basic overview, see https://adf.org.au/drug-facts/amphetamines/, last accessed on 28 May 2021.

8 Court of Appeal, Leeuwarden, April 16th 2007, ECLI:NL:GHLEE:2007:BA3007.

9 de Ruiter, 'Culpa in causa bij amfetaminepsychose: wisselende perspectieven' p.25.

10 Section 3.6 further explains the connection between punishment and rehabilitative measures, as well as providing more detailed information about this particular measure.

11 More details on this defence can be found in chapter 3, section 3.5.1.

framework and the elements in which mental disorders, including addiction, could play a role.[12] Moreover, it indicates that there are multiple legal matters for which potentially impaired or absent mental states could be relevant. However, although *a priori* the psychosis may be a valid basis for discussing those elements, it seems that this particular case is complicated further due to the cause of the psychosis. After all, the psychosis was induced by amphetamine use. In what way are the legal consequences of substance-induced disorders different from non-substance related disorders? Is it legally relevant how the disorder came about? This seems to be the case: *prior fault rules* may negate exculpating conditions such as the non-accountability defence, due to previous culpable conduct by the defendant.[13] Also for Avi C., this means that even though the psychosis and his behaviour fulfilled the requirements that would negate the element of blameworthiness, his 'voluntary' substance use impacted this conclusion. Determining what qualifies as previous culpable conduct, however, is debatable. Does it matter, for instance, that Avi C. was unaware of the negative effects of amphetamine use? For the Court of Appeal presiding over the Tolbert case, it was irrelevant that the defendant claimed to be unaware of the negative effects. It was stated that he should have known of the nature of such an illegal substance by virtue of it being illegal. Therefore, he needed to bear the legal responsibility for the intoxication as well as for the subsequent disorder and the offence.[14]

These first two matters are predominantly legal ones and cover the requirements and conditions for various legal concepts and rules that deal with mental disorders. However, these legal concepts and rules do not exist in isolation and are largely informed by scientific empirical information. Such information about mental states and capacities is often provided in court by behavioural experts. In the case of Avi C., there were a total of four experts consulted, each with a different conclusion. Hence, the exact nature and qualification of the disorder, and the consequences on the previously mentioned legal matters, is a third aspect to address. His substance use – which caused the psychosis – was not incidental, as he had been addicted for several years. Could his addiction be directly relevant as an excuse or a mitigating circumstance? Or alternatively, did the presence of an addiction negate or at least nuance the application of these aforementioned prior fault rules? Some authors have suggested that prolonged substance use has such effects on the brain that it results in involuntary substance use, or uncontrollable behaviour.[15] This was also mentioned (to some extent) by one of the experts in the case of Avi C. Based on these perspectives from psychology and neuroscience, we could debate whether it is still appropriate to say that Avi C.'s substance use was voluntary, and thus, whether he can be blamed for causing his

12 Supreme Court, December 9th 2008, NJ 2009, 157, annot. Schalken, ECLI:NL:HR:2008:BD2775.
13 E.g. Bijlsma, 'Drank, drugs en culpa. Zelfintoxicatie en culpa in causa: pleidooi voor een voorzienbaarheidseis'.
14 Court of Appeal, Arnhem, February 17th 2010, ECLI:NL:GHARN:2010: BL4185.
15 Leshner, 'Addiction is a brain disease, and it matters' (1997) 278 Science 45-47.

psychosis. Indeed, this was also debated by the experts in the case. One expert explained that the addiction is the defendant's own responsibility, and that we can trace his responsibility for becoming psychotic back to when he (voluntarily) started abusing substances. Another expert stated that the "autonomous and severely addictive properties of amphetamines have strongly diminished the defendant's capacities to reduce or cease his substance use" – although also explaining that some responsibility for the psychotic breakdown remains.[16] By addressing the addiction as a brain disease, a clear neuroscientific component had entered the case. This shows that examining the potential use of neuroscientific information in cases of addiction is not only theoretically interesting, but also very practically relevant.

This debate about the nature of addiction, and what this means for prior fault-like situations, would then cascade onto the previous legal questions and would possibly require us to revise our previous decisions. A fourth question, therefore, discusses if or how addiction impacts the assessment of prior fault. To be able to answer this, it is necessary to examine the nature of addiction further. For instance, what is known about the effects of addiction onto the individual's capacity for control? Intuitively, it seems that reduced or absent ability to control behaviour would be relevant to take into account when assessing prior fault specifically, or criminal liability more generally. An essential fifth question, therefore, concerns the ways in which addiction affects the (legally relevant) mental capacities of the user and to what extent. More traditional psychological perspectives may benefit from neuroscientific insights in this regard. Yet this remains a general assessment of addiction on capacities. A sixth matter, for now, is how all potential impairments, and consequences of these impairments on the law, can be determined in an individual case. If these capacities are a necessary feature in answering all the preceding questions, then it seems paramount to reflect on the abilities of our current tools and methods to address these capacities. To say that addiction generally impairs behaviour is one thing; to determine whether an individual was unable to control her behaviour at the time of the offence, is another.

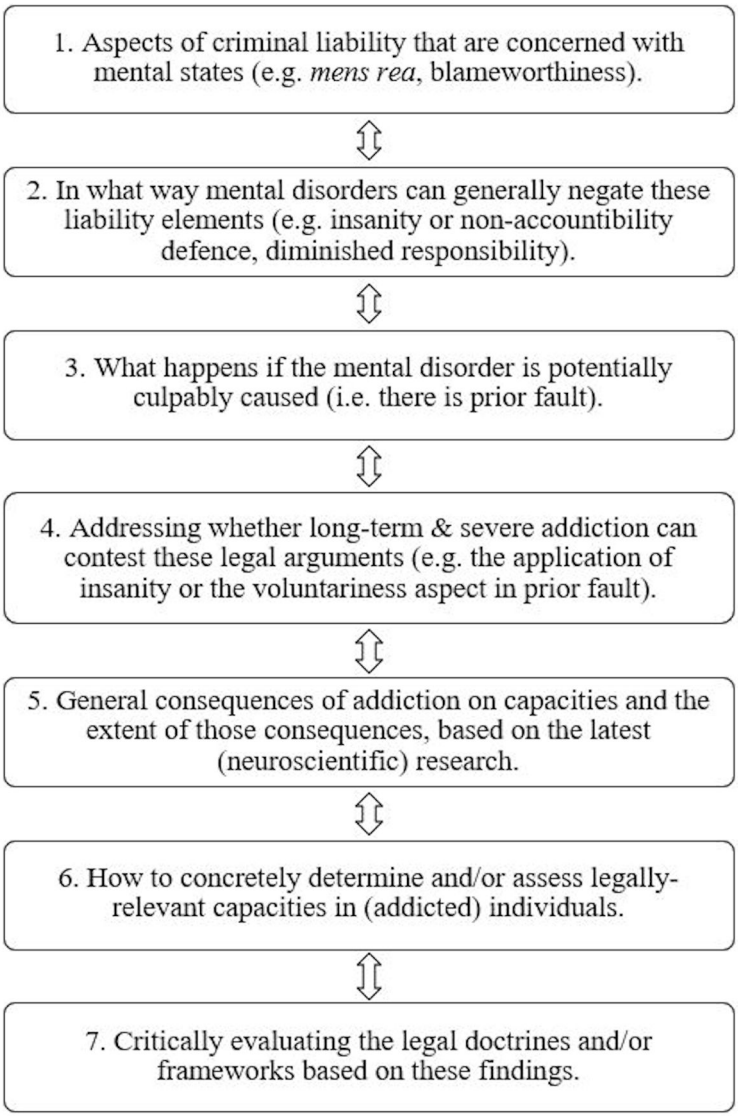
To summarise, determining the capacities of the defendant seems to be the foundation of assessing the intricacies of addiction in criminal law. By addressing the relationship between addiction and (impaired) capacities, questions about criminal liability can ultimately be discussed (and hopefully answered), when this knowledge is applied to the requirements of the law. Perhaps even more importantly, the assessment of these questions also allows for a more fundamental, final discussion, namely critically evaluating the legal

16 Original: "Hoewel ook de autonome ernstig verslavende eigenschappen van amfetamine betrokkenes vermogen om het gebruik te minderen of te staken ernstig hebben aangetast, kan toch worden geconcludeerd dat betrokkene enige, zij het zeer beperkte verantwoordelijkheid draagt voor het zichzelf in een toestand van psychotische ontregeling brengen." Court of Appeal, Leeuwarden, April 16th 2007, ECLI:NL:GHLEE:2007:BA3007.

framework as we know it. In the Tolbert case, Avi C.'s amphetamine use was considered to be of his own volition, and due to his prolonged use of the substance, he should have known that the drug could have detrimental consequences.[17] Ultimately, the court ruled that the insanity defence did not apply, and the defendant was found guilty. Whether or not such conclusions are compatible with our current understanding of both the law and addiction is up for debate in the remainder of this thesis. To do so, these elements that this particular case demonstrates need to be examined carefully first, separately and together. The following figure succinctly presents these themes on a general level.

17 Court of Appeal, Arnhem, February 17th 2010, ECLI:NL:GHARN:2010: BL4185.

Figure 1: Overview of themes relevant to the discussion of addiction in criminal law



As this case illustrates, it has become clear that addiction and criminal liability requires a broad and interdisciplinary framework. For the remainder of this introductory chapter, I introduce this framework further. First, section 1.2 provides the scope of this research as well as a structural framework for this thesis. The overall research question contains different features that require distinct methods and designs. An overview of the purpose and structure of each section will be helpful in organising the readings. Afterwards, section 1.3 clarifies some terminological issues and provides some boundaries to the scope of this study. Finally, in section 1.4, the discipline of neurosciences & law ('neurolaw') requires some additional introductory information. As the law aims to regulate behaviour, and behaviour originates – to a certain extent – from our brains, this field attempts to combine themes "at the intersection of neuroscience and criminal justice".[18] As will become clear, the use of neuroscience in criminal law is an exciting and promising endeavour but ought to be considered with appropriate caution. Hence, it is necessary that in the following discussion regarding addiction in criminal law, in which neuroscience may play an interesting role, one should always bear these cautionary remarks in mind. Importantly, this introduction to neurolaw is by no means all there is to say about the discipline: I merely intend to focus on angles that are relevant in the subsequent discussion on addiction and its relevancy for criminal law. The aim of this introductory chapter is, therefore, that by the end, a reader will have all the necessary tools to engage comfortably in the discussion of addiction in criminal law.

1.2 Research questions, methods and overview of chapters

As mentioned, the overarching question that this thesis aims to answer is how addiction may influence the criminal liability of addicted offenders and in what manner the neuroscientific perspective of addiction may inform and affect this. In other words, the question is twofold: first, which consequences of addiction are potentially relevant for which legal aspects in determining criminal liability? And second, is this role of addiction in the law informed or affected by a neuroscientific approach towards or conceptualisation of addiction? In answering the entire research question with all its different angles, several sub-questions were formulated, each requiring a specific approach and method. Although the details of these methods are covered more extensively in their respective chapters, I briefly describe the sectional research questions and their corresponding research methods below. Moreover, I provide a quick insight into the content of the respective chapters to introduce the general structure and line of reasoning. In general, this thesis is divided into

18 As stated by the MacArthur Foundation Research Network on Law and Neuroscience, see: https://www.lawneuro.org/.

two main sections. The first half (chapters 2, 3 and 4) covers a theoretical and normative framework, and the second half (chapters 5, 6 and 7) addresses three empirical studies that add new insights to these frameworks.

1.2.1 Theoretical and normative frameworks: chapters 2, 3 and 4

First, a clear conceptualisation of addiction is necessary. What is addiction according to different perspectives, and how does it affect individuals and their behaviour? This is addressed in chapter 2. This research is mainly descriptive in nature, and thus the basis of chapter 2 is a literature review. It shows that many different models exist that are seemingly contradictory in nature. Consequently, in order to describe such a heterogeneous phenomenon, a starting point in discussing addiction is agreeing on an accurate and unbiased definition to be used throughout the thesis. Second, it is relevant to address how addiction can develop from incidental drug use into dependence. Neuroscientific research has created much insight into these processes, which is explained in more detail. And third, two opposing models of addiction need to be explored and reviewed. The two main models and variations on their main ideas, namely the Brain Disease Model (BDM) and the Choice Model (CM) are often considered crucial to the addiction debate due to their opposing views regarding voluntariness of addiction. A thorough outline of their differences and similarities is provided. Fourth, it is discussed whether addiction is rightfully called a disorder, and what it takes to be considered as such. Lastly, an overview of the capacities affected by addiction is provided, but I also discuss some practical matters of determining these in individual cases.

After this introductory chapter on addiction, delineating a legal framework is needed, containing an overview of the legal questions that courts need to answer and the potential role of addiction in each of these questions. For this study, Dutch criminal law is used as a framework. The sectional research question of chapter 3 is: For which legal aspects can the addiction and its consequences on the capacities of an offender be relevant? This question is answered by doctrinal research, and thus the basis is literature and case law. In addition, chapter 3 contains a brief legal comparison with the law of Germany and of England and Wales. The content of chapter 3 contains a systematic assessment of all relevant criminal legal questions in consecutive order and identifies the possible influence of addiction on these questions. Especially the non- or diminished accountability defence is, of course, relevant to discuss. As these equivalents of legal insanity (and the related option of diminished accountability) is potentially the most universally relevant aspect when it comes to addiction in criminal law, this is discussed extensively and is also is put into a comparative perspective. Neither this nor the previous comparative analysis is meant to be a standalone extensive legal comparison, but rather serves to better understand and

discuss the Dutch rules. Where relevant, specific attention is given to the (possible) role of neuroscience in assessing these legal questions.

In chapter 4, I discuss the role of prior fault in the assessment of addiction in criminal law. The effects of addiction on the legal questions, as identified in chapter 3, may be negated by establishing that the defendant had acted culpably in creating these effects himself. The question here is: what is the role of prior fault in cases of addicted defendants? Again, a doctrinal research question, answered by analysing the literature and case law. In addition, chapter 4 employs a brief legal comparative approach to provide more depth to the Dutch-oriented doctrinal analysis. As in chapter 3, the comparison is used illustratively. At first sight it seems fair that if a defendant purposefully intoxicated himself, the intoxication cannot be used as an excuse. But oftentimes cases are not as black-and-white as that, but rather reflect several shades of grey, when addiction and/or various complex comorbidities are involved. Hence, I elaborate on the theoretical framework of the prior fault rules, and explain how these may be used to establish criminal liability for cases in which the conventional requirements for criminal liability are lacking (such as cases of successful criminal defences). Next, I critically discuss some problems arising from the current way that courts operationalise prior fault. Moreover, I provide recommendations on how to distinguish between black, white and grey cases of intoxication, addiction and other culpable prior conduct.

1.2.2 Empirical studies: chapters 5, 6 and 7

After these first framework-building chapters, I continue with three empirical studies. The first study is described in chapter 5. This chapter answers the question in which aspect of the Dutch criminal liability structure, and by which legal actor, the addiction of the defendant is discussed, and whether neuroscientific information is used, and if so, in what way this is formulated. In this question, 'legal actors' refers to judges, defence attorneys, prosecutors and behavioural experts. Thus, simply stated, chapter 5 provides an insight into the presence of addiction in legal practices. Through the use of a systematic case file analysis of 70 cases, the role of addiction in criminal cases is discussed from a quantitative as well as qualitative perspective. Based on the legal framework from chapter 3, all relevant legal elements are covered again and it is assessed in which of these elements addiction plays a role: this time in practice rather than theory. There are some interesting differences between the various legal actors and this study differentiates between them. Aside from concrete findings regarding the frequency of discussion on addiction and the language of that discourse, there are also many implicit references to addiction in the case files. Consequently, there is an in-depth discussion of the nature of such implicit references and the message they seem to imply, based on qualitative data from the case files.

Afterwards, an experimental study addresses the exact effects of a neuroscientific perspective on addiction in a vignette study with prosecutors and criminal law students. In chapter 6, I answer the following question: what are the effects of two types of addiction explanations on jurists' perception assessment of the defendant's criminal liability, in violent and property offences? As chapter 2 explains, there are many different models of addiction, and the BDM and CM of addiction are often diametrically opposed. Thus, these two opposing models are used as basis for two vignette versions, and the difference between the effects of either conceptualisation on assessments of liability was tested. This study provides a solid starting point for discussing the exact effects of different addiction models. The findings show that the discussion of the nature of addiction is not only a social-scientific, scholarly debate, but has concrete effects on the law.

A last empirical study is covered in chapter 7. So far, this thesis contains an overview of addiction in criminal law from theory to practice, and the exact consequences of different models of addiction on legal judgments. The perspective that is still missing is that of those who ought to work with all these elements: practitioners. Not only are their perspectives helpful in interpreting the previous chapters, but they are also able to add nuances and context. The research question that is answered here is: What are practitioners' perceptions of the nature of addiction, and the role of addiction in the assessment of criminal liability and potential problems or limitations they encounter? As the question suggests, this study uses the qualitative data gathered from ten semi-structured interviews.

Lastly, chapter 8 contains general conclusions and integrates all findings. In addition, I highlight recommendations, not only for future research but also for legal practice. Some general limitations to this study are also mentioned, such as relevant perspectives that are currently not yet examined.

1.3 Scope and terminological matters

It is important to emphasise the scope of the aforementioned research questions. This thesis is an interdisciplinary study, aimed at jurists as well as social scientists. Thus, the goal is to make all information accessible to both disciplines, and in order to do so, proper introductory explanations are provided wherever necessary. This may result in the feeling that some information in the introductory parts of the chapters is quite elementary, yet this may be essential to ensure that all chapters are accessible to readers with various backgrounds. Moreover, the topics discussed here are relevant for practitioners and academic scholars alike, and the discourse often reflects on practical implications or suggestions. Finally, addiction clearly is a universal topic, but putting it in a legal perspective is subject to the intricacies of specific jurisdictions. This thesis is primarily focused on the Netherlands in order to allow for focused, detailed and elaborate analysis. This means that

the legal framework in which addiction is discussed is limited to the Netherlands, with some brief occasional legal comparisons. Nonetheless, many of the discussions and implications are relevant globally, and most research results are equally interesting for other jurisdictions. Thus, despite the specific Dutch context of the analysis, this thesis is interesting for academics and practitioners from all over the world.

Additionally, although the concept 'addiction' is not limited to the use of psychoactive substances, this thesis does focus solely on that. There is an ongoing discussion regarding behavioural addictions and their terminology, i.e. whether it can be grouped in the same category as substance addiction. For instance, in the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM), pathological gambling was included in the now-called category of 'Substance Related and Addictive Disorders'.[19] Due to the ambiguity as to whether gambling and other behavioural addictions such as internet, gaming or sex addictions should be considered as equivalent to substance addiction, I focus solely on substance addictions. There is ample controversy on that matter alone. To be sure, when referring to 'drugs' or 'substances of abuse', this not only includes illicit drugs: alcohol is one of the most widely reported substances of abuse, and as a result, when addressing substance or drug addiction this also includes legal substances. As this consideration also shows, it is difficult to provide an exact definition of addiction. Hence, I devote a section to this matter in chapter 2 (see section 2.1) rather than using this introductory chapter for such purpose.

This interdisciplinary as well as international outlook naturally results in some other terminological issues as well. For instance, the use of the term *responsibility* can cover many meanings, especially in a legal context. For instance, based on previous work by the legal philosopher Hart, Vincent discussed as much as six responsibility types, all related but distinct in meaning.[20] As an example of some of such meanings of responsibility, imagine if somebody becomes intoxicated and damages another's property. When asking whether the individual is responsible for these events, several distinct matters come to mind. By outlining just three of such matters here, it is clear that the term responsibility may encompass separate legal (and also moral) issues. First is determining if this person is responsible for causing the damage, i.e. whether his actions are the cause of the damage: a form of causal responsibility. Second is whether there is a legal defence that negates the defendant's responsibility, i.e. did the defendant have sufficient abilities to be held responsible? This would be capacity responsibility. And third, whether the defendant needs to take responsibility by for instance reimbursing the costs, or addressing in what way the

19 American Psychiatric Association, 'Substance-Related and Addictive Disorders', *Diagnostic and Statistical Manual of Mental Disorders* (Author: Washington, DC 2013).

20 Vincent, 'On the relevance of neuroscience to criminal responsibility' (2010) 4 Criminal Law and Philosophy 77-98 p.81-82 based on an earlier example by Hart (1968).

defendant ought to be sentenced: liability responsibility.[21] As this brief example shows, responsibility is clearly not a unitary concept, yet oftentimes scholars conduct studies addressing the 'criminal responsibility' in general, without specifying which meaning(s) of responsibility it encompasses. With this in mind, and to avoid confusion, I consistently use the term criminal *liability* throughout this thesis as an umbrella term rather than responsibility, which I define as encompassing all elements involved in the conviction of a perpetrator. This refers to the fulfilment of the description of offence – objective as well as subjective elements –, the absence of defences but also the consequences in terms of sanctioning. These elements are, of course, discussed in more detail later in this thesis.[22] In referencing or discussing other studies that have used the term criminal responsibility, the original author's terminology is copied, which is why this term may sporadically still be encountered.

Another important remark relates to the use of the terms *blameworthiness* and *non-accountability*. These words are related to distinct legal aspects. *Blameworthiness* is a requirement for criminal liability and refers to the absence of an excusatory defence. The defendant is presumed to be blameworthy, and can consequently be held liable for the offence, unless an excuse applies to him such as the insanity defence or duress. Additionally, *non-accountability* is the direct translation of the Dutch concept of '*ontoerekenbaarheid*', which is the equivalent of the more commonly known insanity defence in common law jurisdictions. Thus, when *accountability* is discussed, i.e. "the defendant can be held fully accountable" this ought to be interpreted as similar to "the defendant can be considered legally sane". Further details on this particular defence, as well as some comparative nuances regarding the insanity defence, can be found in section 3.5.1 and section 3.5.3. In sum, *blameworthiness* is a more expansive concept than *accountability*. For now, the exact difference may be perceived as unclear, confusing or may seem redundant. Yet in the broader context of Dutch criminal law, which is explained in full detail later, these concepts will start to make sense. Consequently, I am convinced that throughout this study, the distinction will be proven necessary and practical.

These are the main, important distinctions in terminology. A possibility for misunderstandings will always remain, as certain legal aspects (intent, voluntariness, and so on) also have colloquial meanings. In the respective chapters, I therefore provide explanations to ensure that the legal terms are not mistaken for their colloquial counterparts. Yet it remains the predicament of interdisciplinary research, and one always ought to be cautious for potential 'lost in translation' cases. One particularly relevant concept to elaborate on here is that of free will. Oftentimes, the term 'voluntariness' is used in relation to mental disorders and addiction specifically (in the sense of being unable to control

21 Example inspired by Vincent's explanation. See ibid p.81.

22 See section 3.1.1.

impulses) or the defendant is considered unable to 'determine his will freely'. The potential misunderstanding underlying such statements is the connotation with a metaphysical discussion of free will, which is focused on the general ability to choose otherwise, free from any form of causal determinism. Scholars have widely argued about how neuroscience may negate such a 'libertarian' notion of free will, and the consequences this could have for criminal liability.[23] For instance, famous experiments, such as by Libet[24] and Wegner,[25] suggest that before we decide to act, our brain has already initiated our decision-making. This offers new ammunition to the debate that we are causally determined puppets, mere automatons in our actions. Consequently, authors have suggested that the presumably 'libertarian' foundations of our criminal law ought to be adjusted.[26] After all, how can we hold individuals responsible when determinism is true and they had no possibility to choose otherwise to begin with? Are notions such as blameworthiness not even outdated in a deterministic universe?[27]

Interesting as it may be, this philosophical discussion is outside the scope of this thesis. Aside from it having already been exhaustively discussed, it seems to be irrelevant for this primarily doctrinal and empirical research on addiction in Dutch criminal law. After all, if our behaviour (and our brain states) are determined and if this would render our will unfree, and if criminal law needs to undergo a revolution for this reason, does it even matter – in terms of having free will as a basis for responsibility – whether one is addicted or not? This foundational challenge to the law is, as a matter of principle, the same for addicted and non-addicted individuals alike. Thus, arguments in the remainder of this thesis regarding voluntariness ought to be understood from a more capacitarian perspective, i.e. the capacity to control behaviour, irrespective of metaphysical notions underlying such capacity.

Lastly, it is important to mention that this thesis consistently uses the term 'addiction' and, sporadically, the term 'addict'. Previous research indicated that these terms, as opposed to the more medicalised terms such as 'individuals with substance use disorder', likely

23 See for instance Greene and Cohen, 'For the law, neuroscience changes nothing and everything' (2004) 359 Philosophical Transactions of the Royal Society of London Series B, Biological Sciences 1775-1785; Kolber, 'Will there be a neurolaw revolution' (2014) 89 Indiana Law Journal 807-846; or Morse, 'Determinism and the death of folk psychology: Two challenges to responsibility from neuroscience' (2008) 9 Minnesota Journal of Law, Science & Technology 1-36.

24 Libet and others, 'Time of conscious intention to act in relation to onset of cerebral activity (readiness-potential): The unconscious initiation of a freely voluntary acts' (1993) 106 Brain 623-642.

25 Wegner, *The Illusion of Conscious Will* (MIT Press: Cambridge, MA 2002).

26 E.g. Lamme, 'Controle, vrije wil en andere kletskoek' (2008) 34 Justitiële Verkenningen 76-88.

27 Swaab, *Wij zijn ons brein: van baarmoeder tot Alzheimer* (Atlas Contact: Amsterdam 2010) pp.218-220. See also the English translation: Swaab, *We are our brains: From the womb to Alzheimer's* (Penguin Books: London, UK 2015).

result in more negative attitudes towards the individuals involved.[28] Recent publications also encourage the use of more medicalised terms to reduce stigma.[29] There seems to be a distinction between disciplines, however, as the majority of legal scholars seem to refer to 'addiction' in their discussions. Moreover, the importance of using the terms 'substance use disorder' seems to stem mostly from clinical practice, in which there was a perceived need to differentiate better between abuse, dependence, addiction, problems and misuse.[30] In the DSM-5, these are now more adequately captured and described under the label of 'substance use disorders'.[31] These distinctions, which indeed seem relevant for clinical practice, do not seem crucial in discussing addiction in the context of the law. For that reason, as well as to avoid the medicalisation of the predominantly legal discourse of this study, I decided to use the term 'addiction' throughout. This is also a more practical consideration, as continuously using the phrase 'individuals with substance use disorder' does not improve the clarity and thus the persuasiveness of the underlying message.

1.4 Introductory remarks on neurolaw and addiction

Now that the aims and scope of this study are clarified, the following section introduces the broader framework in which this research is positioned. To better understand the chapters to come and to accommodate the interdisciplinary reader, the remainder of this introductory chapter aims to provide some background knowledge on the field of neurolaw.

To begin with introducing the neuroscientific discipline, this is a thriving multidisciplinary branch of theories and techniques studying the nervous system. The plural 'neurosciences' would, therefore, do more justice to the heterogeneity of this branch. Roughly speaking, neuroscientific techniques could be divided into *diagnostic* and *intervention* purposes.[32] Diagnostic purposes are aimed at 'reading' the brain, observing the processes that occur and determining brain states. The most well-known are imaging techniques, either structural or functional. Structural scans, such as structural Magnetic Resonance Imaging (sMRI) or Computed Axial Tomography (CAT) provide structural information about brain anatomy. Conversely, functional imaging techniques such as functional MRI (fMRI) or Positron Emission Tomography (PET) provide insight into the

28 Feingold, 'Attitudes towards Substance Use Disorders among students in the social sciences: The role of gender and terminology' (2020) 55 Substance Use & Misuse 519-523.

29 Saitz and others, 'Recommended use of terminology in addiction medicine' (2021) 15 Journal of Addiction Medicine.

30 Ibid.

31 American Psychiatric Association, 'Substance-Related and Addictive Disorders'.

32 Vincent, 'On the relevance of neuroscience to criminal responsibility'.

connectivity between brain areas and sectional activity.[33] Intervention purposes, on the other hand, aim to alter certain brain features or processes. This can be achieved with, for instance, psychopharmacology or brain stimulation techniques, either via intracranial or transcranial (i.e. invasive or non-invasive) methods. Intracranial techniques are mostly referred to in intervention strategies, particularly for somewhat controversial Deep Brain Stimulation (DBS) often used on Parkinson patients but also other mental disorders.[34] Evidently, different methods (and different purposes) lead to very different kinds of information, and the reliability of these methods also differs greatly. It is therefore important to realise that neuroscience is not a unified concept and that conclusions regarding the effect or consequences of 'neuroscience' as such always need further elaboration.

The neurosciences are increasingly incorporated into other disciplines to create interdisciplinary fields such as neuroeconomics, neuropsychology and neurolaw. The field of neurolaw is concerned with human cognition and behaviour relevant to the law, and contains discussions on themes that range from lie detection,[35] memory,[36] and free will[37] to pain research[38] and addiction,[39] amongst others. This is not merely an academic field of interests: US courts have been seeing a rapid development of neurolaw cases in the past two decades, for instance in the large increase in cases using neuroscientific evidence, as well as publications revolving around neuroscience in the law.[40] In the Netherlands, the neuroscientific assessment of the defendant's mental state is now also increasingly addressed in the courtroom, often as part of a more comprehensive evaluation also including psychological or psychiatric assessments.[41] Similar research across the globe also corroborates these trends.[42]

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33 Ward, *Student's Guide to Cognitive Neuroscience* (3rd edn, Psychology Press: London, UK 2015) 7-9.

34 For a clear visual, Vincent has provided a schematic overview of the different categories and techniques. See Vincent, 'On the relevance of neuroscience to criminal responsibility', the figure on p. 79.

35 E.g. Nadelhoffer and Sinnott-Armstrong, 'Neurolaw and neuroprediction: Potential promises and perils' (2012) 7 Philosophy Compass 631-642.

36 E.g. Rosenfeld, Ben-Shakhar and Ganis, 'Detection of concealed stored memories with psychophysiological and neuroimaging methods' in Lynn Nadel and Walter P. Sinnott-Armstrong (eds), *Memory and Law* (Oxford University Press: Oxford, UK 2012).

37 E.g. Greene and Cohen, 'For the law, neuroscience changes nothing and everything'.

38 E.g. Greely, 'Reading minds with neuroscience – possibilities for the law' (2011) 47 Cortex 1254-1255.

39 E.g. Hall and Carter, 'How may neuroscience affect the way that the criminal courts deal with addicted offenders' in Nicole A Vincent (ed), *Neuroscience and Legal Responsibility* (Oxford University Press: New York 2013).

40 Jones and Shen, 'Law and Neuroscience in the United States' in Tade Matthias Spranger (ed), *International Neurolaw: A Comparative Analysis* (Springer Berlin 2012).

41 de Kogel and Westgeest, 'Neuroscientific and behavioral genetic information in criminal cases in the Netherlands' (2015) 2 Journal of Law and the Biosciences 580-605; Meynen, *Neurorecht: hoop of hersenschim?* (Boom: Den Haag, NL 2020).

42 For the US, see: Farahany, 'Neuroscience and behavioral genetics in US criminal law: an empirical analysis' (2015) 2 Journal of Law and the Biosciences 485-509. For Canada, see: Chandler, 'The use of neuroscientific evidence in Canadian criminal proceedings' (2015) 2 Journal of Law and the Biosciences 550-579. For the

It seems clear that there are many legal questions for which answers are sought in the mechanisms of the brain. Is he lying? How much pain does he have? Is he mentally competent to stand trial? From what age can individuals be considered mature enough to be held responsible? Indeed, all of these are crucial matters that legal professionals have to deal with on a regular basis, and if the neurosciences were able to provide answers, the law would benefit tremendously. However, some important cautionary remarks are necessary. Even if such questions may be informed by neuroscience, they ultimately are legal matters that ought to be answered in legal terms. For example, the law may want to determine whether the defendant acted with intent or negligence. Although these may sound (to the non-jurist particularly) BCN-scientific questions, they are largely normative: legal concepts, and not brain states. Of course, the law is based on behaviour, and many legal concepts are fundamentally connected with (mostly folk-) psychological concepts. Nevertheless, it is important to note that although neuroscience could perhaps inform legal professionals whether the person had the ability to comprehend the situation, or whether he had knowledge of the facts of the case, a translation is needed between such cognitive factors into the law.[43] Such a translation makes the current interdisciplinary outlook a challenge. In the remainder of this chapter, I further explain some introductory concepts in the field of neurolaw, specifically related to addiction, highlighting its interdisciplinary nature.

In order to aid the discussion on the relevancy of neuroscience and the law, authors have identified general domains with which neurolaw is concerned. Meynen, for instance, explains that neurolaw may inform us about revision, assessment, and intervention related themes.[44] *Revision* refers to neuroscientific research that fuels the need to revise parts of the law. Most notable is the discussion on free will: some have argued that when we empirically prove that free will does not exist, then criminal law needs to change drastically.[45] I already mentioned that this discussion is outside the scope of this study. More relevant revision themes are, for instance, a revision of the insanity defence based on new insights into disorders, or revisions of sanctioning systems if these were to be

UK, see: Catley and Claydon, 'The use of neuroscientific evidence in the courtroom by those accused of criminal offenses in England and Wales' (2015) 2 Journal of Law and the Biosciences 510-549.

43 Shen and Jones, 'Brain scans as evidence: truths, proofs, lies, and lessons' (2011) 62 Mercer Law Review 861-883.

44 Meynen, 'Neurolaw: neuroscience, ethics, and law. Review essay' (2014) 17 Ethical Theory and Moral Practice 819-829 see Table 1. Other authors have also identified categories or themes to structure the neurolaw discussion that are equally relevant and interesting. See, for instance, the seven categories by Jones: Jones, 'Seven ways neuroscience aids law' in A Battro, S Dehaene and W Singer (eds), *Neurosciences and the human person: new perspectives on human activities, Scripta Varia* (Scripta Varia 121: Vatican City 2013).

45 E.g. Lamme, 'Controle, vrije wil en andere kletskoek'.

ineffective.[46] Neurolaw on *assessment* level relates to potential uses in determining mental states. It can be useful to identify disorders, or impairment which could relate to the fulfilment of legal requirements, such as *mens rea* (e.g. intent) or the insanity defence.[47] *Intervention* purposes, as the name suggests, relates to the use of neuroscience in changing the brain for treatment, enhancement or manipulation, for instance by enhancing the defendant's moral responsibility.[48] These categories are useful heuristics in theory, but are not strictly separated in practice.[49]

The relevancy of neurolaw specifically in the context of addiction is also multi-dimensional. Without going into too much detail already, one can imagine that assessment-related topics are important in order to identify how much influence (prolonged) substance use has on the brain of the defendant and whether addiction affects the requirements of criminal liability. But addiction can also be discussed on other levels, such as on Meynen's revision theme, for instance regarding potential changes in legal policies, for example in the insanity defence or regarding (mandatory) addiction treatment. Hence, to structure the discussion on addiction in criminal law, I also make use of neurolaw categories in this introductory chapter and in some of the later discussions. Corresponding to some of the categorisations by other authors, I also focus on the revision-related impact of neuroscience on addiction, and on the level of assessment. What is different is that this study divides the assessment theme (as employed by others such as Meynen) into two subcategories, namely on the individual level (micro) versus on a collective level (meso). Together with the revision or policy-related topics, which I capture under the header of 'macro', I make use of three rather than two levels. In the table below, these levels are illustrated, and the following sections of this chapter further introduce each theme. The examples in the two right columns provide an insight into the possible relevancy for addiction on a legal level as well as on BCN-level. These examples will develop into central themes throughout this study. Below, I delve into a bit more detail regarding these three levels.

46 Coppola, *The emotional brain and the guilty mind: novel paradigms of culpability and punishment* (Bloomsbury Publishing, New York 2021).

47 E.g. Meynen, 'A neurolaw perspective on psychiatric assessments of criminal responsibility: decision-making, mental disorder, and the brain' (2013) 36 International Journal of Law and Psychiatry 93-99.

48 E.g. Vincent, 'Neurolaw and direct brain interventions' (2014) 8 Criminal Law and Philosophy 43-50.

49 Meynen, 'Neurolaw: neuroscience, ethics, and law. Review essay' 821.

Table 1: Categorization of neurolaw levels in the context of addiction

Category	Explanation	BCN-science examples in the context of addiction	Legal examples in the context of addiction
Individual (i.e. micro)	The contribution of neuroscientific methods in assessing an individual's liability.	– Contributing to the assessment of specific capacities of the defendant that are (potentially) impaired due to addiction.	– Relating the presence or absence of capacities (and potential new, BCN ways to assess these) in the case of an addicted defendant to legal questions, e.g. in establishing his/her intent, blameworthiness, sanctioning etc.
Collective (i.e. meso)	The influence of neuroscientific evidence on the perception and capacities of a particular group of people or a general condition.	– Using neuroscientific research findings to describe in what way addiction may influence criminal behaviour generally. – Using neuroscientific research to develop tools to measure capacities	– Addressing how addicted defendants are generally perceived in the law. – Assessing whether neuroscientific findings on addiction affect perceptions towards offenders, e.g. by legal professionals.
Structural (i.e. macro)	The potential of neuroscientific research findings to change the legal framework internally or externally.[50]	– Using neuroscientific research to develop specific sanctioning policies tailored to addiction	– Using neuroscientific research to evaluate and/or change the application of certain legal rules in cases of addiction, e.g. regarding prior fault or the non-accountability defence.

1.4.1 Micro level themes

There are some well-known criminal cases that introduced neuroscientific evidence into the proceedings, illustrating the benefits but also dangers of doing so. In *Florida v. Grady Nelson* an EEG scan was introduced as evidence, showing that the defendant suffered from brain abnormalities (recall that an EEG serves diagnostic purposes) which the defendant believed should mitigate the severity of his sentence.[51] Such developments definitely seem like a good thing: if an individual is less responsible due to an injury or disabilities that are

50 Internal changes refer to adjusting existing policies or laws to better accommodate neuroscientific evidence or developments. External changes refer to fundamental changes in the criminal justice system as we know it, usually based on arguments relating to free will and the incompatibility thereof with current criminal legal structures. The latter is not very relevant in the context of addiction. In the previous section 1.2, I already mentioned why such external challenges are not relevant for the current study, namely that the foundational challenge to the law is the same for addicted and non-addicted individuals. Hence, the focus here is on current policies.

51 Nelson v State, 362 So. 2d 1017 (District Court of Appeal of Florida, 3rd district, 1978).

now visible with brain scanning technology, we ought to enable such evidence. However, we ought to critically evaluate whether these methods are actually capable of assessing what legal actors need to know. Relating this to addiction, it is evident that recent neuroscientific findings have furthered our understanding of the effects of (prolonged) substance use on the brain and on behaviour. On an individual level, this means that with the use of diagnostic neuroscientific methods, such as brain scans or neuropsychological tests (usually in conjunction with other diagnostic methods, often self-reporting tests), we may be better able to diagnose addiction.[52] Additionally, this may help identify the brain and behavioural impairments of addicted defendants, which are potentially relevant for the offence.[53] For instance, the Court of Gelderland followed the behavioural expert's recommendation of diminished accountability regarding a defendant who suffered from a neurocognitive condition. The neurological examination of the defendant shed light on the interplay of the defendant's substance dependency and neurocognitive impairment, and the behavioural expert concluded that both capacities for control and rationality were reduced.[54]

What this example shows, is that such BCN-scientific assessment can, in turn, contribute to the legal professionals' assessments of criminal liability, including the applicability of excuses, recidivism risk and/or sanctions in the case of an addicted defendant. Another well-cited example is a case of tumour-induced paedophilia. Here, the defendant started to exhibit inappropriate or criminal behaviour, which was out of the ordinary for that particular person. After brain scans revealed a large tumour, which was consequently removed by surgery, the behaviour improved.[55] Hence, brain scans can be highly valuable in discovering abnormalities. Whether these methods are also used in practice in cases of addiction, and whether this can be improved, remains to be seen. In the chapters to follow, this study discusses the current prevalence of neuroscientific methods in assessing addicted defendants, the legal framework in which these methods may play a role, and ways to assess capacities in more detail.

Aside from diagnostic neuroscientific methods that can be beneficial in individual cases, there are other relevant applications of neuroscientific tools, methods or findings to the law. For addiction, an interesting field is that of direct brain interventions, such as transcranial direct-current stimulation, transcranial magnetic stimulation, and the

52 Franken and van de Wetering, 'Bridging the gap between the neurocognitive lab and the addiction clinic' (2015) 44 Addictive Behaviors 108-114.

53 For a succinct overview of neuroscientific research findings on addiction, see Lingford-Hughes and Nestor, 'Neuroscience perspectives on addiction: Overview' in J. Clausen and N. Levy (eds), *Handbook of Neuroethics* (Springer: Dordrecht, NL 2015) as well as Smith and others, 'Deficits in behavioural inhibition in substance abuse and addiction: a meta-analysis' (2014) 145 Drug and Alcohol Dependence 1-33.

54 Court of First Instance, Gelderland, April 26th 2018, ECLI:NL:RBGEL:2018:1920.

55 This particular patient is described in Burns and Swerdlow, 'Right orbitofrontal tumor with pedophilia symptom and constructional apraxia sign' (2003) 60 Archives of Neurology 437-440.

previously mentioned and more invasive and DBS. These methods are considered relevant in restoring responsibility in legal cases.[56] Some promising results were found for neurostimulation on reducing craving.[57] They authors pooled 17 relevant studies which used non-invasive neurostimulation, which means that a stimulator was connected to the scalp, which induces small electrical currents that affect the firing of neurons. This analysis revealed a moderate effect size for the effectiveness of such stimulation on areas of the prefrontal cortex, the front part of the brain.[58] This shows the relevancy of neuroscience on an individual level, in the intervention stage, and is promising as a treatment for addiction.

Now that the relevance of neurolaw on a micro level have been illustrated, some cautionary remarks are important, especially regarding the use of brain scans specifically. First, and most practically, brain abnormalities do not equate with brain dysfunction. An extreme example would be the extraordinary case of an individual born with only one hemisphere. Although that would be considered quite an abnormality, the patient does not experience any major psychological dysfunction.[59] This illustrates how the brain is generally very capable of adapting to circumstances, referred to as neuroplasticity, and brain regions often substitute for other regions in the case of a defect.[60] For that reason, a brain scan showing an abnormality does not automatically imply a disability or dysfunction. On a similar note, behaviour and abilities are rarely limited to one specific brain region: higher-level brain functions typically are dependent on interactions among a distributed web of neural centres. Hence, an abnormality within a specific region that is often associated with, say, memory, does not directly lead to a loss of all memory functions.[61] Reaching such conclusions from brain scans would therefore be too far of a stretch.

Secondly, correlation does not imply causation. There is the issue that a correlation may be found between brain regions (functionally or structurally) and certain behaviour, but that does not mean that a specific behaviour was *caused* by the brain region. As mentioned before, it would be unrealistic to pinpoint complex behaviour or decision-making on one brain region. That also means that an abnormality in a certain brain region does not mean that it is the (sole) cause of a dysfunction. As is discussed later,

56 Vincent, 'Restoring Responsibility: Promoting Justice, Therapy and Reform Through Direct Brain Interventions' (2012) 8 Criminal Law and Philosophy 21-42.

57 Jansen and others, 'Effects of non-invasive neurostimulation on craving: a meta-analysis' (2013) 37 Neuroscience & Biobehavioral Reviews 2472-2480.

58 Ibid. Importantly, this meta-analysis pooled studies addressing the effects on substance craving as well as craving for highly palatable food. Thus, the findings are not based on addiction-related research alone.

59 Muckli, Naumer and Singer, 'Bilateral visual field maps in a patient with only one hemisphere' (2009) 106 Proceedings of the National Academy of Sciences 13034-13039.

60 Cramer and others, 'Harnessing neuroplasticity for clinical applications' (2011) 134 Brain 1591–1609.

61 Appelbaum, 'Through a glass darkly: Functional neuroimaging evidence enters the courtroom' (2009) 60 Psychiatric Services 21-23.

a causal connection between the brain impairment and the behavioural dysfunction is often of utmost importance in legal questions. Yet such a causal connection can be difficult or even impossible to establish.

Thirdly, structural scans and looking for 'abnormalities' poses its own problems due to human biases. If a neuroscientific expert is presented with a brain scan, there is the underlying expectation that there must be something wrong with that individual. Why otherwise have the brain scanned? That results in an underlying pathology bias, in this case similar to an expectancy bias, unconsciously leading the expert to start looking for abnormalities. Moreover, in such a quest, we have blind spots for those things that we are *not* expecting or looking for and we experience 'satisfaction of search' which stops us from looking critically after we have already found what we were looking for. These biases are famously illustrated in the Gorilla experiment, where several radiologists were shown brain scans, which included some images of gorillas. In the end, 20 out of 24 experts did not see the gorilla in the scan.[62] Bear in mind that there is a subjective decision towards the type of scan and the type of experiment that will be conducted, a decision fuelled by previous assumptions or hypotheses.[63] In itself not problematic, yet in the legal field, such decisions are also based on the type of argument that suits the purpose of the person requesting such a scan. Moreover, interpretation and presentation of the outcome of the scans can be somewhat arbitrary. Evidently, our brains do not light up in those fancy colours that can be seen on the brain image. The image from a functional scan is constructed by subtracting resting levels of blood flow from those achieved when the brain is being challenged to perform a particular task. This is then compared to a baseline group and significant differences are consequently considered to represent malfunction. However, the level of significance chosen as well as the types of colours it is presented in is up to the analyst. That means that dramatic contrasts on a scan can reflect a relatively minor difference.[64] In addition, the results of the control group that the defendant is compared with is often not representative. In such cases, a difference with baseline may not at all represent dysfunction but rather an understandable difference inherent to the populations.[65]

As this background information regarding brain scans demonstrates, both functional and structural scans may sometimes seem more objective than other forms of evidence, but they are still conducted and interpreted by humans. It is important to bear these cautions in mind when evaluating the neuroscientific evidence regarding the impairments

62 Drew, Vō and Wolfe, 'The invisible gorilla strikes again: Sustained inattentional blindness in expert observers' (2013) 24 Psychological Science 1848-1853.

63 Baskin, Edersheim and Price, 'Is a picture worth a thousand words? Neuroimaging in the courtroom' (2007) 33 American Journal of Law & Medicine 239-269.

64 Appelbaum, 'Through a glass darkly: Functional neuroimaging evidence enters the courtroom'.

65 Martell, 'Neuroscience and the law: Philosophical differences and practical constraints' (2009) 27 Behavioral Sciences & the Law 123-136.

of a defendant. This does not at all mean that such evidence is inappropriate or useless, but rather that it ought to be interpreted correctly.

As a last cautionary remark, and relevant more generally as opposed to only in relation to brain scans, are translation issues from the neurosciences to the law. The process of inferring brain activity from blood flow, and inferring dysfunction from difference in brain activity compared to a baseline group is an acceptable (yet complex) endeavour. This is especially relevant for assessing general impairment or mechanisms in groups of people, for instance with a specific disorder (such as schizophrenia or addiction). However, to use this dysfunction (which as we saw, should not be concluded too quickly) as a legal argument in an individual case is often a bridge too far.[66] A psychological disorder is not automatically synonymous with legal insanity, and prefrontal dysfunction does not necessarily mean a lack of, for instance, intent or blameworthiness. It may be informative in such matters but ought not to be considered as the one and only objective truth, copy-pasted to legal problems in the assessment of a defendant.

As this brief, and by no means exhaustive, introduction shows, there are many interesting and relevant uses for neuroscientific methods in individual criminal cases. These may aid the discussion on addiction. Yet it is important to remain aware of the limitations. Stressing these limitations, as done in these previous paragraphs, is not meant to disregard neuroscientific methods as a whole or its relevance for the law. These limitations are equally relevant for other psychological methods and tools that are long since widely used in the law. Innovations and contributions by neuroscientific techniques are highly valuable in all sorts of (legal) debates and they may offer alternative insights into the mind of a defendant. The only request is to be aware of any shortcomings, and recognise these to ensure a fair and just application of neurolaw in individual cases. Morse jokingly addresses an overestimation of the neurosciences' powers as the Brain Overclaim Syndrome. "Fueled by overconfidence in the state of the neuroscience and insufficient understanding of the law, this disorder is marked by inflated claims for the usefulness of neuroscientific information to guide individual case adjudication, doctrinal change, legal policy, and specific legal practices."[67] It is important to be aware of these strengths and weaknesses throughout discussions of neurolaw.

66 Appelbaum, 'Through a glass darkly: Functional neuroimaging evidence enters the courtroom'; Morse, 'Brain imaging in the courtroom: The quest for legal relevance' (2014) 5 American Journal of Bioethics Neuroscience 24-27.

67 Morse, 'Brain imaging in the courtroom: The quest for legal relevance' p.27.

1.4.2 Meso level themes

The main themes in which neuroscience can aid on a collective level is by explaining or developing theories and models regarding certain phenomena in general, or by addressing biases. Thus, to start with the latter, a major topic is the assessment of biases in legal professionals, particularly towards neuroscientific evidence. In the previous paragraph I ended with the ironic Brain Overclaim Syndrome, which has an important underlying message. It is suggested that individuals seem to be easily swayed by neuroscientific findings. In the Grady Nelson case that the previous section started with, an EEG was admitted as evidence and led to a sentencing change from the death sentence to life imprisonment. It is speculated that this particular change was a result of the influence of the brain scan on the jury.[68] According to one of the jury members, the EEG was decisive. "After seeing the brain scans, I was convinced this guy had some sort of brain problem".[69]

This introduces a potential problem relating to biases surrounding neuroscientific methods or findings. The 'seductive allure' of neuroscience is a popular research topic, and also a major theme in popular science that is met with some scepticism,[70] and it suggests that legal professionals are overly impressed by such evidence.[71] Authors have suggested that legal professionals tend to perceive brain scans as equally robust as, for instance, DNA evidence or finger prints because they are based on biomedical markers, rather than intangible, 'fluffy' psychological evidence.[72] In an empirical study this was nicely demonstrated by presenting a criminal case with and without neuroscientific evidence, and shows that individuals were more prone to judge the defendant as legally insane when brain scans were presented.[73] Could the use of neuroscientific evidence result in a bias? Some have suggested that when compared to other, equally valid sources of evidence, people tend to judge the neuroimaging as superior.[74] The reason for this superiority could be due to a perceived objectivity of neuroscientific evidence.[75] By measuring neural activity rather than interpreting behaviour, or by imaging brain regions rather than using

68 Miller, 'Brain exam may have swayed jury in sentencing convicted murderer' (*Science Magazine*, 2010) http://www.sciencemag.org/news/2010/12/brain-exam-may-have-swayed-jury-sentencing-convicted-murderer accessed 28 April 2021.

69 Ibid.

70 Some have argued that this seductive allure is not studied adequately enough, and question whether there are indeed such strong effects of neuroscientific evidence. See: Farah and Hook, 'The seductive allure of "seductive allure"' (2013) 8 Perspectives on Psychological Science 88-90.

71 Jelicic and Merckelbach, 'Hersenscans in de rechtzaal: oppassen geblazen' (2007) 44 Nederlands Juristenblad 2794-2800.

72 Dumit, *Picturing personhood: Brain scans and biomedical identity* (Princeton University Press: Princeton 2004).

73 Gurley and Marcus, 'The effects of neuroimaging and brain injury on insanity defenses' (2008) 26 Behavioral Sciences & the Law 85-97.

74 Morse, 'Brain imaging in the courtroom: The quest for legal relevance'.

75 Baskin, Edersheim and Price, 'Is a picture worth a thousand words? Neuroimaging in the courtroom'.

self-reporting measures, neuroscience may feel more robust and objective than other (usually psychodiagnostic) tools. Other studies, on the other hand, have not found such effects.[76] One study, for instance, tested the perceptions towards scientific articles, accompanied by either a brain scan, a bar chart or a photograph. There was little evidence that the articles that contained a brain scan were perceived as more scientifically sound, although the articles with brain scan images were perceived as more interesting than the other conditions.[77] Moreover, the addition of neuroscientific information has also been linked to a harsher punishment, potentially due to a higher perceived level of danger or risk.[78] Thus, there is mixed evidence that there is indeed a uniform superiority bias for neuroscientific evidence, and what the specific effects would be on judgments.

As there is considerable neuroscientific research on addiction, and as addiction often plays a role in the assessment of the defendant, it is relevant to address potential biases regarding the perception of such neuroscientific findings in addiction cases. Even though previous research on such bias has had mixed results, it is worthwhile to address whether neuroscientific perspectives of addiction result in a different appraisal of the addicted defendant compared to non-neuroscientific perspectives. Moreover, it is important to address the practical relevancy of this theoretical discourse by studying the prevalence of such neuroscientific perspectives in criminal law. This is examined further in chapter 5, and the potential role of bias towards neuroscientific findings in cases of addiction takes a central role in chapter 6. Those two chapters discuss the prevalence of neuroscience in addiction cases and the effects of neuroscientific evidence on legal professionals.

The second way in which neurolaw may be relevant on a collective level is by increasing knowledge and understanding regarding (criminal) behaviour and mental disorders. In the previous section, I explained how – with the help of neuroscientific tools, in addition to other diagnostic methods – the behaviour of individuals may be better explained in an individual court case. Yet also on a general level, neurolaw has increased our theoretical understanding of psychopathology and delinquency. For instance, many studies have related the functioning of prefrontal subcortical circuits to impulsivity,[79] and in turn, have ascribed impulsivity-related criminal behaviour to impairment in the prefrontal cortex.[80]

76 Gruber and Dickerson, 'Persuasive images in popular science: Testing judgments of scientific reasoning and credibility' (2012) 21 Public Understanding of Science 938-948.

77 Hook and Farah, 'Look again: Effects of brain images and mind–brain dualism on lay evaluations of research' (2013) 25 Journal of Cognitive Neuroscience 1397-1405.

78 Barth, 'A double-edged sword: The role of neuroimaging in federal capital sentencing' (2007) 33 American Journal of Law & Medicine 501-522.

79 Spinella, 'Neurobehavioral correlates of impulsivity: Evidence of prefrontal involvement' (2004) 114 International Journal of Neuroscience 95-104.

80 Such as sexual deviancy or paraphilia. See for instance: Joyal, Black and Dassylva, 'The neuropsychology and neurology of sexual deviance: A review and pilot study' (2007) 19 Sexual Abuse: A Journal of Research and Treatment 155-173.

Not only regarding brain impairment or processes, but also genetic research has increasingly provided insight into delinquency. Twin studies have suggested that delinquent behaviour has a considerable genetic basis, with meta-analyses suggesting a 40-60 per cent predictability.[81] Also commonly known is the research on the monoamine oxidase A (MAOA) gene[82] which was immediately dubbed the 'warrior gene' in popular science.[83] However, the gene environment interaction is complex, and similar to the use of brain scans, we must be wary of attributing legal consequences to such findings. Glenn and Raine have provided an excellent overview of different neurobiological factors that are relevant in understanding underlying processes in criminal behaviour.[84] These also include, for instance, perinatal and prenatal influences, as well as psychophysiological factors, which I do not further discuss here. Relating these points to addiction, it is clear that neuroscience has greatly contributed to our understanding of the mechanisms involved in becoming and remaining addicted. These developments are all addressed in chapter 2. This allows us to examine whether the demands of the law are generally compatible with current knowledge about addiction and the behavioural consequences of addiction.

Bearing the nuances in mind, research that identified neurobiological parameters for delinquent behaviour has resulted in interesting debates about the legal consequences of that research, as it suggests that these predispositions are beyond one's control. Such conclusions can go two ways: some may suggest that it has an exculpating function, whereas others suggest that it is evidence of an innate 'dangerousness' which justifies more preventative interventions by the law.[85] Such discussions show that neurolaw may have direct implications for doctrines or policies, which I discuss further in the following section.

1.4.3 Macro level themes

Up to this point, I have addressed the ways in which neurosciences affect our knowledge and assessments of (groups of) people: on an individual level, such as the use of brain scans to determine mental states in trial, or on a general level, for instance by providing insights into the workings of the (disordered) brain. Neurolaw also covers a range of topics that go beyond individuals, or groups of individuals, and address the legal system on a structural

81 Glenn and Raine, 'Neurocriminology: implications for the punishment, prediction and prevention of criminal behaviour' (2014) 15 Nature Reviews Neuroscience 54-63.

82 Reif and others, 'Nature and nurture predispose to violent behavior: serotonergic genes and adverse childhood environment' (2007) 32 Neuropsychopharmacology 2375-2383.

83 See, for instance, https://www.sciencedaily.com/releases/2009/01/090121093343.htm last accessed on 5 May 2021.

84 Glenn and Raine, 'Neurocriminology: implications for the punishment, prediction and prevention of criminal behaviour'.

85 Eastman and Campbell, 'Neuroscience and legal determination of criminal responsibility' (2006) 7 Nature Reviews Neurology 311-318.

level. To illustrate such an application of neurolaw on a macro level, a good example is to look at the development of a specific criminal law for adolescents in the Netherlands.[86] Neuroscientific research findings have established, on meso-level, that the brain develops heavily until individuals are in their the mid-twenties[87] and that this causes a particular set of problems and needs. Especially the developing prefrontal cortex leads to underdeveloped control or inhibition, whereas the socioemotional circumstances of the individual lead to heightened sensation-seeking and increased vulnerability for risk-taking.[88] In addition, reward-processing brain regions (such as the ventral striatum, and particular the nucleus accumbens) show heightened responsivity in adolescence compared to childhood or adulthood.[89] Although these developments have several adaptive advantages in terms of creative thought and goal setting,[90] increases in reward activity, combined with underdeveloped cognitive control, has also been linked to increased negative consequences such as substance use or delinquency.[91]

These neuroscientific findings on a meso level contributed to adjustments to the law on a macro level, i.e. these findings moved beyond a scientific and explanatory level by contributing to reforms on a legal, structural level. From 2014 onwards, the Dutch system introduced and 'adolescent criminal law'.[92] In doing so, the law now allows young offenders up to the age of 23 to be tried as juveniles, which leads to more flexibility on the court's behalf and offers a wider range of sanctions and measures that may better suit the adolescent offender.[93] Importantly, this still leads to several practical matters, such as how courts can determine the level of immaturity, yet it is a relevant illustration of the contribution of neuroscience to the law.

Such changes to the legal structure are also foreseeable in relation to addiction. As this introduction has already suggested, there are several aspects to addiction where neuroscientific findings may impact our views and approach towards addicted defendants. It is not far-fetched to believe that this may ultimately also lead to adjustments in legal

86 Barendregt and van der Laan, 'Neuroscientific insights and the Dutch adolescent criminal law: A brief report' (2018) 65 Journal of Criminal Justice.

87 Prior and others, *Maturity, Young Adults and Criminal Justice: A Literature Review*, 2011.

88 Also dubbed the dual systems model, see Figure 4 in Steinberg, 'The influence of neuroscience on US Supreme Court decisions about adolescents' criminal culpability' (2013) 14 Nature Reviews Neuroscience 513-518.

89 Braams and others, 'Nucleus accumbens response to rewards and testosterone levels are related to alcohol use in adolescents and young adults' (2016) 17 Developmental Cognitive Neuroscience 83-93.

90 Crone and Dahl, 'Understanding adolescence as a period of social–affective engagement and goal flexibility' (2012) 13 Nature Reviews Neuroscience 636–650.

91 Galvan and others, 'Risk-taking and the adolescent brain: Who is at risk?' (2007) 10 Developmental Science F8-F14.

92 Barendregt and van der Laan, 'Neuroscientific insights and the Dutch adolescent criminal law: A brief report'.

93 Ibid.

doctrines, as with the juveniles. There are some (overly) simple similarities between the two groups: they are overrepresented in the criminal justice system and neuroscientists study both groups extensively, revealing abnormalities in terms of structure and functioning of the brain. However, just as adolescents are a diverse group, addicted offenders are also very heterogeneous in their capacities and behaviour. Macro-level changes in the justice system thus always need to be paired with assessments on the micro- and meso-level. In other words, just as adolescents are still individually assessed to see whether the adolescent criminal law may apply to them, this would also be the case if legal frameworks were to adjust to addiction. Moreover, juvenile criminal law is based on the developing brain, not a disordered one: this means that, fundamentally, there are already different legal doctrines (such as the insanity defence) that cater to defendants with mental disorders. Thus, macro-level discussions in this study predominantly focus on whether policies and legal rules that exist at present are appropriate, and compatible, with our current understanding of addiction. The primary focus is on the legal framework of the non-accountability defence (and diminished degrees of the defence) as well as the prior fault doctrine, in their application to addicted defendants. Fuelled by neuroscientific developments related to addiction, it may be relevant to adjust such concepts. Chapter 3 and chapter 4 discuss these concepts in more detail, respectively.

Before doing so, however, it is important to delve deeper into the central theme of this thesis: addiction. In the next chapter, an overview is provided of the different ways of conceptualising addiction. With an overview of the research questions, the themes ahead, and scope and terminology in mind, as well as being introduced to the field of neurolaw, all the necessary groundwork is provided to properly start the research. To the reader, I wish much insight and inspiration in the chapters to come.

2 Conceptualising the Addiction Debate[94]

The core of this study revolves around the concept of addiction. How addiction is defined, how it is caused and how it affects behaviour and capacities are necessary pieces of information in the discussion of criminal liability. As such, before outlining the legal requirements, this chapter solely focuses on the nature and conceptualisation of addiction. Addiction has proven difficult to comprehend, as shown by the dozens of theories and models that have been constructed over the years. In a thorough overview by the European Monitoring Centre for Drugs and Drug Addiction, 10 different definitions are presented (and these only involve medical and dictionary definitions!) and more than 20 theories are discussed.[95] It is easy to get lost in the vast amount of literature, which complicates the consequent discussion of the various legal implications that addiction may have. If there is no clarity on what addiction is, how can the judicial system respond to addicted offenders in the most appropriate manner? This chapter therefore aims to identify and explain the aspects of addiction that are necessary to have a discussion of criminal liability. Hence, the following discussion is by no means an exhaustive literature review on all available theories. In addition, I do not aim to proclaim one model as superior or pick sides: rather, this chapter aims to examine elements that are relevant to have an informed discussion of criminal liability in cases of addiction.

This aim is achieved by first providing an objective, unbiased definition of addiction that may be used throughout this study. Then, section 2 contains a descriptive account of the general development from initial drug use to addiction and the characteristics commonly associated with these phases. This intends to provide a more detailed background into the concept of addiction to accompany the definition, and at the same time explains the terminology used in the models of addiction. These models are most central to this chapter, and are discussed next. Section 3 consequently focuses on explaining two seemingly opposing theories, the Brain Disease Model (BDM) and the Choice Model (CM), since these two dominate the addiction debate and their accounts are often cited as the basis of dispute in discussing criminal liability. Some other models are considered more briefly. In section 4, the clash between the BDM and CM of addiction and their most pronounced disagreements are highlighted, even though I conclude that they share common grounds. Here, I also discuss two particular capacities in more detail, namely the capacity for rationality (also referred to as cognition) and the capacity for control (also referred to as

94 An abridged and adapted version of this chapter has been published elsewhere. See Goldberg, 'The (in)significance of the addiction debate' (2020) 13 Neuroethics 311-324.

95 West, *EMCDDA insights: models of addiction* (Publications Office of the European Union 2013).

volition). Impairments regarding these two capacities are essential in the later discussion of criminal liability. Section 5 of this chapter discusses addiction as a disorder, a disease, or neither. Interestingly, the label disease or disorder shows to be an element in the addiction debate that causes much controversy. As section 5 shows, the terminology in itself is confusing and unnecessary in understanding addiction. Nonetheless, a preview of chapter 3 shows that the label disease or disorder is relevant for discussing the insanity defence and, therefore, it is necessary to determine how addiction may be characterised. Hence, section 5 of this chapter discusses whether or not addiction can be rightfully called a disease or a disorder. Last but not least, I summarise the consequences of being addicted from a capacitarian perspective, but also consider how to address such capacities in practice. This last section, section 6, therefore, serves as an overview of this chapter as well as a starting point for chapter 3.

2.1 A definition of addiction

The controversy and disagreements surrounding addiction and theories of addiction result in a lack of consensus regarding a definition. However, in order to effectively discuss addiction, it is clearly important to specify what is precisely meant by that. The term is colloquially understood fairly well, and nobody will need to resort to a dictionary whenever they come across the term 'addiction'. However, this conversational view and definition does not say much, as illustrated by the following. The Oxford Dictionary (uninformatively) defines addiction as "the fact or condition of being addicted to a particular substance or activity"[96] which requires the additional definition of 'being addicted'. This is then defined as "physically and mentally dependent on a particular substance".[97] In an everyday context this would be informative enough, but to truly understand the concept one may continue to wonder what the meaning of dependence is, and so forth. As such, there is no true explanatory or discriminating value in the commonly understood meaning of addiction and, needless to say, this ought to be clarified further before elaborating on different theories.

As explained in the introduction, and further elaborated upon in the remainder of this chapter, the so-called addiction debate is central to this study. Different viewpoints on addiction have resulted in divergent accounts of what addiction is throughout the literature. As a result, some definitions are in stark contrast with one another. To illustrate this, the definition of addiction according to the BDM is as follows: "Drug addiction is a brain

96 Oxford Dictionary, 'addiction', https://en.oxforddictionaries.com/definition/addiction last accessed on 8 May 2021.

97 Oxford Dictionary, 'addicted', https://en.oxforddictionaries.com/definition/addicted last accessed on 8 May 2021.

disease that develops over time as a result of the initially voluntary behavior of using drugs. The consequence is virtually uncontrollable compulsive drug craving, seeking, and use that interferes with, if not destroys, an individual's functioning in the family and in society."[98] The CM instead provides the following description: "[…] individuals caught in a destructive pattern of behavior retain the capacity to improve their lot and they will do so as a function of changes in their options and/or how they frame their choices."[99] At first glance, one can already see how the gravity of the first definition ('virtually uncontrollable' and 'destroys') seems to oppose the lighter, more optimistic 'retain the capacity to improve' stated by the choice modelists. In addition to the definitions proposed by some of these influential theory-makers, the Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 has a diagnostic description as well. Due to the widely-accepted use of the DSM in the field of mental health, this explanation is often used when discussing addiction, and reads as follows: "All drugs that are taken in excess have in common direct activation of the brain reward system, which is involved in the reinforcement of behaviors and the production of memories. They produce such an intense activation of the reward system that normal activities may be neglected."[100] This explanation contains similar notions as the definition by the BDM, by defining the brain processes as a main criterion of addiction, albeit not stressing the compulsive and uncontrollable nature of it. However, this description seems to be somewhat bare: there is little to no focus on the disruptive nature of addiction, nor does it capture the subjective feeling of being 'hooked' and the problems associated as such.[101] As a result, it may be useful in an objective medical context, but it remains too meagre for the purpose of this study. Consequently, none of these seem appropriate to use as a basis for further discussion.

In order to accept a working definition of addiction for the remainder of this study, it is wise to consider different viewpoints and extract their common elements in order to construct an unbiased and complete definition of addiction. Sussman and Sussman have conducted a review of 52 studies regarding definitions of addiction.[102] A systematic review of these uncovered five common themes. First, a recurring theme is that using substances and eventually engaging in or refraining from addictive behaviour is an *individual process*, which takes time, and can be the result of a wide variety of motives and reasons. What is

98 Leshner, 'Addiction is a brain disease' (2001) 17 Issues in Science and Technology 75-80.

99 Heyman, 'Addiction and choice: Theory and new data' (2013) 4 Frontiers in Psychiatry 31.

100 American Psychiatric Association, 'Substance-Related and Addictive Disorders'.

101 These elements are also part of the DSM, but are mentioned as the diagnostic criteria.

102 Sussman and Sussman, 'Considering the definition of addiction' (2011) 8 International Journal of Environmental Research and Public Health 4025-4038. Importantly, the authors have attempted to include sources from different theoretical perspectives by searching for a 'definition of addiction' on Google Scholar, OvidMEDLINE and PsycINFO. Interestingly, despite an enormous number of scholarly texts when searching 'addiction' paired with 'definition' (over 3,000 articles), only 52 articles actually provided a definition of the subject.

key is that these motives are not to be captured under one heading, but that addiction is a heterogeneous process with some form of appetitive motives at base. Second, most studies agree that addiction entails a certain *preoccupation* with the addiction. This could be a behavioural, physical or cognitive preoccupation, for instance spending excessive time in the pursuit of the addictive substance, developing tolerance, or recurring thoughts and desires as a result of cravings. Third, *temporary satiation* was identified, referring to the period of time after the drug has been taken, where the subjective sense of unease is temporarily relieved. Fourth, and possibly the most argued,[103] an element of *control* is extracted from all available definitions. It reflects the difficulty associated with ceasing the addictive behaviour. Indeed, this is what usually is considered a key definition of the addictive process: the urge to keep using and the hardship experienced in withdrawal. However, the exact degree of control, or rather loss of control, is also the core of the addiction debate. Therefore, an objective definition of addiction ought not to specify how much control is exactly lost, or the reasons that this control is supposedly absent. What it should identify then is that addiction affects the individual's capacity for behavioural choices – in one way or another – and as a result, influences the continuation of using. Without a quantification of control, the feeling of being 'hooked' on the substance is an element that will be accepted by all partakers in the addiction debate. Fifth, and last but not least, there need to be *negative consequences*. Simple as it may sound, all previous elements are not necessarily problematic until adverse consequences ensue. These consequences may vary across different life domains, such as health, social, occupational or financial difficulties.[104] Moreover, ramifications of using may become apparent very quickly into the addiction process, such as withdrawal effects, but may also extend further over time into long-term consequences, like financial debts, loss of job and so forth.[105]

Combining these elements together may form a neutral definition of addiction that captures its essence, may satisfy the majority of addiction scholars and could function as an unbiased starting point of this study. Although the first element describing a heterogeneous and individual addiction process is an accurate presupposition, it has little descriptive or distinguishing value in a definition.[106] Due to its being a mere outline of what different addicted individuals are like, rather than identifying factors of how they resemble one another, I decided to omit this element in the definition. As a result, the

103 Snoek, 'Addiction, Self-Control and the Self: An Empirical, Ethical Study' (PhD thesis, Macquarie University 2017).

104 As is also one of the diagnostic criteria. American Psychiatric Association, 'Substance-Related and Addictive Disorders'.

105 Sussman and Sussman, 'Considering the definition of addiction'.

106 That does not render it irrelevant. The individual differences in addiction are very important in a discussion of criminal liability and treatment. Throughout this study, individualised perspectives towards addiction and addicted defendants is an important theme.

proposed definition of addiction[107] encompasses the other four elements: preoccupation with using the addictive substance, temporary satiation after using, an element of impaired control, and adverse consequences. Therefore, from this point onwards addiction is defined as 'using a substance to the extent that there is a preoccupation with the substance-using behaviour that is only satiated temporarily after using the substance, where the individual experiences varying degrees of difficulty controlling this addictive behaviour despite harmful consequences'.

2.2 Stages of addiction

Still, a definition does not explain the development and process of using drugs and becoming addicted. The next section aims to illustrate this by addressing the several stages that addicts may experience, from initial experimentation until the aftermath of withdrawal. Each phase has distinct characteristics and has different effects on behaviour and decision-making. Although there are several ways to categorise these phases, for the mere purpose of providing a conceptual framework it seems most appropriate to focus on three main stages: experimentation and intoxication, preoccupation and anticipation, and withdrawal and recovery. By illustrating what characterises each stage, it is more convenient to discuss the different models of addiction, since these models often refer to a specific moment in the addictive process.

2.2.1 Experimentation and intoxication

The initial experience with a substance of abuse often happens during adolescence. Studies indicate that the majority of teenagers have experimented with alcohol and illicit drugs up to the point of intoxication.[108] The early onset of this initiation is partly due to environmental factors such as peer pressure; personality factors such as suggestibility and curiosity; and biological factors, mainly related to an underdeveloped prefrontal cortex, which plays a major role in decision-making and impulse control. Broadly speaking, the teenage and adolescent brain is generally associated with a peak in sensation-seeking

107 Strongly inspired by the work of Sussman and Sussman.

108 Spear, 'The adolescent brain and age-related behavioral manifestations' (2000) 24 Neuroscience & Biobehavioral Reviews 417-463.

behaviour, whereas inhibitory development lags behind.[109] This also helps to explain the small effects, if any, that preventative programs with youngster have.[110]

The direct intoxicative and pleasurable effects of a substance are distinct per individual drug type, but generally involve dopamine release throughout the 'motivational circuit' or 'reward circuit' in the brain.[111] Dopamine is a neurotransmitter, i.e. a chemical released by cells in the brain which signals other cells, importantly associated with feeling of pleasure, memory and learning amongst others. The term motivational or reward circuit is used to indicate and simplify the cortico-basal ganglia-thalamo-cortical loop, which is a neural pathway starting from the cerebral cortex (the outer layer of the brain) and projecting on to the striatum (an important nucleus in the inner part of the brain), where it is relayed back to the cortex: a loop that stimulates pleasure and consequently also stimulates learning.[112] The stimulation of the dopamine receptors by the drug results in a wide range of cellular events, persisting for several hours and leading to the subjective experience of a high or rush. In our definition earlier, this is the temporary satiation after use. This 'rush' is considered to describe the pleasurable experience of the individual, which he or she often seeks to experience again, especially since the reward circuit stimulates learning.[113] However, this does not mean that an individual is immediately addicted and for many individuals substance usage does not become destructive. For example in the Netherlands, approximately 80 per cent of the adult population uses alcohol whereas around 3.6 per cent of Dutch adults are considered addicted to alcohol.[114] Similarly, recreational or incidental illicit drug use occurs often without developing into addiction. The reasons for these individual differences are sought in various types of theories and models, as are discussed further below in this chapter.

2.2.2 Preoccupation and anticipation

This phase is fundamental in the development of addiction following experimentation or occasional substance use. The excessive dopamine that is released in the reward circuitry after usage has the important consequence of dulling the natural reward and pleasure

109 Crone and Steinbeis, 'Neural perspectives on cognitive control development during childhood and adolescence' (2017) 21 Trends in Cognitive Sciences 205-215.

110 Tobler and others, 'School-Based Adolescent Drug Prevention Programs: 1998 Meta-Analysis' (2000) 20 Journal of Primary Prevention 275-336.

111 Volkow and others, 'Imaging dopamine's role in drug abuse and addiction' (2009) 56 Neuropharmacology 3-8

112 Bear, Connors and Paradiso, *Neuroscience: Exploring the brain* (3rd edn, Lippincott Williams & Wilkins: Baltimore, MD 2007).

113 There are differences in effects for different kinds of substances, of course. See also: Wise and Koob, 'The development and maintenance of drug addiction' (2014) 39 Neuropsychopharmacology 254-262.

114 Trimbos Instituut, *Nationale Drug Monitor* (Trimbos-instituut: Utrecht, the Netherlands 2016).

responses, for instance those of food or sex.[115] Prolonged and excessive dopamine release due to drugs dulls the dopamine receptors and thereby blunts the functioning of the prefrontal cortex.[116] Most importantly, imaging studies show impaired response inhibition and salience attribution in addicted participants, the latter meaning an attribution of excessive importance and salience to drug and drug-related cues.[117] The preoccupation due to this salience plays a role in the prioritising of the substance, and the impaired response inhibition could encumber the resistance of the individual to pursue usual behaviour after that salience. These elements explain what the definition means with preoccupation of the behaviour and difficulty resisting the urges. The extent of this preoccupation and control is debatable. These matters are both important as well when discussing criminal liability in the later chapters. Cognitive capacities as well as volitional capacities are both essential features to discuss, and impulsivity and salience both inform us on these capacities.

In addition, dopamine release not only produces the short-term rush, but also triggers associative learning and conditioning responses.[118] As a result, the preceding environmental situation becomes associated with substance use. After repeated exposure, dopamine is not released from the using the substance itself but rather from the anticipation of the use of the substance and the use of substances becomes a learned, conditioned response. Anticipation can therefore produce strong cravings for the drug. Cravings are mainly associated with strong physical urges, i.e. the body demands the substance similar to the way it demands food.[119] The difference with natural dopamine-releasing rewards such as food is these natural desires will eventually be satiated, after which the urge to engage in the behaviour will stop. Drug-induced dopamine release, however, circumvents this natural satiation and will be experienced as more persistent than natural cravings, explaining why most natural rewards are not addictive whereas drugs often are.

Importantly, perspectives on cravings are more diverse and the concept of craving has expanded to allow for behavioural and environmental cues as a cause of the pathological urges to use drugs.[120] Additionally, there is no agreement on the exact definition of craving and the strength of the urges, and subsequently the difficulty to resist the urge.[121]

115 Volkow, Koob and McLellan, 'Neurobiologic advances from the brain disease model of addiction' (2016) 374 New England Journal of Medicine 363-371.

116 Goldstein and Volkow, 'Dysfunction of the prefrontal cortex in addiction: neuroimaging findings and clinical implications' (2011) 12 Nature Reviews Neuroscience 652-669.

117 Franken and van de Wetering, 'Bridging the gap between the neurocognitive lab and the addiction clinic'.

118 Volkow, Koob and McLellan, 'Neurobiologic advances from the brain disease model of addiction'.

119 Drummond, 'Theories of drug craving, ancient and modern' (2001) 96 Addiction 33-46.

120 Ibid.

121 Addolorato and others, 'Neurobiochemical and clinical aspects of craving in alcohol addiction: A review' (2005) 30 Addictive Behaviors 1209-1224.

2.2.3 Withdrawal and recovery

Periods after or between use are often characterised by withdrawal symptoms. Initial detoxification, which is only the process of the drug leaving the body, is mostly associated with physical withdrawal symptoms of various levels of severity such as nausea and insomnia.[122] These physical effects of drug withdrawal can become less problematic and severe due to medicinal symptom relief, but treating the detox symptoms does not equal treating the addiction. Most persistent are the behavioural and psychological withdrawal symptoms. Due to the associative learning and conditioning, cravings may persist for up to a lifetime, especially when exposed to the associated cues or environments. Interestingly, although dopamine has provided clear explanations of the neurological events that stimulate drug abuse and addiction, no psychopharmaceutical treatments have been tremendously successful yet. Since excessive dopamine and blunted receptors in the cortex play such an important role in the development of addiction, it is surprising that drugs which counter these effects are inadequate. This suggests that the addiction amounts to more than mere dopamine disruption and that recovery from addiction ought to be stimulated through other means as well. Treatment, therefore, often consists of cognitive and behavioural therapy, by learning to avoid cueing situations and acquiring alternative coping skills to problems that otherwise led to substance use.[123] Moreover, several socioenvironmental factors are correlated with recovery, such as marital status, higher income and absence of comorbidity.[124] Since many addicts do not seek professional help, and a majority of addicts seem to overcome their addiction, it is extrapolated that many addicts recover on their own account due to these socioeconomic incentives.[125] A more detailed explanation of these socioenvironmental correlates are discussed in section 2.3.2.

2.3 Models of addiction

In order to fully understand the aetiology, development and prognosis of addiction, many scholars have attempted to construct explanatory models. However, similar to the problem of definition discussed earlier, there seems to be no consensus regarding the ultimate theory of addiction. All these theories contribute to the overall knowledge on addiction, but seem to differ in their main focal points or even outright disagree. By now, dozens of

122 National Institute on Drug Abuse, 'Frequently Asked Questions - What is withdrawal?' (*NIDA*, 2017) accessed 22-01-2018.

123 Carroll, 'Therapy manuals for drug addiction, manual 1: a cognitive-behavioral approach: treating cocaine addiction' (1998) National Institute on Drug Abuse.

124 Heyman, 'Addiction and choice: Theory and new data'.

125 IbidSobell, Ellingstad and Sobell, 'Natural recovery from alcohol and drug problems: methodological review of the research with suggestions for future directions' (2000) 95 Addiction 749-764.

theories exist,[126] but somehow the discussion surrounding the nature of addiction mostly addresses the BDM and CM. These two models are indeed particularly interesting due to their opposing nature and their central roles in legal responsibility debates.[127] Therefore, these two models constitute the main focus of this chapter. Nonetheless, some other views such as the interesting vision of Lewis are also addressed, who makes a valuable contribution to the debate by providing a neurological account of addiction with less contentious conclusions, as well as the economic model by Becker. Lastly, the biopsychosocial approach to addiction is also elaborated upon. In discussing the models, particular attention is paid to the suggested impairments on capacities, as these are essential in determining criminal liability in a later stage.

2.3.1 Brain Disease Model

The central idea of the BDM is that addiction is a chronic, relapsing brain disease. Thus, there is a strong focus on the neurological components of addiction, although the model also emphasises other biological evidence, such as genetics, when explaining susceptibility to addiction.[128] Also referred to as the medical model, these theories are often accepted by medical and psychiatric bodies and professionals, such as the National Institute on Drug Abuse (NIDA) and the DSM.[129] Thereby this is the leading view in terms of drug-governing bodies and research institutes.[130] In fact, the BDM originated from the research conducted by the former director of NIDA and is currently being expanded by its present-day director.[131] With their basis in the neurosciences, researchers have made great progress in identifying the underlying processes that contribute to the craving, seeking and use of drugs, including what brain mechanisms are involved in modifying mood, memory, emotions and perceptions. Together, these attempt to explain addiction. The most important aspects of the BDM are the neurobiological effects of substance use on the brain (particularly

126 For a clear overview, see West, 'Theories of addiction' (2001) 96 Addiction 3-13 as well as Shafiee, Razaghi and Vedadhir, 'Multi-level approach to theories of addiction: a critical review' (2019) 13 Iranian Journal of Psychiatry and Behavioral Sciences, particularly figure 1.

127 Snoek, Kennett and Fry, 'Beyond Dualism: A Plea for an Extended Taxonomy of Agency Impairment in Addiction' (2012) 3 American Journal of Bioethics Neuroscience 56-57.

128 Leshner, 'Addiction is a brain disease, and it matters'; Volkow, Koob and McLellan, 'Neurobiologic advances from the brain disease model of addiction'.

129 See https://www.drugabuse.gov/ as well as American Psychiatric Association, 'Substance-Related and Addictive Disorders'.

130 Vrecko, 'Birth of a brain disease: science, the state and addiction neuropolitics' (2010) 23 History of the Human Sciences 52-67.

131 Courtwright, 'The NIDA brain disease paradigm: History, resistance and spinoffs' (2010) 5 BioSocieties 137-147.

the dopaminergic effects), the genetic heritability of addiction and the chronicity of the addiction, all addressed in turn below.

The BDM focusses mostly of the physical processes referred to in the previous section, i.e. the cumulative effects of dopamine. Importantly, the BDM also points to the various disabilities that result from these effects previously mentioned on the brain. On their accounts, cognitive control, attention or motivational bias and negative emotional states are seen as major complications resulting from said brain changes. As a result, the behaviour of addicted individuals is considered compromised and disordered in those aspects.[132] Cognitive control is referred to as the underlying processes that guide our actions into norm-conforming and goal-directed behaviour.[133] Cognitive control is considered to supress distractions that could otherwise redirect the focus away from the goal, and to inhibit impulsive actions. A practical example of cognitive control is for instance the discipline to adhere to long-term plans (e.g. saving money) without being distracted by short-term advantages which can negate the higher goal (e.g. the immediate pleasure of drug use). Because cognitive control is dependent on the functioning of the prefrontal cortex, which can be blunted due to the dopaminergic effects as explained earlier, arguably this control is depleted in addicts. Neuroimaging studies also support this by showing that addicted participants have marked differences in their prefrontal cortex compared to healthy participants.[134] Specifically, a significant decrease in dopamine receptors and in dopamine release was found, which was considered associated with reduced regional activity in the orbitofrontal cortex. In turn, this is thought to result in compulsive behaviour.[135] Compulsivity is often considered in conjunction with impulsivity, although they are not the same: impulsivity can simply be defined as "the tendency to act prematurely without foresight". Compulsivity, on the other hand, can be defined as "actions inappropriate to the situation which persist, have no obvious relationship to the overall goal and which often result in undesirable consequences."[136] Consequently, impulsivity and compulsivity are both suggested to be a consequence of failing cognitive control.

In addition, reduced activity in the dorsolateral prefrontal cortex and the cingulate gyrus are considered to negatively affect the regulation of intentional action and inhibitory control, respectively.[137] These effects are furthered by an attention bias which results in

132 Uhl, Koob and Cable, 'The neurobiology of addiction' (2019) 1451 Annals of the New York Academy of Sciences 5-28.

133 Hyman, 'The neurobiology of addiction: implications for voluntary control of behavior' (2007) 7 American Journal of Bioethics 8-11.

134 Volkow and others, 'Imaging dopamine's role in drug abuse and addiction'.

135 Lee, Hoppenbrouwers and Franken, 'A systematic meta-review of impulsivity and compulsivity in addictive behaviors' (2019) 29 Neuropsychology Review 14-26.

136 Dalley, Everitt and Robbins, 'Impulsivity, compulsivity, and top-down cognitive control' (2011) 69 Neuron 680-694.

137 Volkow and others, 'Imaging dopamine's role in drug abuse and addiction'.

awarding excessive salience to drug-related cues, shifting the attention away from goals such as self-care or parenting.[138] A practical example of attention bias is the preoccupation with everyday objects that serve a purpose in the addictive behaviour, such as tin foil or bottles of alcohol in the supermarket, which may distract the individual, impairing him in simple activities such as cooking or grocery shopping.

In addition to cognitive control and attention bias, negative emotional states are considered to be disrupted with continued substance use. This is neither new nor controversial: addiction has been associated with negative emotional states and self-image for ages.[139] Especially well-known is the use of drugs as a coping mechanism against stress or regulation of negative mood, which becomes cyclical when this drug use leads to new stressors or withdrawal symptoms, for which the addict uses a substance to relieve said symptoms (which in turn leads to new symptoms, and so on).[140] The BDM has furthered this view by shedding light on the pathways that reinforce this cycle of negative affect, and how this contributes to becoming and maintaining addicted. It is suggested that the constant activation of the dopaminergic reward system due to drugs leads to a 'between-system neuroadaption', i.e. the transformation of a chemical system other than the reward system, despite it not being primarily targeted or involved in the drug-using process.[141] As such, the brain stress system may be dysregulated as a consequence of other brain processes, resulting in higher levels of stress or anxiety.[142] More practically, this means that using drugs constantly – and hence dysregulating the dopaminergic reward system as described earlier – may not only result in direct effects from such a dysregulation, but could also lead to higher levels of negative emotional states such as a low self-esteem or stress. Negative affect is consequently a major influencer in maintaining the drug use and worsening cravings.[143]

Apart from generalised neural consequences from repeated substance use that may explain why the addicted population in general experiences certain dysfunctions, this model also explains the individual differences that play a role in acquiring and maintaining addiction. In other words, the BDM not only provides an explanation on a generalised level, but also seeks to explain why some people become addicted fairly quickly (and experience particular hardship in attempts to stop) whereas other individuals may use drugs recreationally without experiencing dependence. The BDM believes that genes may provide an explanation for this and ties in with the idea of transgenerational transference.

138 Volkow and Fowler, 'Addiction, a dease of compulsion and drive: Involvement of the orbitofrontal cortex' (2000) 10 Cerebral Cortex 318-325.

139 Kassel and others, 'Negative affect and addiction', *Stress and Addiction* (Elsevier: 2007).

140 Ibid.

141 Koob, 'Neurobiology of addiction' (2011) 9 Focus 55-65.

142 Kassel and others, 'Negative affect and addiction'.

143 Uhl, Koob and Cable, 'The neurobiology of addiction'.

As the name suggests, this concept identifies the tendency to use substances and the proclivity to become addicted within the transference of such behaviour from previous generations. Although arguably this transference is not solely biological, the majority of studies on this phenomenon look into genetics as an explanation.[144] Family studies have pointed to a genetic vulnerability for becoming addicted, which is estimated to account for 30-60 per cent of the variance.[145] These genetic predispositions are considered to interact with environmental factors but nonetheless serve as a biological basis to explain individual differences in addiction.

Lastly, the chronicity of addiction is a final factor worth mentioning as an important concept within the BDM. In fact, in the BDM definition of addiction, it was called a '*chronic*, *relapsing* brain disease' after all. This implies that once the individual is hooked, there is no turning back. To illustrate this view, the DSM-5 has, for instance, clearly indicated the specifier 'in sustained remission' if the criteria for addiction have not been met for 12 months or longer.[146] Consequently, once a diagnosis has been established, a person who stops using the substance entirely (or at least without meeting the criteria for addiction) may be in sustained remission but will not be 'undiagnosed', no matter how long ago the criteria did apply. This view of addiction as a chronic condition is substantiated in two ways. First, there is a large body of evidence suggesting that the functional and structural changes in the brain are long-lasting and persistent, even after discontinuation of the use.[147] If the disruption of the neural pathways as discussed earlier persist throughout abstinence, then all the proposed deficits associated with addiction (i.e. lack of cognitive control, attention bias, negative affect) will continue to be present. This results in the view that the symptoms and the condition itself are chronic. Second, chronicity is also often implied due to epidemiological indicators that suggest low recovery rates. For instance, prevalence studies in clinical and community settings suggest that around 60 per cent of addicted individuals eventually achieve sustained recovery, after at least one (but more likely several) treatment episodes.[148] This suggests that the other 40 per cent will continue to engage in a chronic cycle of use, withdrawal, abstinence and relapse. Other studies that examined

144 Campbell and Oei, 'A cognitive model for the intergenerational transference of alcohol use behavior' (2010) 35 Addictive Behaviors 73-83.

145 Kreek and others, 'Genetic influences on impulsivity, risk taking, stress responsivity and vulnerability to drug abuse and addiction' (2005) 8 Nature Neuroscience 1450-1457.

146 American Psychiatric Association, 'Substance-Related and Addictive Disorders'.

147 Fowler and others, 'Imaging the addicted human brain' (2007) 3 Science & Practice Perspectives 4; Schlaepfer and others, 'Decreased frontal white-matter volume in chronic substance abuse' (2006) 9 International Journal of Neuropsychopharmacology 147-153; Volkow, Fowler and Wang, 'The addicted human brain: insights from imaging studies' (2003) 111 The Journal of Clinical Investigation 1444-1451.

148 Dennis and Scott, 'Managing addiction as a chronic condition' (2007) 4 Addiction Science & Clinical Practice 45.

abstinence after treatment suggest even higher rates of relapse, for instance of 60 per cent and 90 per cent.[149]

In sum, the BDM places a strong if not exclusive emphasis on the neurobiological component of addiction. The vast majority of its arguments stem from extensive brain research indicating functional and structural changes in the brain, particularly the dopaminergic reward pathways and the prefrontal cortex, which could persist for a lifetime. As a result, this perspective contends that addiction is a disease and more specifically, a chronic brain disease, because the lifetime effects and disruptions of addiction are particularly visible in the brain. The capacities that are subsequently affected most are those of cognitive control, attention bias and negative affect. Moreover, a strong biological element is found in the genetic inheritance of addictive tendencies.

2.3.2 Choice model

The most well-known and elaborate account of addiction as a choice comes from Gene Heyman, who researches addiction and psychopharmacology in experimental settings. Famous for his book 'Addiction: a disorder of choice' he provides the reader with extensive evidence that addiction is first and foremost in the hands of the addicted individuals who choose to use or to abstain by their own account.[150] It is therefore not a chronic, relapsing brain disease but rather a matter of choice. The CM uses predominately epidemiological studies and first-person experiences to substantiate this claim and accordingly, it focuses on the *voluntary* nature of the (addiction-related) conduct to show that addiction is neither involuntary nor uncontrollable. It does so by looking at remission rates as well as reasons and correlates associated with remission.

In terms of epidemiological studies, it is widely known that relapse rates after treatment is very high. However, according to the choice theory, this does not automatically imply that addiction is chronic and that most people fail to discontinue their drug use. Most of the studies with such high relapse rates are focused on a clinical population, meaning addicts who were enrolled in treatment programmes. However, addicted individuals receiving treatment only represent a very small proportion of all people who suffer from addiction. For instance, a report by the US-based Substance Abuse and Mental Health Services Administration (SAMHSA) indicated that in 2013, only 10.9 per cent of individuals

149 McLellan and others, 'Reconsidering the evaluation of addiction treatment: from retrospective follow-up to concurrent recovery monitoring' (2005) 100 Addiction 447-458; Brecher, *Licit and illicit drugs* (Little, Brown and Company: Boston 1972).

150 Heyman, *Addiction: A disorder of choice*.

who needed specialty treatment actually received it.[151] Specialty treatment refers to hospitals (inpatient only), drug or alcohol rehabilitation facilities (inpatient or outpatient), or mental health centres. The 11 per cent of patients who do receive treatment are the types of patients with severe pathology due to comorbid physical or mental conditions, which is shown by their request to enrol in treatment programmes. Hence, they may have more severe pathology and problems than other addicted individuals, and hence be unrepresentative of addiction as a whole.[152] Nonetheless, studies of addiction often use this subgroup of patients in specialty treatment, because these institutes have well-maintained records of all patients. As a result, the astonishing relapse rates that have been found in previously mentioned epidemiological studies likely only apply to this clinical subgroup. As such, saying that *all* drug use is chronic because clinical patients often relapse is likely to be an overstatement, since there is no evidence that this can extend to the other 90 per cent who do not enrol in treatment programmes. Of course, this number may not be fully accurate, but it goes to show that the conclusion about chronicity is more accurate when stating that at most, only this clinical subgroup of addicts suffers from a chronic disease.

However, studying non-clinical samples in order to get a more complete and realistic outlook on addiction is generally difficult: if there is no registration of the addiction, how can addicted individuals be studied and followed-up? To combat this issue, large sample studies address prevalence and remission of addiction, which are conducted in the following manner: first, a very large, general population sample is required in order to ensure there is a sufficient number of participants who are or have been addicted. For instance, with an overall prevalence rate of 5 per cent,[153] a study needs around 10,000 participants to ensure a sample of approximately 500 addicted individuals to be studied. As such, large epidemiological studies are mostly conducted in the US. For instance the National Comorbidity Survey (and its replication, which I am mainly referencing later) is a study conducted with a representative English-speaking population of 18 years old and over, to assess prevalence and other characteristics of DSM-IV disorders.[154] Second, such studies

151 Page 92 of the results from the 2013 National Survey on Drug Use and Health, accessed on 25 April 2018 on https://www.samhsa.gov/data/sites/default/files/NSDUHresultsPDFWHTML2013/Web/NSDUHresults2013.pdf.

152 Heyman, 'Once an addict, always an addict?', *Addiction: A Disorder ofCchoice* (Harvard University Press: Cambridge, MA, US 2009).

153 The exact prevalence rate is very difficult to define and there are many accounts depending on the definition of addiction, the type of substance or behaviour and the methods of the study. For instance, according to the WHO (www.who.int), the prevalence rate of alcohol use disorder differed between 0-16 per cent and drug use disorder between 0-3 per cent amongst adults. I merely use the current percentage as an example and these statistics may not be entirely accurate.

154 Kessler and others, 'Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the national comorbidity survey replication' (2005) 62 Archives of General Psychiatry 617-627; Kessler and others, 'Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey replication' (2005) 62 Archives of General Psychiatry 593-602.

continue by assessing the difference between lifetime prevalence rate and 12-month prevalence rate. The aim of such analysis is to see whether individuals who met the criteria for addiction at some point in their life were considered 'clean' during the 12-month study. If addiction is truly a chronic disorder, then lifetime prevalence rate would not be very distinct from 12-month prevalence rate. Also, if truly chronic, there would be no different remission rate than other mental disorders which are less controversially known to be chronic, such as schizophrenia.

Having explained the methods of such research, the results are as follows. In this study, addiction (as defined as Substance Use Disorder in the DSM-IV) was assessed alongside several other mental illnesses such as anxiety and mood disorders, based on interviews with 900 participants. It was addressed whether the individual qualified for a DSM disorder in the past 12 months as well as at any point in their lives. The results were highly interesting. First of all, in terms of prevalence rates, almost 15 per cent of the individuals met the criteria for addiction at some point in their lives, whereas only 3.8 per cent could be considered addicted in the past year. These results were in concordance with similar epidemiological studies. A more detailed overview of all these findings shows that all such studies report a remission rates between 60-80 per cent, suggesting that the large majority of addicts do not experience addiction chronically. Moreover, combining this information with the results that indicate that by age 25 already half the population who ever met the criteria for addiction did not report any symptoms any more. By age 37, approximately 75 per cent did not report any more symptoms, it is suggested that most addicts cease their drug use by the time they reach their thirties or forties.[155] They seem to 'mature out' or 'age out' of their conditions. These recovery rates deviate and stand out from the trends that other disorders show.

These findings are one important element of the CM. A second focal point is on the correlates associated with these high remission rates. Again, when using data from treatment programmes, the results may be skewed due to the unrepresentative nature of the clinical sample. Therefore, studies looking into natural recovery (i.e. without treatment) are necessary as well. However, these studies suffer from methodological issues, for instance sampling bias, which is a weakness of these data and should be considered.[156] A sturdy finding, however, points to marriage as a positive correlate of recovery rates, meaning that those who are married are more likely to be able to quit using drugs. A close circle of family members has also shown to play a big role in remission rates, just as the absence of comorbid psychological or physical health problems, economic or judicial pressures and hardship,

155 Anthony and Helzer, 'Syndromes of drug abuse and dependence' in LN Robins and DA Regier (eds), *Psychiatric Disorders in America: The Epidemiologic Catchment Area Study* (Free Press: New York 1991).

156 Sobell, Ellingstad and Sobell, 'Natural recovery from alcohol and drug problems: methodological review of the research with suggestions for future directions'.

and respect from relatives.[157] This is often interpreted as practical or moral concerns for not *wanting* to continue drug use: they are correlates of choice. These ideas are also supported by more personalised accounts of what it is like to use drugs, be addicted and also to quit.[158] In the third chapter of his book, Heyman provides an elaborate account of these perceptions and experiences of addicts. Interestingly, even the addicts who seemed to have a very difficult time resisting drugs gave very straightforward accounts for finally abstaining from substances. For instance, Harry is described as a highly addicted individual who ruined his successful career as a lawyer and divorced his wife due to his cocaine addiction. Remarkably, he describes that none of these events motivated him enough to stop using, until he woke up one day and simply realised that he could not continue like this. That day, he stopped using drugs. Other stories also revolve around a sudden change of mind, or a noteworthy occurrence that provided insight into the destructive behaviour, such as a car accident or the sudden loss of income. What these individuals all have in common is that they describe and explain their reasons to quit as a conscious, voluntary choice: enough is enough. Needless to say, these stories are only a fraction of the different paths that may lead to abstinence or continuation of drug use. Importantly, however, is that for a group of individuals, treatment is not essential to recovery and that reasons for quitting may be very unambiguous.

2.3.3 Additional models

This section outlines two alternative views on addiction, namely Lewis's developmental approach and Becker's economic approach. Although these models are not commonly the centre of the addiction debate, these accounts do provide valuable insights into the nature of addiction as well as the capacities potentially affected.

In Lewis's book entitled 'The Biology of Desire: Why Addiction is not a Disease', he elaborates on his view that addiction is a habitual, developing process, albeit much quicker and deeper than other habits, distinguishing it from a disease.[159] As a neuroscientist himself, he postulates that the habit of using drugs is grounded in desire, which has neurological correlates that result in anticipation, focused attention and behaviour: the core of addiction. In more detail, he explains these correlates in the same fashion as the BDM. Similarly, there is no doubt in his account that addiction is destructive and that an increasingly biological focus to addiction has rightfully dismissed views of addiction as a moral

157 Russell and others, 'Natural recovery in a community-based sample of alcoholics: Study design and descriptive data' (2001) 36 Substance Use & Misuse 1417-1441; Heyman, 'Addiction and choice: Theory and new data'.

158 Heyman, 'Addiction in the first person'.

159 Lewis, *The Biology of Desire: Why Addiction is not a Disease* (Scribe Publications Pty Ltd 2015).

weakness.[160] However, he strongly opposes the view that addiction is a disease, thereby rejecting the BDM. He claims that, despite being destructive, addiction is not any different from other learning processes (which also have neurological correlates) and that this is exactly why researchers, doctors and laymen cannot fully grasp the phenomenon. How can something so natural and common like learning and desire still be so destructive? In his account of addiction, Lewis aims to explore this.

He equates using drugs with repeated learning experiences, consequently resulting in the rewiring of neural pathways. Since the effects of the drug are desired, and those things that we desire are repeated most often, this process is fixed and results in habitual learning. Hence, using drugs quickly becomes ingrained in the brain, but this makes is it no more a disease than other learned habits that rewire the brain, such as riding a bicycle. One may think that contrary to biking, the results of rewired neural pathways due to drug use are destructive, thereby rendering drug use a disease. According to Lewis this is not an argument either: individuals engage in learned behaviours that have negative consequences continuously, such as the use of violence or racist remarks. That does not make violence or racism a disease. Besides his argument against calling it a disease, he also worries that externalising the consequences of addiction hinders recovery. He has a compelling point: by only focusing on the chronicity of a disease and the role of the brain, there is little information about or hope for recovery.[161] Indeed, the BDM is by definition chronic and hence not recovery-focused. Lewis proposes that by focusing on addiction as a developmental process that may be ingrained but can still be unlearned much like another bad habit, addicts will retain a sense of agency. This agency ought to empower addicts to take control over their behaviour and inspire them to make a change. As such, it seems to offer a satisfying compromise between the science of the BDM and the sense of personal power from the CM.

Something different entirely, Becker has outlined an economic account of addiction in what is often dubbed the 'theory of rational addiction'.[162] It is an economic model in the sense that it looks at subjective expected utility, which presumes that individuals make deliberate decisions by maximising their net benefits. In order to maximise expected utility, each option is weighed and valued under a certain expected probability of that option occurring. Note, however, that rational is not used to describe reasonable or sensible, but rather implies a deliberate weighing of interests to consequently decide. At first, these ideas seem to directly oppose what we consider to be typical addicted behaviour, which prioritises short-term drug use over long-term benefits. Nonetheless, Becker and Murphy argue that

160 Lewis, 'Addiction and the Brain: Development, Not Disease' (2017) 10 Neuroethics 7-18.

161 Snoek, 'How to Recover from a Brain Disease: Is Addiction a Disease, or Is there a Disease-like Stage in Addiction?' (2017) 10 Neuroethics 185-194.

162 Becker and Murphy, 'A Theory of Rational Addiction' (1988) 96 Journal of Political Economy 675-700.

even severe addiction is almost always rational, in the sense of deliberate. Their argument is as follows. The drug user knows the effects that drugs have on him, for instance the high that one gets from using cocaine. He also knows that by using today his overall health deteriorates, or by increasing the dosage tomorrow his financial situation will worsen. The expected pleasure from the rush is then carefully weighed against these unfavourable effects by addressing all consequences, positive or negative. This theory explains why addicts often stop using drugs when the stakes become too high, and the exact tipping point in the expected utility is modelled in elaborate mathematical functions.

This theory is supported by evidence that modest, everyday incentives can help addicts stop using drugs. In a study by Higgins and colleagues, a group of cocaine addicts was 'rewarded' with vouchers after producing negative drug tests.[163] These vouchers could be traded for very modest rewards, such as movie tickets. Moreover, with each week of negative tests, the vouchers would become somewhat more valuable (albeit still modest). The end results indicated that compared to a control group without vouchers, the voucher group experienced higher abstinence rates: around 70 per cent versus 20 per cent. This and other studies alike have produced results that continuously show the effects of small incentives on drug use. Its findings are consequently used to indicate that drug use is a rational consideration, explainable by an economic model.

2.3.4 A biopsychosocial approach

All these models above seem emphasise a single perspective towards addiction in their attempts to explain it. However, it seems that these aspects are not necessarily mutually exclusive and that multiple causes and consequences of addiction exist and interact, rendering it such a heterogeneous phenomenon. Such a view is supported by a biopsychosocial (BPS) approach to illness. As a response to the biomedical focus in the 20th century, Engel introduced a BPS account to suffering, disease and illness.[164] His critiques of the predominantly medical viewpoints were manifold: amongst others, he argued that mere biochemical alterations do not directly lead to illness because there needs to be an interaction of environmental and personal factors. Also, many medical interventions are influenced by psychological features (for instance as demonstrated by the placebo effect), as well as the interaction between the doctor and his patient which is far from objective and which also influences medical outcomes. In short, Engel thought only biological components are too one-sided in a discussion of disease. As a result, the BPS approach emerged. This is not a specific theory behind a particular disorder, but rather an overall

163 Higgins and Delaney, 'A behavioral approach to achieving initial cocaine abstinence' (1991) 148 The American Journal of Psychiatry 1218.

164 Engel, 'The need for a new medical model: a challenge for biomedicine' (1977) 196 Science 129-136.

framework of how disease and illness ought to be addressed, including addiction. A BPS model attempts to understand disorders as an alliance of three aspects: biological, psychological and sociological factors. For addiction specifically, this is considered a more appropriate perspective than the one-dimensional BDM or CM.[165] In brief, the biological factors are commonly described as the influence of genetic vulnerability or the physical changes in the brain as a result of drug use. Furthermore, psychological factors, such as PTSD and depression, have continuously shown to be related to the incidence of addiction due to their high comorbidity rates, and are often considered risk factors for addiction.[166] Additionally, stress responsiveness and trait anxiety show significant correlation with substance addiction.[167]

Aside from biological and psychological factors, various studies have indicated the importance of the environment in the occurrence and maintenance of addiction.[168] For instance, common risk factors for addiction are weak family bonds, violence or poverty. Social factors, such as neighbourhood and employment can explain the context that stimulates drug-seeking behaviour. A striking example comes from a well-known (and overly cited) study conducted with soldiers fighting in the Vietnam War, showing exorbitantly high numbers of drug use.[169] However, upon return to the USA, the vast majority of these soldiers recovered from their addiction. In other words, the context and environment of the individual can influence the course of addiction. Based on the BPS view, most clinical practices now incorporate all three aspects into treatment programmes by considering not only medication to alleviate symptoms, but also psychological treatment as well as community- or family-based interventions.[170]

Naturally, a BPS seems to be very fitting to describe a phenomenon like addiction, as it combines several of the arguments from the previously discussed models.[171] A question may therefore arise why the addiction debate centres so often on the CM and the BDM.

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165 Blaauw and others, 'Visie op de mens, visie op verslaving: een meervoudige kijk op problematiek en herstel' (2018) 60 Tijdschrift voor Psychiatrie 774-781.

166 Back and Jones, 'Alcohol Use Disorder and Posttraumatic Stress Disorder: An Introduction' (2018) 42 Alcoholism: Clinical and Experimental Research 836-840.

167 Sinha, 'Chronic stress, drug use, and vulnerability to addiction' (2008) 1141 Annals of the New York Academy of Sciences 105-130; Breese, Sinha and Heilig, 'Chronic alcohol neuroadaptation and stress contribute to susceptibility for alcohol craving and relapse' (2011) 129 Pharmacology & Therapeutics 149-171.

168 Panebianco and others, 'Personal support networks, social capital, and risk of relapse among individuals treated for substance use issues' (2016) 27 International Journal of Drug Policy 146-153.

169 Robins, Davis and Nurco, 'How permanent was Vietnam drug addiction?' (1974) 64 American Journal of Public Health 38-43.

170 Borrell-Carrió, Suchman and Epstein, 'The biopsychosocial model 25 years later: principles, practice, and scientific inquiry' (2004) 2 The Annals of Family Medicine 576-582.

171 As with the other models, the BPS approach is also subject to criticism, for instance by neglecting the relationship between the patient and the treatment provider, as well as being unspecific regarding the exact role, magnitude and interaction of the different elements. See also: Blaauw and others, 'Visie op de mens, visie op verslaving: een meervoudige kijk op problematiek en herstel' 776.

Can we not settle the argument surrounding addiction by simply agreeing on a BPS approach? In my understanding, however, it seems that the multi-facetted nature of addiction is already presupposed by all researchers: I have yet to find a scholar who claims that addiction solely involves neurological or psychological processes, or solely genetics, or solely bad upbringing. The BDM, for instance, study and outline the many environmental factors that play a role in addictive processes.[172] Thus, the three facets of a BPS approach are already present in the addiction models, despite not necessarily being stressed equally. Hence I believe that the current focus of the addiction debate between a brain disease and a choice is not necessarily overcome by applying a BPS approach. In order to explain and assess specific aspects of addiction and behaviour, both models highlight their accounts of what is the most crucial element in their theory. "It [addiction – AEG] is considered a brain disorder, because it involves functional changes to brain circuits involved in reward, stress, and self-control."[173] Thereby they do not necessarily deny the existence of other influential factors but rather conclude that those are less relevant (or are – in the end – also part of the brain). Exactly this discussion, determining which elements are most relevant and which factors should be prioritised when addressing an addict's behaviour, seems to be the essence of the addiction debate. As discussed later, such discussion in which the individual's capacities – or lack thereof – are prioritised is also crucial to the discussion regarding criminal liability. The clash between the models is therefore further discussed in the next section.

2.4 Disagreements between the two models

The BDM and the CM appear to disagree most on two aspects: the chronicity of the condition and the amount of self-control. Both models seemingly disagree about the other model's perspective towards control, but neither actually seems to provide a measurable account of how much can be considered to be lost. However, the models are not only in disagreement about the specific characteristics of addiction: more rigorously and interestingly is their discussion of the implications of the conclusions. In fact, it shows that both models agree on many matters but only start to diverge once there are more normative, responsibility-related conclusions formed or inferences drawn. In the next paragraphs, the specific disagreements regarding chronicity and control are discussed first, followed by the conflict on normative perspectives.

172 National Institute on Drug Abuse, *Drugs, brains, and behavior: The science of addiction*, 2020 https://www.drugabuse.gov/publications/drugs-brains-behavior-science-addiction/preface 9.

173 Ibid, 4.

2.4.1 A conflict of chronicity and control

In terms of chronicity, the BDM seems to largely focus on the neuroscientific research that shows disrupted neural pathways which seem to persist even after abstinence is achieved, and the high relapse rates. On the other hand, the CM outlines the results from epidemiological studies on prevalence, indicating that apart from a clinical minority, most addicts do recover. Moreover, Lewis's theory adjoins this view and also rejects the chronicity of the BDM. Lewis explains that neuroplasticity (i.e. the brain's ability to change and adapt over time) is what causes the disrupted prefrontal cortex as a consequence of drug use, but exactly this neuroplasticity is also what causes healing after withdrawal from using drugs. He claims that neuroplasticity is the norm for those who had brain diseases such as strokes and that when they heal; the brain adapts again and recovers. He sees no reason why the addicted brain would be any different.

More interesting than the chronicity debate, due to the relevancy for the law, are the large differences in their perception of the amount of self-control that addicts can exercise. Throughout the discussion of addiction, scholars refer to an inability to control oneself, implying that addictive behaviour is involuntary. But what exactly is compulsion, voluntary behaviour, or self-control? Interestingly, the BDM uses a lack of control as a substantial argument for the interpretation of addiction as a brain disease, often without clearly stating what that entails. For instance, Leshner claims that once the individual becomes addicted (which starts as a voluntary endeavour), the associated brain changes result in craving, seeking and using drugs that are no longer under such voluntary control.[174] Charland additionally claims that the use of drugs influences decision-making to the extent that these "physiological and psychological compulsions usually […] nullify any semblance of voluntary choice".[175] However, what is meant with 'not under control' or 'voluntary choice' is never clearly defined. At minimum, they ought to refer to a diminished ability to control one's behaviour and decision-making.[176] At maximum, they would mean that there is no choice in the literal sense: there are no alternative possibilities or options available than the use of drugs. The latter qualification of 'involuntariness' seems to be outside the scope of a strict addiction debate. Whether or not anyone has alternative possibilities in any event, not just when using drugs, reeks of a metaphysical free will discussion. As I explained in the introductory chapter, the broader philosophical discussion on free will is not that relevant here: after all, the challenges that the free will/determinism discussion arguably pose for the law are the same for everybody, addicted or not. Hence, the BDM may find exciting new evidence regarding addiction and the brain, but this ought not to be discussed

174 Leshner, 'Addiction is a brain disease, and it matters' 47 footnote 11.

175 Charland, 'Cynthia's dilemma: Consenting to heroin prescription' (2002) 2 The American Journal of Bioethics 37-47.

176 Hyman, 'The neurobiology of addiction: implications for voluntary control of behavior'.

metaphysically. Contrarily, what the BDM does examine are empirical matters relating to choice and control, namely concrete mental capacities such as impulsivity and inhibition. These capacities are without doubt highly relevant and informative in a debate about control amongst addicts, but they do not inform us on a philosophical notion of voluntary action as being free from any form of causal determinism. Hence, the choice of words suggesting literal voluntariness in the addiction debate may be confusing as it may suggest a metaphysical free will discussion. Therefore, when discussing control in this social scientific debate, this ought to be considered from a capacitarian rather than a philosophical perspective. Aspects that may underlie the capacity for control are, for instance, impulsivity or compulsivity, defined earlier in section 2.3.1.

Perspectives towards control in capacitarian terms. Importantly, the translation between such a representation of impulsivity and compulsivity determines exactly how much control there was at a certain point in time, which I later show to be legally relevant, remains vague and speculative at best. This is a fundamental problem with the debate on addiction and (un)controlled behaviour as outlined eloquently by Morse as early as 1985: "If or to what degree a person's desire or impulse to act was controllable is not determinable: there is no scientific test to judge whether an impulse was irresistible or simply not resisted".[177] The American Psychiatric Association (APA) also discussed this problem: "[t]he line between an irresistible impulse and an impulse not resisted is probably no sharper than that between twilight and dusk."[178] Consequently, this dilemma is often referred to as the 'twilight versus dusk' problem. What the APA also suggests is that there is, in fact, a distinction between the two, albeit difficult to determine. Although Morse considers this an impossible endeavour, empirical results can be useful in at least providing evidence to practical questions of control. I come back to this problem later in this chapter, in section 2.6.

The BDM can help explain why addictive behaviour is more difficult to control in theory. A decision to act or not to act is considered to be a function of the weighted salience of this particular stimulus in relation to other stimuli, which is influenced by past experiences, current internal needs and expectations of the individual. The brain regions responsible for decision-making are the reward and pleasure centres (nucleus accumbens and ventral pallidum), the regions regulating memory and learning/conditioning (amygdala and hippocampus), the centre for motivation, drive and salience attribution (orbitofrontal cortex) and the area of cognitive control (prefrontal cortex).[179] Neuroscientific evidence suggests that the difference between healthy and addicted individuals is that there is more

177 Morse, 'Excusing the crazy: The insanity defense reconsidered' (1985) 58 Southern California Law Review 777 p.817.

178 American Psychiatric Association, 'American Psychiatric Association statement on the insanity defense' (1983) 140 The American Journal of Psychiatry 681-688.

179 Volkow, Fowler and Wang, 'The addicted human brain: insights from imaging studies'.

activity in the nucleus accumbens, ventral pallidum, amygdala and hippocampus which results in stronger salience attribution in the orbitofrontal cortex in the latter group.[180] Contrarily, the controlling prefrontal cortex plays a much smaller role for addicted than for healthy individuals. As a result, the attractive power of drug-related stimuli is much stronger and the resistance much lower.[181] Moreover, the view that cognitive control is a depletable resource is also used to describe compulsions in addicted individuals.[182] The ability to inhibit behaviour requires cognitive resources and skills, which may run out or be limited. It is argued that to a certain extent, addicts may very well be able to control themselves or respond to reason, but this ability can be depleted and consequently control may be lost. The analogy of somebody hanging on a cliff is often used, indicating that the individual can only hang on for so long before his strength is completely depleted and he has to let go.[183] Hence, the BDM holds the view that self-control is impaired, which is a reasonable conclusion, but also tends to state that drug cravings can result in involuntary actions. This latter conclusion arguably has implications for criminal liability, which presumes behavioural control,[184] but also raises new problems on determining when action is truly beyond one's capacity for control.

The CM critically addresses the meaning of uncontrollable, compulsive and involuntary behaviour. Although not disagreeing on the neural processes that are the basis of such behaviour, it is considered a problem that addiction seems to be equated with a lack of control without explaining what that means.[185] Indeed, similar to the paragraph above, the BDM explains the mechanisms involved but does not further elaborate on the behavioural outcome: how much control did the individual have over his actions? And why is that referred to as fully uncontrollable? Pickard suggests that the BDM places such a strong emphasis on compulsions and lack of control out of fear of returning to a moral model of addiction with all the negative consequences and stigma as a result.[186] Heyman assumes that the assumption of involuntariness of addiction that the BDM refers to is inferred from the fact that it is self-destructive. If one knows that by using drugs one will lose his job, then the only reasonable explanation of why he still keeps using is that he must somehow be compelled to do so. However, such an argument makes the crucial assumption that

180 Volkow and Fowler, 'Addiction, a dease of compulsion and drive: Involvement of the orbitofrontal cortex'.

181 Baler and Volkow, 'Drug addiction: the neurobiology of disrupted self-control' (2006) 12 Trends in Molecular Medicine 559-566. For a clear and helpful visual, Baler and Volkow have constructed a schematic representation of this process: see figure 1.b of this source.

182 Baumeister, 'Ego depletion and self-regulation failure: A resource model of self-control' (2003) 27 Alcoholism: Clinical and Experimental Research 281-284.

183 Kennett, Vincent and Snoek, 'Drug addiction and criminal responsibility' in J. Clausen and N. Levy (eds), *Handbook of Neuroethics* (Springer: Dordrecht, NL 2015).

184 The exact legal requirements and implications are discussed in the following chapters.

185 Heyman, 'Voluntary behavior, disease and addiction'.

186 Pickard, 'What we're not talking about when we talk about addiction' (2020) 50 Hastings Center Report 37-46

self-destructive behaviour is by definition involuntary. This is something Heyman contests by arguing that many types of behaviour are self-destructive yet deliberately pursued. Moreover, in an attempt to distinguish between voluntary and involuntary behaviour, voluntary behaviour is arguably dependent on and influenced by consequences such as benefits and costs. In comparison, involuntary actions are preceded by urges and are not at all influenced by consequences. The example he gives is winking and blinking: physically very similar behaviours, but the first can be committed with a purpose and can be influenced by consequences, whereas one cannot control the urge to blink, no matter how large a potential reward. Earlier in this chapter, we saw that small contingencies such as movie vouchers were enough to keep addicts clean. Consequently, Heyman argues, addiction is not involuntary.[187]

Similarly, Hanna Pickard argues against addictive behaviour as a compulsion.[188] She outlines four arguments that prove that addiction is not compulsive, starting by saying that the brain science theory merely explains why drugs may be difficult to resist (especially compared to other urges), but not why using is impossible to resist. She also indicates the opportunities where individuals have to avoid cues or drug-related stimuli. Easier said than done, she admits, but it is a highly successful treatment strategy and every alcoholic knows: to not relapse into drinking, one should not visit a pub. Her other arguments are very similar to those mentioned above. However, there seems to be lack of diversity amongst the opinions. The wording by the BDM seems to suggest that drugs cravings are impossible to control, whereas several choice theorists claim there are addicts who are able to do as they wish. Are there not any other options besides these? The argument that addicts are not compelled because in general, there are always other potential options, overlooks an experiential and individualist account of addiction. Qualitative reports of addicts' experiences indicate that many users have experienced moments of intense urges and cravings, often described as uncontrollable, notwithstanding that in general, addicts are in control of their actions and decisions. Moreover, a lack of control also comes in other forms and shapes such as the automatic movement of lighting a cigarette before being well-aware of the movement, or a sudden relapse after sustained periods of abstinence. As a result, control may be more than the simple dichotomy of it being present versus absent.[189] This view is also endorsed by Kennett and colleagues, who state that drug use may be an involuntary choice, but only after self-control resources are exhausted. Is the behaviour therefore compelled? Not in the literal sense, but apparently it can be experienced as such.

187 Heyman, 'Voluntary behavior, disease and addiction'.

188 Pickard, 'The purpose in chronic addiction' (2012) 3 American Journal of Bioethics Neuroscience 40-49.

189 Charland, 'The varieties of compulsion in addiction' (2012) 3 American Journal of Bioethics Neuroscience 50-51; Snoek, 'Addiction, self-control and the self: An empirical, ethical study.

Diachronic control. So far, I have discussed control from a synchronic perspective, meaning having control at a particular point in time. However, as the arguments by Pickard already posited, individuals may also anticipate their expected loss of control by taking countermeasures. This is what is meant with diachronic control: rational and controlled behaviour in anticipation of moments where no such control is possible. That means that either the individual minimises the chances of such an 'uncontrolled' moment happening in the first place, or that he directly takes action against the feelings of diminished control.[190] To use examples related to addiction, the first scenario would be to avoid places that create temptation, for instance taking a different route home in order not to pass by a bar. An example of the second scenario would be to take medication or enrol in psychological treatment which reduces craving for the drug in general. Both scenarios demonstrate that an individual could have lost control when using substances, but having experienced control diachronically which would have minimised their loss of control in the first place. Unlike the urges during cravings, in these moments our executive functioning is not overwhelmed by temptation and enables the individual to think more clearly. This is also underlined by Morse, who states that addicts have "lucid, rational intervals between episodes of use", even if we were to consider addicts irrational or coerced.[191] The importance of such moments will become relevant later during the discussion on prior fault in chapter 4. Having lost control during an offence is one thing, but not taking steps to avoid that moment is another, and it seems evident that such events are relevant for the law to consider.

Yet as with factors that complicate synchronic control, there are also ways in which diachronic control is troubled. According to Kennett, there are internal as well as external barriers to diachronic control.[192] First, addicts may experience an incapacity to foresee future consequences (myopia for the future) and foresee (and plan according to) a drug-free future. Moreover, poor physical health reduces the capacity for diachronic control as well as monopolisation of attention, rendering diachronic focus almost equivalent to synchronic. Of course, these are internal barriers, but also a lack of treatment options or ineffectiveness of treatment, as well as environmental factors outside the individual's control are restraints to exercise diachronic control. The assessment of such barriers may be very relevant when trying to determine the amount of control an individual had, for instance at the time of committing an offence.

In short, there are several accounts of what control actually is and what it means to have control when addicted. However, the problem of how control can be measured, if at

190 Kennett, Vincent and Snoek, 'Drug addiction and criminal responsibility'.

191 Morse, 'Addiction and criminal responsibility' in Jeffrey Poland and George Graham (eds), *Addiction and Responsibility* (MIT Press: Cambridge, MA 2011) p.191.

192 Kennett, *Agency and Responsibility: A Common-sense Moral Psychology* (Clarendon Press: Oxford, UK 2001).

all, still remains. To overcome the problem of quantifying control, empirical studies have looked at capacities that can be studied empirically and which could inform us about control. By addressing aspects such as impulsivity, empirical studies have aimed to gain insight into the motives and processes underlying control and choice. There is a clear association between addiction and impulsivity,[193] suggesting that addicted individuals have less control over their choices than non-addicted individuals. That does, however, indicate that there is a choice in the first place. The issue is therefore not about having a choice or not, but rather the extent to which it is influenced. These studies provide the general conclusion that addicts are more impulsive in their decision-making overall. It is worthwhile to address whether such research can also be used in an individual assessment, in combination with behavioural tests, in order to determine the individual's amount of impulsivity in a legal context. Ultimately, we need to find a way to distinguish between somebody who experiences irresistible impulses, versus somebody who simply does not resist them.

2.4.2 A conflict of perspective

At first sight, based on the previous paragraphs, the two theories seem to be diametrically opposed in regarding elements such as chronicity and control. But despite their voiced disagreements and impugning publication titles,[194] these models do not seem to disagree on the research per se. After all, some findings are so robust that it would seem foolish to outright deny them. For instance, the role of the environment (e.g. relatives or other social contacts) is crucial in acquiring, sustaining or ceasing substance use.[195] The BDM does consequently incorporate this into the model, as demonstrated by the following citation: "First, sustained exposure to drugs of abuse might be a prerequisite for drug addiction, but its emergence is ultimately a function of interactions between drug effects, biological and environmental factors, which are crucially influenced by the developmental stage of the individual."[196] Similarly, the CM does not negate the abundance of brain research and the long-lasting or even permanent effects that drug use has on the brain. Ainslie puts it as follows: "Although the most productive research on addictions in recent years has been

193 E.g. Lee, Hoppenbrouwers and Franken, 'A systematic meta-review of impulsivity and compulsivity in addictive behaviors' as well as Smith and others, 'Deficits in behavioural inhibition in substance abuse and addiction: a meta-analysis'.

194 Several books and articles have been provocatively named after prior well-known entries, such as '*Addiction is not a brain disease, and it matters'* by Levy as a reply to Leshner's well-known '*Addiction is a brain disease, and it matters'*.

195 Panebianco and others, 'Personal support networks, social capital, and risk of relapse among individuals treated for substance use issues'.

196 Baler and Volkow, 'Drug addiction: the neurobiology of disrupted self-control' 559.

the study of their brain mechanisms, I won't say much about it, because it doesn't do much to change our concepts of these puzzles. It only lets us see in detail the reward process that used to happen inside a sealed box."[197] This citation perfectly shows that disagreements between the proponents is not regarding the research findings, but rather seem to lie in the interpretation of the results, their (normative) conclusions and overarching perspectives. On the CM account, drugs change the brain, but that does not make addiction a chronic, relapsing brain disorder.[198] On the BDM account, certainly decision-making is of importance in the course of addiction, but focusing on voluntary choice stigmatises patients and does not advance treatment.[199] As a result, the models are less far apart than they suggest: not the experimental data, but the conclusion is where they differ most.[200]

To illustrate this, see for instance the discussion of control and compulsion. All the arguments and evidence proposed by the two sides are valid and there is no outright denial there. For instance, Pickard states that "[…] there is no question that immoderate long-term drug use can affect neural mechanisms. Many drugs directly increase levels of synaptic dopamine, which may affect normal processes of associationist learning related to survival and the pursuit of rewards."[201] As such, she does not disagree with the BDM. Only the verdict that these neurological changes leave the addict with no other choice is what she opposes, since that is an inferred conclusion rather than a directly supported statement. It overlooks the value that the substance use has to the addicted individual, which is in her opinion crucial in overcoming the dependence.[202]

The opponents in the debate often provide the following arguments. First, the choice proponents highlight the facts that everything we do changes the brain: does that make our brain continuously disordered? That would be absurd, since the brain is continuously changing, adapting and learning. There is a need for a broader dimension than solely focusing on the neurology. For instance, the mere effects of dopamine do not distinguish between addictive drugs and other rewarding substances or activities that release dopamine, but are not addictive. To give an example, eating chocolate or looking at cartoons is known to increase dopamine levels in a similar fashion as drugs. However, this hardly leads to any addiction, indicating that dopamine is a crucial puzzle piece but unable to distinguish addictive and non-addictive rewarding behaviour. Earlier I mentioned that cravings for natural rewards become satiated unlike drug-induced cravings, but this does not explain how or why. Hence, there need to be other, more distinguishing factors apart from

197 Ainslie, 'A research-based theory of addictive motivation' (2000) 19 Law and Philosophy 77-115.
198 Heyman, 'Addiction and choice: Theory and new data'.
199 Leshner, 'Addiction is a brain disease, and it matters'.
200 Snoek, 'How to Recover from a Brain Disease: Is Addiction a Disease, or Is there a Disease-like Stage in Addiction?'.
201 Pickard, 'The purpose in chronic addiction' 42.
202 Pickard, 'What we're not talking about when we talk about addiction'.

dopamine and the brain that are vital to the development of addictions. Another example is a statement by Leshner, in which he says "that addiction is tied to changes in brain structure and function is what makes it, fundamentally, a brain disease."[203] Try changing the word 'addiction' with any other activity that changes the brain, such as education, and the statement suddenly seems absurd. As such, the step from the neuroscientific evidence to addiction being a brain disease is considered one bridge too far.

Contrarily, the conclusion by some of the choice theorists that addiction is voluntary is disputed due to their generalised findings and statements which are consequently applied to individuals in very heterogeneous conditions. For instance, consider the fact that most addicts mature out of their addiction by their late twenties and thirties. That still leaves a subgroup of (often severely) addicted individuals for whom addiction may very well be chronic. These individuals often suffer from severe comorbidity, such as mood, anxiety or personality disorders.[204] As a result, not only may the generalised findings not apply to them in terms of chronicity, they may also experience their loss of control more severely since they do not cease using. For instance, there are case studies of severely addicted individuals who continued using despite being aware that it may result in their death. Such 'hard' cases may indicate that for some people, addiction is very clearly not a choice. Hence, are both models even discussing the same phenomenon? With the risk of repeating myself, addiction is a very heterogeneous phenomenon, rendering those suffering from it a highly heterogeneous group as well. As such, it is possible that the BDM and the CM are essentially conceptualising distinctly different 'types' or manifestations of addiction. Not unlike the theories by Moffit on the development of antisocial behaviour,[205] perhaps a taxonomy of addiction to highlight different pathways is appropriate. Such a taxonomy may distinguish between those who indeed are able to choose differently when the incentives are high enough, and those who have very little capacity to restrain their decision-making regarding drug use. To my knowledge, no such general taxonomy yet exists, apart from Marlatt's well-known theory regarding relapse.[206] Arguably, a classification regarding the capacities and impairments caused by addiction may be highly useful in criminal law, where exactly such a distinction may aid the correct legal approach to addicted offenders. For some defendants, the view of addiction as proposed by the CM may accurately describe their situation and their concurrent liability, whereas for others, the view as proposed by the BDM may be more appropriate.

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203 Leshner, 'Addiction is a brain disease, and it matters' 46.

204 Pickard, 'The purpose in chronic addiction'.

205 Moffitt, 'Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy' (1993) 100 Psychological Review 674-701.

206 Marlatt, 'Taxonomy of high-risk situations for alcohol relapse: evolution and development of a cognitive-behavioral model' (1996) 91 Addiction 37-50.

What is more, a concern highlighted by Pickard and briefly mentioned before is the fear that if a disease account of addiction is rejected, that we return to a model in which addiction is perceived as a moral failing.[207] After all, a strong emphasis on choice does suggest that those who succumb to substance abuse simply chose a life of hedonistic impulses at the expense of their own well-being, or perhaps worse, the well-being of others. However, as Pickard suggests, this is not an either-or competition: "we can acknowledge choice while maintaining care and fighting moralism about drugs".[208] Indeed, this is a valuable perspective relevant for the law in later analyses as well. Addicted defendants ought to be assessed based on their capacities, specifically for control, as this is a legally relevant aspect to bear in mind; however, this can be done without any moral condemnation of being addicted. How such a conceptualisation of addiction can be implemented in the law, if not already existent, is discussed in the later parts of this study.

To summarise this section, since the inferences from either model seem to be the fundamental matter in conflict rather than the empirically apparent characteristics of addiction, it is difficult if not impossible to objectively choose one model over the other. This is also not an aim of this study. Nonetheless, the addiction discussion in itself, regardless of personal perspective or conclusion, may already have effects beyond academia. In the next chapters, it is discussed whether the discussion *per se* can affect the view on addiction in criminal law. The different perspectives and the choices one makes regarding theories of addiction may affect how addicted defendants are assessed. Depending on perspective, legal implications may vary widely. As a result, it is not necessary to favour one model over the other but it is crucial to bear in mind what the differences are. Now, there is one final matter regarding addiction and the different perspectives by the CM and the BDM that needs to be clarified. Is addiction a disease, a disorder, both, or none of the above?

2.5 Is addiction a disease?

When encountering the different views on addiction, one cannot help but notice the confusing variations in terminology. Some titles of previously cited books, chapters and articles are 'addiction is a brain *disease*'; 'addiction: a *disorder* of choice'; 'why addiction is *not a disease*'; 'substance-related and addictive *disorders*' and so forth. And although none of them explicitly defines what is meant by disease or disorder, let alone the difference between them, there is a heated discussion on whether or not addiction can be classified as one. For example, Heyman states that addiction is 'by definition a disorder', but also

207 Pickard, 'What we're not talking about when we talk about addiction'.
208 Ibid, 37.

that it is 'disease-like', but that he proposes a 'non-disease account' of addiction, and all of this on the first page.[209] A literature search reveals that the ambiguity of disease versus disorder is not only a problem in the addiction debate, but that there is generally little consensus when something can be classified as a disease, disorder or neither. I below review several accounts on the meaning and definition of these concepts to understand how addiction ought to be classified. Importantly, this excludes a discussion regarding the legal understanding of a disorder as often used in legal insanity pleas. This is a highly relevant issue when addressing addiction in criminal law, but this topic will be discussed in section 3.5.1 specifically.

The earliest found explanation of a disease stems from 1900 and explains that a disease may be the result of intrinsic, extrinsic or undetermined origin. Disease itself is defined as "the sum total of the pathological consequences resulting in a patient from the interference with his physiological state by a disease cause."[210] In other words, there needs to be a disease cause (intrinsic, extrinsic or undetermined) and several pathological consequences.[211] A historical and conceptual overview of the term disease is further elaborated upon by Kendell, who identifies several criteria that have been used throughout the years.[212] Amongst others, whether or not something is a disease has been based on the levels of social or biological disadvantages, a statistical deviance, or the presence of a lesion. All these terms come with considerable critiques and disadvantages. In his conclusion, it is stated that a disease (which is then equated with illness, for complication's sake) is when it carries an intrinsic biological disadvantage. This may be in terms of mortality or reduced fertility, but also social disadvantages that consequently impact mortality or fertility rates. Moreover, disease has also been interpreted in a more hybrid manner, by combining harm in everyday life with a breakdown in a naturally selected system, but this has also not been without critique.[213]

Disease is often used interchangeably with disorder, but is it really synonymous? A quick Google search results in dozens of different (non-academic) explanations as to what the exact difference is. A general feeling emerging from these explanations is that the term disease comes with a physical response or alteration due to a stressor whereas a disorder

209 Heyman, 'Addiction and choice: Theory and new data' 1.

210 Macilwaine, 'What is a Disease?' (1900) 2 British Medical Journal 1703.

211 Interestingly, the author gives examples of what types of causes may be considered and the types of disease stemming from those. An example of a cause of extrinsic disease is 'non-parasitic matters introduced into the economy', which according to the author could lead to alcoholism. It is curious that alcoholism was used as a prime example of a disease, but also that it had an external cause, namely the economy.

212 Wakefield, 'The concept of mental disorder: on the boundary between biological facts and social values' (1992) 47 American Psychologist 373; Kendell, 'The concept of disease and its implications for psychiatry' (1975) 127 The British Journal of Psychiatry 305-315.

213 Satel and Lilienfeld, 'If addiction is not best conceptualized a brain disease, then what kind of disease is it?' (2017) 10 Neuroethics 19-24.

is more considered to be the disruption of 'normal' functioning.[214] However, some people also seem to consider a disease to have an external cause (e.g. a virus or bacteria) whereas a disorder has an internal cause (e.g. genetic malfunction, birth defect).[215] However, there are very few academic reviews regarding these concepts and their differences: in fact, I found none. Specifically on disorder, Jerome Wakefield concludes that this may be best described as a harmful dysfunction.[216] Harmful is consequently explained as a normative concept, based on social standards. Dysfunction on the other hand is a 'scientific term' which has a mental or physical malfunction or defect regarding the way in which it was originally designed to function evolutionarily. Before he draws this conclusion, he explores previous accounts of disorder that show similarities with the way disease was explained in the previous paragraph, by addressing it as statistical deviance, something that requires treatment, and a biological disadvantage, amongst others.

Hence, it seems that there is no clear account of the difference between disease and disorder. One commentator even makes the statement that disease is conceptually very different from a disorder but consequently does not explain what this conceptual difference is.[217] From all these interpretations (which are by no means exhaustive) it seems that the conceptualisations so far centre on some form of deviating, harmful functions which can be either physical in nature or behavioural. Moreover, based on these previously discussed definitions, differentiating between a disease and a disorder seems to have little added value since they are both described similarly and a comprehensive statement on their exact difference is nowhere to be found. Hence, to avoid further confusion, the terms disease and disorder may be used interchangeably, at least for the purpose of this study.

Within this realm of potential meanings of disease and disorder, could addiction be conceptualised as one? Based on the criterion of a disorder being a deviating functioning as described earlier, there is no doubt that addiction can be considered as such. Without discussion, there is a wide range of biological, behavioural, psychological and social characteristics associated with addiction and there are numerous harmful consequences for the individual as well as his surroundings. In addition, one may consider the role of medical authorities when trying to classify addiction. This is perhaps oversimplified, but definitely workable as a substitute for a proper classification. It does not seem very far-fetched that recognition for a certain phenomenon by the DSM or the International

214 After a Google search for 'difference disorder disease' several pages suggested explanations of the like. See for instance the following pages:https://www.sireninteractive.com/sirensong/disease-versus-disorder-what%E2%80%99s-in-a-word/ and/or https://www.healthwriterhub.com/disease-disorder-condition-syndrome-whats-the-difference/ both accessed on 1 May 2018.

215 See for instance the reply on https://www.researchgate.net/post/What_is_the_difference_between_disease_and_disorder accessed on 1 May 2018.

216 Wakefield, 'The concept of mental disorder: on the boundary between biological facts and social values'.

217 Cooper, 'Disorders are different from diseases' (2004) 3 World Psychiatry: Official Journal of the World Psychiatric Association (WPA) 24-24.

Classification of Diseases (ICD) is a valid reason for calling it a disorder. Provided that the DSM is a product of one single organisation, it still contains an immense body of researchers, clinicians and other healthcare professionals who contribute to the classification and conceptualisation of all sorts of conditions. The DSM is widespread and used globally and does not come without the necessary critiques, but it is still considered a valuable tool to classify and diagnose disorders. The ICD is produced by the World Health Organisation and is therefore even more widespread than the DSM. As a free publication, this book provides a systematic overview of disorders and classifications. The latest versions of the DSM and the ICD both consider substance use disorder as a mental illness. Perhaps this can be used as a threshold to determine whether something can classify as a disorder or not, given the broad range of professionals involved in creating these classifications.[218] Moreover, given the broad array of behaviours associated with addiction, from neurological, psychological, social to environmental, and the various negative consequences as a result, there is little doubt that anybody would consider addiction not to be a disorder. The DSM as well as the ICD are continuously updated and reviewed, which ensures that new evidence regarding addiction has been incorporated.

Consequently, one may wonder where the objections against the disease account of addiction come from. As explained, there seems to be no consensus regarding a definition in the first place and medical authorities seem to have no difficulty in calling it one. On what basis then are scholars so vigorously vouching against calling addiction a disease? Although not explicitly stated, it looks as if Heyman is suggesting that voluntariness is the reason that addiction is not a disease.[219] However interesting, none of the aforementioned authors discusses involuntariness as a criterion for disease, i.e. suggesting that if the condition is voluntary, that it would not be a disease. In Heyman's description of addiction, there are no elements that contradict the definitions of disorders. Also, the reluctance to label something as a disease may be explained through the association by people (including laymen) with a lack of responsibility. "He has a disease? Then he is not responsible for his actions." Relatively recently, for example, in the Netherlands there was a lot of publicity regarding a criminal complaint against the tobacco industry for deliberately making individuals addicted, and as a result, harming their health.[220] In several statements on popular media, addiction was explained as a disease and therefore the tobacco industry

218 Although these organisations also develop and change as a consequence of the *zeitgeist*, and there are plenty of controversial examples of 'disorders' which in later editions were omitted, such as homosexuality. Thus, it must be borne in mind that societal perspectives regarding what is 'abnormal' thus requires diagnostic definitions be variable.

219 Heyman, 'Addiction and choice: Theory and new data'.

220 https://www.independent.co.uk/news/business/news/smoking-netherlands-attempted-murder-case-philip-morris-british-american-tobacco-benedicte-ficq-lung-a8223381.html assessed on 12 June 2018. Interestingly, the call was rejected by the public prosecutors, because amongst other reasons smoking was considered a voluntary endeavour.

was blamed for any negative effects on users' health. Implicitly, they associate the label disease with an excuse: the smoker could not help but smoke, and therefore the health concerns are not primarily his fault. If it were truly the case that a disease immediately means that the individual is no longer responsible for the consequences, then it is completely understandable that people are hesitant to label certain conditions as a disease. By doing so, a large body of individuals would automatically be exempted from a whole range of moral and legal responsibilities.

However, and this becomes even clearer in the next chapter, this assumption of disease automatically negating criminal liability law is ill-founded. First and foremost, the exact legal requirements that need to be fulfilled are much more refined than merely being diagnosed with a disease.[221] Regardless of the legal details, the idea that identifying the cause of behaviour (and labelling this as a disease) directly negates criminal liability is often considered a folk psychology fallacy. This is what Morse calls *"the fundamental psycholegal error"*: causation in itself does not excuse.[222] If an aggressive outburst can be attributed to a psychotic disorder, it is a fallacy to assume that the individual cannot be held responsible for such behaviour: such a conclusion requires a broader assessment of the concrete volitional and cognitive capacities of the individual at the time of the offence.[223] Based on specific impairment, it can be relevant to negate or diminish (aspects of) liability, but in order to do so, such capacities need to carefully examined. Having a disorder is in itself insufficiently informative to decide on criminal liability. Vincent also mentioned that having a disorder is neither necessary nor sufficient, as explained before.[224] Some disorders (for instance phases of hypomania) may even make a person *more* responsible, due to the heightened vigilance associated with the condition. Contrarily, there are plenty of circumstances, such as childhood, that do not carry the label disease but nonetheless still function as a reason for (legal) non-responsibility. Similar to Vincent's argument, Beukers adds that not only aspects of responsibility but also the assessment of recidivism or treatability are not advised by the label disease or disorder.[225] Both state that rather than the label disease or disorder, the relevant capacities ought to be discussed, such as our prior discussion of control.

Hence, it seems that some reluctance in using the label disease stems from a folk psychology perspective that causation excuses whereas this is no structural basis for concern.

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221 See section 3.1 for an introduction to all elements required for criminal liability, and the later sections on the ways in which mental impairments can negate or mitigate these elements.

222 Morse, 'Addiction, choice and criminal law' in N. Heather and G. Segal (eds), *Addiction and Choice: Rethinking the Relationship* (Oxford University Press: Oxford, UK 2017).

223 Or even events prior to the offence, which may be relevant when applying prior fault doctrines: see chapter 4.

224 Vincent, 'Responsibility, dysfunction and capacity' (2008) 1 Neuroethics 199-204.

225 Beukers, 'Over de grenzen van de stoornis ("Mental Disorder in Criminal Law")' (PhD thesis, Erasmus University Rotterdam 2017).

Disease in itself is not a one-way ticket to escape responsibility for one's behaviour. Therefore, the discussion surrounding addiction is unnecessarily convoluted by quarrelling over labels, and derails the debate from what matters more: the capacities of the individual.

Finally, it seems that a last bottle neck for disease opponents is not so much the term disease as such, but rather the *brain* disease account.[226] It is as if classifying addiction as a disease, it is automatically equated with it being brain disease. As discussed earlier, this conclusion is a statement disputed by many who feel that this overlooks too many other valuable aspects of addiction. However, by never specifying what is meant by disorder and disease, academics are unnecessarily complicating matters by saying something is a disorder but not a disease, leaving the reader in the dark as to what that means precisely. Moreover, by sometimes using brain disease and disease interchangeably, the two have become entangled and it seems that calling addiction a disease is therefore immediately associated with the BDM, causing confusing and critique. In conclusion, it seems therefore best to use disorder and disease both interchangeably to indicate the disruptive nature of addiction without inferring what the cause of addiction is, by explicitly stating that disease does not automatically imply a *brain* disease. As such, it is broad enough to satisfy all of those professionals studying addiction. Perhaps it will lose specificity as such, but since addiction is a highly heterogeneous disorder that requires an individual approach to the cause and course of the disease, it may very well be left more general. Moreover, specifically discussing capacities will help to focus on what matters most.

2.6 Addiction and impaired capacities: practical reflections

Although there have been frequent references to impaired capacities throughout this chapter, I summarise the main points here for the purpose of the subsequent discussion of the law. In addition, this section briefly discusses the implications of focusing on capacities in practice. Although an account of specific impairments sounds great in theory, it also needs to be applicable in individual cases. How can we distinguish – in the example of control-related impairments – between twilight and dusk? And what is the potential role of neuroscience in all this?

Some of the most commonly addressed impairments based on addiction are problems with control and attention, and increased focus relating to the salience of a substance. In practical terms, this means that there may be problems or impairments with inhibiting behaviour, giving into craving, or having difficulties with long-term versus short-term rewards, to summarise some of the findings discussed earlier in this chapter. Being 'hooked' on substances is related to attentional biases in which substance-related cues occupy the

226 Satel and Lilienfeld, 'If addiction is not best conceptualized a brain disease, then what kind of disease is it?'.

thoughts of the individual, contributing to strong cravings.[227] These are relevant later, when I discuss the legal framework in more detail. For instance, whether behaviour is driven by substance use rather than the consequences of the offence may be relevant for addressing the legal concept of premeditation, although it is to be seen whether the legal requirements indeed accept such reasons.[228] Similarly, being able to control impulses seems intuitively relevant for a defence based on mental disorders.[229] Nonetheless, even though (severe) addiction could cause impairments in the capacity for control, it is still necessary to provide evidence for substantial incapacity for the defendant in question. This is necessary to differentiate between 'hard' cases of addiction for which legal doctrines may be different compared to lighter cases. Moreover, there needs to be a distinction between not only the research data in general but also the individual assessments, and this is complicated even further as it is also needed at the time of the offence specifically (as well as potentially before the offence, in the case of prior fault-like situations). Thus, a practical assessment of capacities is much more complicated than referring to research regarding impairments in addiction in general.

The additional problem of assessing control(-related capacities) is the multifaceted nature of control, which cannot be captured simply by one scale or tool.[230] The notion of control encompasses various different types, scales and aspects, as has been more extensively outlined elsewhere.[231] In what follows, I use the notion of impulsivity in order to provide some practical examples and tools on how volitional capacities and impairments may be empirically assessed in legal cases. Please note that impulsivity itself is also a broad concept, and that high impulsivity is not synonymous to being 'out of control'. Yet it may provide some illustrations and suggestions to my previous argument about understanding and addressing volitional capacity from a practical perspective. Impulsivity is strongly validated as a predictor of developing and sustaining addiction.[232] It is also suggested to be strongly related to relapse and giving into cravings.[233] Finally, impulsivity is a very well-researched trait, and therefore I chose to focus on this as an illustration of an assessable element of control.

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227 Franken, 'Drug craving and addiction: integrating psychological and neuropsychopharmacological approaches' (2003) 27 Progress in Neuro-Psychopharmacology and Biological Psychiatry 563-579.

228 See section 3.3.

229 Whether this is the case is discussed in section 3.5.

230 Nigg, 'Annual Research Review: On the relations among self-regulation, self-control, executive functioning, effortful control, cognitive control, impulsivity, risk-taking, and inhibition for developmental psychopathology' (2017) 58 Journal of Child Psychology and Psychiatry 361-383.

231 Chapters 1 and 2 of Snoek, 'Addiction, self-control and the self: An empirical, ethical study' contain an accessible overview of different elements of control in general and specifically to addiction.

232 Joos and others, 'The relationship between impulsivity and craving in alcohol dependent patients' (2013) 226 Psychopharmacology 273-283.

233 Billieux, Van der Linden and Ceschi, 'Which dimensions of impulsivity are related to cigarette craving?' (2007) 32 Addictive Behaviors 1189-1199.

Measures of impulsivity can be based on self-report questionnaires, performance-based tests, and laboratory measures assessing behavioural traits. These may distinguish between either test-based measures (experiment approach), i.e. measuring behaviour in a controlled, experimental environment, or trait-based measures (psychometric approach), i.e. identifying more stable personality traits.[234] Commonly used experimental tests are, for instance, the go/no go task. In this task, the individual is required to respond to certain stimuli but is told to specifically *not* respond to others. This aims to measure the ability to inhibit a response when knowing this is required or appropriate to do so.[235] Another commonly used test is based on delay-discounting principles, for instance tests in which participants are required to respond to smaller but immediate rewards, versus larger but delayed rewards.[236] Examples of psychometric tests are, for instance, the UPPS-5 Impulsive Behaviour Scale which is a psychodiagnostic questionnaire addressing five relevant factors that underlie impulsivity.[237] Other well-known tests are the Eysenck Impulsiveness Questionnaire (I_7 test, self-report)[238] or the Wender Utah Rating Scale (WURS, often used to diagnose Attention Deficit Hyperactivity Disorder).[239] It is feasible that in addition to these more conventional measures of impulsivity, there is a role for neuroscientific tests. For instance, studies using cerebral blood flow addressed correlations between brain physiology and impulsivity traits, finding a correlation between reduced blood flow and impaired control over drinking.[240] These tools may help address capacities, but are subjected to more intricacies before any definitive conclusions may be drawn. For instance, it is

234 Lane and others, 'Relationships among laboratory and psychometric measures of impulsivity: Implications in substance abuse and dependence' (2003) 2 Addictive Disorders & Their Treatment 33-40.

235 Gomez, Ratcliff and Perea, 'A model of the go/no-go task' (2007) 136 Journal of Experimental Psychology: General 389.

236 Balodis and Potenza, 'Anticipatory reward processing in addicted populations: a focus on the monetary incentive delay task' (2015) 77 Biological Psychiatry 434-444.

237 See the explanation in Coskunpinar, Dir and Cyders, 'Multidimensionality in impulsivity and alcohol use: A meta-analysis using the UPPS model of impulsivity' (2013) 37 Alcoholism: Clinical and Experimental Research 1441-1450. "(1) Lack of perseverance, representing the tendency to not finish tasks; (2) lack of planning, involving acting without thinking; (3) sensation seeking, encompassing behavior tendencies of trying new and exciting activities or sensations; (4) negative urgency, representing the tendency to act rashly in response to extreme negative emotions; and (5) positive urgency, representing the tendency to act rashly in response to extreme positive emotions." 1441-1442.

238 Lijffijt, Caci and Kenemans, 'Validation of the Dutch translation of the I7 questionnaire' (2005) 38 Personality and Individual Differences 1123-1133.

239 Ward, 'The Wender Utah Rating Scale: an aid in the retrospective diagnosis of childhood attention deficit hyperactivity disorder' (1993) 150 American Journal of Psychiatry 885-885.

240 Weafer and others, 'Associations between regional brain physiology and trait impulsivity, motor inhibition, and impaired control over drinking' (2015) 233 Psychiatry Research: Neuroimaging 81-87.

necessary to differentiate between such capacities 'hot' versus 'cold' circumstances, i.e. emotionally loaded circumstances or more neutral circumstances.[241]

Although these measures inform us about general traits of impulsivity (thereby providing evidence for a general tendency to act on impulses), they do not distinguish between 'twilight and dusk'. Moreover, as there seem to be varying degrees of addiction and the most severe subtypes seem to be of interest for the law, it remains relevant to distinguish these groups. Yet there are currently no clear biological (or other) indicators that distinguish such (clinical) subtypes.[242] That means that for an assessment of whether an individual was in control at the time of the offence, more external and behavioural indications of a lack of control may necessarily be included. These are strongly related to the barriers to diachronic control that Kennett has described, as cited before.[243] For instance, more external criteria can include the presence of drug-related paraphernalia (inducing craving and leading to motivational/attention bias), being in a state of withdrawal (and related to this, the type of drug and thus the severity of such states), and general impulsive behaviour beyond the case at hand. Such a comprehensive assessment of control would need further research and validation (which is outside the scope of this study) but it is clear that there are several leads for the law in addressing control-related capacities. This is, of course, also dependent on the exact requirements of the law. Therefore, the next chapter outlines the legal framework and the potential role of addiction in that framework.

2.7 Concluding remarks

This chapter first focused on the concept of 'addiction' in order to clear up some confusion and controversy in the addiction debate. It has attempted to show a neutral definition of addiction that steers clear of normative conclusions and assumptions which could be accepted by the majority of addiction researchers. This discussion, and especially – once again – opposing the two models can be perceived as a done deal by now. Yet this chapter's aim was not to quarrel over which model is most appropriate, nor did it intend to add to a clinical debate. Rather, I hoped to provide an overview of the differences in conceptualisations of addiction, and deconstruct which elements exactly are contested. This allows me to later address which legal questions are potentially impacted by these

241 Botdorf, Rosenbaum, Patrianakos, Steinberg and Chein, 'Adolescent risk-taking is predicted by individual differences in cognitive control over emotional, but not non-emotional, response conflict' (2017) 31 Cognition and Emotion 972-979.

242 Volkow, Koob and Baler, 'Biomarkers in substance use disorders' (2015) 6 ACS Chemical Neuroscience 522-525.

243 Kennett, *Agency and responsibility: A common-sense moral psychology*.

different perspectives, and whether the law is on a practical level affected by this predominantly social scientific discourse.

In this discussion on the addiction debate, and by highlighting the commonalities of the BDM and the CM, it turns out that these models are not always as often in opposition as they might appear. To a large extent, the research and data on addiction are accepted by all scholars. Primarily, the conclusions regarding the extent to which the capacities of addicts are affected, and what the consequences are of that, are what are contested. Indeed, determining the number of capacities is shown to be a challenging endeavour, potentially even impossible when solely focusing on quantifiable, empirical qualities. Yet by approaching this more holistically, by trying to address the capacity for control in terms of empirical methods (e.g. impulsivity or different types of control) as well as more legal methods (e.g. disucssing how these types of control should be appreciated by the law), this endeavour shows to have some promising new leads. Nonetheless, this still does not fully answer the million dollar question: could the person not resist, or was it simply not resisted?[244]

Moreover, this chapter has also indicated many aspects in the addiction debate that drive the important discussion to distraction. By calling the behaviour of addicts involuntary, there is an immediate connotation of a lack of free will. Still, whether or not humans have free will in the philosophical sense is a different discussion entirely. This deflects from the discussion on what is likely meant by calling addiction involuntary, namely a difficulty in the capacity of controlling behaviour. Similarly, labelling a condition as a disease or disorder – and a discussion on which term would be more appropriate – is not necessarily relevant to understanding addiction, nor does it seem sufficiently informative to determine criminal liability. Disease does not equate non-accountability and assuming certain consequences based solely on a diagnosis is too short-sighted. Therefore, the last sections of this chapter have already introduced some of the dilemmas that are encountered when addressing the criminal liability of addicted defendants. The conceptualisation of addiction presented consequently serves as a basis to delve deeper into the structure and requirements of the law, and addresses which aspects of addiction are relevant in order to inform us of the legal challenges.

244 At the end of this study, however, I argue that this question does not need to be answered conclusively. But before this argument can be made, more details about the law and addiction are required. For a preview of this argument, however, see sections 8.2.2 and 8.4.2.

3 Addiction in (Dutch) Criminal Law

Due to the complex nature of the condition and the various consequences on capacities and behaviour, as discussed in the previous chapter, it is evident that addiction would feature in the assessment of criminal liability. The question, however, is *which* element of criminal liability can be affected (if any, that is) and *how*. Moreover, the previous chapter described the neuroscientific elements that have influenced the addiction debate. Does this information about the conceptualisation of addiction and the related presence or absence of capacities have consequences for the law as well? Could this debate help us determine the extent to which addicts should be held liable? Hence, the central research question of this chapter is: for which legal aspects can the addiction and its consequences on the capacities of an offender be relevant? 'Legal aspects' in this research question is understood as all the elements that make up criminal liability, such as *actus reus*, *mens rea*, blameworthiness and sanctioning. Moreover, whenever possible and relevant, I address the potential role of neuroscience in these legal questions. This research question is answered through conceptual and doctrinal research on Dutch criminal law. By doing this, a theoretical outline is created that can be used as the basic legal framework on which to build the later analytical and empirical chapters. Short legal comparisons are employed for illustrative and contextualising purposes.

The order of this chapter is structured along with the elements that are present in the tripartite structure of Dutch criminal law. This allows for dissecting all the elements of criminal liability in which impaired or absent capacities could potentially play a role. Moreover, the currently employed structure also reflects the order of possible defences that could be relevant in addiction-related cases. Practically, this results in the following structure. In section 3.1, the basics of Dutch criminal law are outlined and compared very briefly with the structure employed in common law jurisdictions. After this, each element of the tripartite framework is discussed in order. Hence, section 3.2 contains the potential effects of addiction on *actus reus* and the notion of voluntary conduct. Section 3.3 assesses whether addiction can play a role in determining premeditation and section 3.4. looks at the potential role of addiction in establishing intent and negligence. The relevant excuses are discussed in section 3.5 in light of the general element of blameworthiness. Last but not least, section 3.6 outlines the potential roles of addiction in risk assessment and sanctioning. Importantly, the concept of prior fault is crucial for a thorough application of some excusing and mitigating elements. Due to the importance and the large theoretical discussions on this doctrine, this is addressed separately in the next chapter.

For most legal scholars, some legal elements may perhaps seem irrelevant for addiction-related cases as these concepts are only marginally concerned with mental states

or impaired mental capacities, if at all (such as, for instance, the voluntary act requirement that I discuss as one of the first elements). Yet I believe that it is still relevant and important to go over each step and explore those seemingly superfluous legal possibilities for two reasons. First, due to the interdisciplinary nature of this study, many readers may not be familiar with the details of some concepts, for example, voluntary act or duress, or the difference between intent and blameworthiness. From a non-legal perspective, these concepts sound as if they can easily be influenced by mental states and disorders. For instance, it sounds plausible that an individual who is experiencing a strong craving is not acting voluntarily or intentionally: could this not negate this defendant's liability? Colloquially, but also from a social-scientific perspective this may sound right; yet looking at the legal requirements it becomes clear that the ordinary (and psycho-behavioural) meaning of voluntarily or intentionally differs from the legal interpretation. Hence, it is worthwhile to outline the exact requirements and particularly point out the differences between legal and normative requirements, versus psycho-behavioural ones. Second, there may be crucial differences between legal systems in how equivalent concepts are explained. The requirements of intent, for instance, are constructed in a very different manner in common law versus civil law jurisdictions. Hence, also for a comparative purpose, bearing in mind that the reader may not be fully acquainted with the Dutch civil law system, it is relevant to discuss all legal concepts, even though the role of addiction may not always be equally relevant. Additionally, much of the scholarly literature on addiction and criminal liability is Anglo-American, thereby warranting a comparative stance to understand the different theories and perspectives fully.

Now that the structure of this chapter is outlined as well as justified, let us look at the Dutch criminal law in more detail.

3.1 An introduction to the conditions of Dutch criminal liability

There are two major ways of structuring the different elements of criminal liability: a bipartite or a tripartite structure, the first of which is prevalent in common law jurisdictions, whilst the second is employed more commonly in civil law countries.[245] The Netherlands, therefore, applies a tripartite system. Although these two structures may seem very different at first sight, most elements can be found – one way or the other – in both systems.[246] This

245 Fletcher also identifies a quadripartite structure, but since it is similar to the bipartite structure and since I do not cover any of those jurisdictions, I do not further explain it here. For more information, see: Fletcher, *The Grammar of Criminal Law: American, Comparative, and International*, vol 1: Foundations (Oxford University Press: New York 2007) 43-55.

246 Dubber, 'Comparative Criminal Law' in M. Reimann and R. Zimmermann (eds), *The Oxford Handbook of Comparative Law* (Oxford University Press: Oxford, UK 2006) 1318.

section, therefore, serves a twofold function: to familiarise the (interdisciplinary) reader with the elements that make up criminal liability in the Netherlands on a basic level and to relate these elements to elements in common law jurisdictions.

3.1.1 The Dutch tripartite structure of criminal liability

The tripartite structure of criminal liability consists of three elements, which also serve as a sequential structure for criminal proceedings. These three elements are also recognisable in, yet not entirely identical to, article 350 of the Dutch Code of Criminal Procedure (DCCP), which specifies the aspects that need to be assessed and proven in order to hold an individual criminally liable. In short, first, the statutory offence description needs to be fulfilled. If this definition of offence is proven, the court subsequently assesses whether the offence in question was unlawful. If so, the court needs to determine the blameworthiness of the defendant. If the offender is blameworthy, the court can continue to discuss and impose a sentence.[247] These elements are discussed in more detail in turn.

The first step is referred to as the statutory offence description: whether or not the conduct, which can be an act or an omission, fulfils the objective and possibly subjective elements of the offence description as formulated in the statutory provision. The objective element refers to the criminal act, and the subjective element generally refers to either intent (*dolus*) or negligence (*culpa*).[248] As an example, article 157 of the Dutch Criminal Code (DCC) reads "He who intentionally sets fire, causes an explosion or causes a flood is punished: […]". The objective element is the act of setting a fire, causing an explosion or causing a flood. It must, of course, be proven that it was indeed the defendant/accused who did so. However, it is also necessary that the act was done *intentionally*. In order to fulfil the definition of offence, the accused therefore also needs to possess the required subjective mental state, in this example any form of intent.[249]

Intent has three variants, which are direct intent, indirect intent and conditional intent (*dolus eventualis*). In simplified terms, the forms of intent are differentiated based on the presence and weight of a cognitive (knowing) and volitional (wanting) prong.[250] Especially the volitional aspect is key for intent. Not only does an individual know what he or she is doing, but also desires this behaviour to happen, or at least reconciles himself or herself

247 Koopmans, *Het beslissingsmodel van 348/350 Sv* (9th edn, Kluwer: Deventer 2004) p.4-5.

248 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* (7 edn, Wolters Kluwer: Deventer, NL 2018) 209.

249 There are also strict liability offence for which there is no need to prove a mental state, for example certain traffic violations. These are considered exceptions to the general rule that "*actus reus non facit reum nisi mens sit rea*", i.e. an act is not culpable unless the mind is guilty too.

250 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht*, 209-220.

with the possibility (in the case of conditional intent). Negligence, on the other hand, is a more normative concept that concerns the violation of a required duty of care which as a result leads to a criminal offence. Negligence can be either conscious or unconscious. The difference between the two forms of *culpa* is the awareness of a risk or a (culpable) lack thereof. In other words: bad risk-assessment and a lack of risk-assessment, respectively.[251] Most negligence offences have an intentional counterpart which usually entails a higher sentence. For instance, causing serious bodily injury exists both as an intentional assault offence as well as a negligence offence (article 302 DCC and article 308 DCC, respectively). The more precise requirements and conditions, and the relevancy of addiction in these, are discussed further in section 3.4.

Sometimes the aggravating circumstance of premeditation is present in the statutory offence description in addition to the element of intent.[252] For instance, articles 287 and 289 DCC are both intentional manslaughter provisions, but the addition of the words 'with premeditation' in article 289 DCC makes it a more severely punishable offence: murder. Although the interpretation has shifted throughout the years, premeditation was originally defined as "a moment of calm deliberation, of composed thinking; the opposite of an immediate, impulsive state of mind".[253]

After the court establishes that the offence description has been fulfilled, both objectively and subjectively, the second step is taken: unlawfulness of the act is assessed by addressing the applicability of any justificatory defences. This aspect concerns the circumstances of the crime and the court may find these to be such that the crime can be justified. For instance, in an attack, it may be justified to use violence (i.e. self-defence), or in a tough choice scenario, it may be justified to ride through the red light in order to prevent something worse from happening (i.e. necessity). These justifications are by definition act-related, meaning that they take away the wrongfulness of the conduct, and are quite independent of any personal characteristics or qualities of the offender. Next to necessity (art. 40 DCC) and self-defence (art. 41(1) DCC), the Netherlands also accepts acts authorised by legitimate authorities (arts. 42 & 43(1) DCC) as a justification. There is one additional, non-statutory justification, developed in case law, that allows a general lack of wrongfulness to be applied as a defence.[254] Due to the justificatory nature of the act, and not the actor, this second aspect of the tripartite structure is clearly outside the scope of

251 Keiler, Panzavolta and Roef, 'Criminal Law' in Jaap Hage and Bram Akkermans (eds), *Introduction to law* (Springer: Dordrecht, NL 2014) 138-139.

252 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* p. 261-264. Offences that contain premeditation are, for instance, Arts. 108, 115, 117, 289, 301 and 303 DCC.

253 Ibid, 261.

254 Ibid, 287-303, 304-315, 326-330, 341-347.

this discussion of addiction. Therefore, these four justifications are not further discussed in this chapter or in the remainder of this book.

The last step in the tripartite structure concerns the blameworthiness of the actor and whether any excuses could apply. Although these excuses negate liability as well, the major difference with justifications is the focus on the actor rather than the act.[255] Can we truly blame the offender for the offence committed, did he lack certain capacities, or experienced such pressure that he is not to be held responsible for his actions? Dutch criminal law recognises four types of statutory excuses: (i) non-accountability (art. 39 DCC), (ii) duress (art. 40 DCC), (iii) self-defence excess (art. 41(2) DCC), and (iv) the execution of an official order by an illegitimate authority (art. 43(2) DCC). In addition, case law has also accepted a fifth excuse, in order to deal with situations that cannot be covered by those in the DCC, and expresses a general absence of all guilt.[256] Duress, sometimes also called psychological necessity, is an excuse commonly associated with a 'do it or else' situation. If the defendant is being pressured into an illegal act by threats of death or serious injury, for instance, the defendant is not to blame for yielding to this pressure and committing an offence.[257] Non-accountability, the Dutch equivalent of the common law insanity defence,[258] can be considered in cases where the defendant was suffering from a mental disorder at the time of the crime. As an excuse, this is an all-or-nothing situation: in order to be fully acquitted, the defendant needs to be considered completely non-accountable for his offence. However, in practice, several degrees of diminished accountability are recognised which do not serve as a full excuse but rather as a mitigating circumstance regarding sentencing. As such, they are distinct from a full excusing condition that article 39 DCC entails since the actor is still considered blameworthy to a certain extent.

In light of addiction, duress and the non-accountability excuse (and the possibilities that the notion of diminished accountability add) are arguably the most relevant excuses, as they are both concerned with the mental capacities of the offender. As discussed in chapter 2, there are various ways in which these capacities could be affected, influenced or diminished, due to prolonged substance use. Therefore, the aspects of blameworthiness will be thoroughly addressed in relation to addiction in section 3.5.

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255 Although it seems to be a sensible enough distinction, the demarcation between justifications and excuses was not one that was initially envisaged by the legislature. The difference is mostly of a procedural nature, pursuant to Art. 348/350 DCCP, rather than an explicit substantive distinction. See also: ibid, 297-299; see also Kelk, *Studiebook materieel strafrecht* (5th edn, Wolters Kluwer: Deventer 2019) 315-320.

256 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht*, 290-294, 315-322, 330-341, 348-359.

257 Ibid, 306.

258 There is a fundamental difference between the common law insanity defence and the Dutch (and German) equivalents thereof, which warrants the use of the term 'non-accountability' rather than the term insanity defence/legal insanity. Although section 3.5 addresses this in more detail, the term reflects the normative nature of accounting for an offence by the defendant rather than focusing on the pathology per se.

These three distinct steps (objective and subjective elements of the offence description, unlawfulness and blameworthiness) in assessing criminal liability are what constitute the tripartite system, and a failure to prove any one of them will lead to an acquittal.[259] If no factors are found to negate the criminal liability, the court will continue a discussion and ultimately decide on sanctioning,[260] which reflects the final question in the procedural scheme of art. 350 DCCP. Importantly, there is an interplay between the non-accountability excuse and sentencing possibilities, as outlined in article 37a and 37b DCC. In cases where a mental disorder leads to the excuse of non-accountability, the defendant will be acquitted due to a lack of blameworthiness and cannot be punished. Nonetheless, measures may still be imposed, most notably the Dutch Entrustment Act (TBS).[261] The TBS measure is not considered a punishment due to its nature and purpose, since it is not aimed at hardship and retribution but rather serves to protect society. This is pursued in the short term by detaining the individual, and by treatment in the long term.[262] The various degrees of diminished accountability, however, do not lead to a full acquittal and can therefore potentially result in both punishments as well as measures: punishment such as a prison sentence due to the degree of the individual's accountability, and a TBS measure due to the degree of non-accountability.[263] An important aspect of the sentencing phase is risk assessment, which contributes to the court's decision on the degree of punishment as well as the potential imposition of measures.[264]

3.1.2 The Dutch tripartite structure from a comparative perspective

The previous section provided a basic overview of Dutch criminal liability. From the outset, this may seem in stark contrast with other jurisdictions. Particularly the bipartite structure, employed in common law systems, may seem very different. In order to better understand

259 Technically, when there is a lack of proof for the objective or subjective element of the offence description, the Dutch legal jargon refers to an acquittal. However, if it is proved that the defendant committed the offence, but is consequently not held liable because of a justification or an excuse, it is not termed acquittal but rather 'dismissal of prosecution' (*ontslag van alle rechtsvervolging – ovar*) as specified in Art. 352(2) DCCP. Since this distinction is not relevant for the current discussion, acquittal is used throughout the study for clarity. See also Koopmans, *Het beslissingsmodel van 348/350 Sv* 105-106.

260 As this also includes the measures described below in this chapter, which are formally not considered a punishment, I will refrain from using the more common term 'punishment' when discussing this fourth and final step in the court proceedings.

261 TBS is the abbreviation of the term '*terbeschikkingstelling*', which literally translates to 'at the discretion of the state'. Other authors occasionally also refer to the TBS measure as 'the entrustment act'.

262 van Marle, 'The Dutch Entrustment Act (TBS): its principles and innovations' (2002) 1 International Journal of Forensic Mental Health 83-92.

263 Ibid 84.

264 Kelk, *Studieboek materieel strafrecht* 544-552.

the Dutch structure and the discussion that is yet to follow, I now address some comparative aspects between the tripartite and the bipartite structure.

A bipartite system distinguishes between the *actus reus* and *mens rea*, literally the 'guilty act' and the 'guilty mind': an objective versus a subjective element. In order to be liable for an offence, both elements have to be fulfilled.[265] In simple terms, the *actus reus* element predominantly consists of the objective conduct that has been criminalised, e.g. the killing of another, or the starting of a fire. The *mens rea* element rather encompasses the subjective mental state that accompanied the behaviour, meaning various degrees of fault (such as intent, recklessness or negligence).[266] The *actus reus* and *mens rea* largely correspond to the objective and subjective elements of the description of offence respectively, i.e. the first tier of the tripartite structure.

A framework based on such an intuitive distinction offers convenience and simplicity in understanding the law. It does raise the (admittedly doctrinal) question of where certain defences can be situated, such as self-defence or insanity. These are separately addressed in their own tiers in the tripartite structure, but do not have a distinct place in the bipartite structure. To accommodate this, common law scholars sometimes refer to three elements to criminal offence, namely containing *actus reus*, *mens rea*, and the absence of a defence.[267] As such, less focus and attention is placed on the order in which the elements are addressed and assessed, as liability is not based on a consecutive fulfilment of the elements but rather assessing the liability as a whole.[268]

One of the most distinct differences between the two systems is the structural position of the justifications and excuses in the tripartite structure. For the bipartite system, these two are not strictly separated nor are they explicitly incorporated under *actus reus* or *mens rea*.[269] Also, the differences between justifications and excuses are acknowledged but are nonetheless of lesser importance than they are in civil law jurisdictions.[270] Conceptually, one may consider justifications to be embedded in the aspect of *actus reus*, by distinguishing an element of unlawfulness in addition to the objective behaviour. Similarly, excuses can be conceptualised as part of *mens rea*, by separating a normative aspect addressing blameworthiness in addition to the descriptively required mental states. Hence, although

265 Again with the exception of strict liability offences, see also footnote 249.

266 Keiler and Roef, *Comparative Concepts of Criminal Law* (3rd edn, Intersentia: Cambridge, UK 2019) 109-113.

267 Monaghan, *Criminal Law Directions* (6th edn, Oxford University Press: Oxford 2020) 16.

268 Christopher, 'Tripartite structures of criminal law in Germany and other civil law jurisdictions' (2007) 28 Cardozo Law Review 2676-2678.

269 Keiler and Roef, *Comparative Concepts of Criminal Law* (3rd edn, Intersentia: Cambridge, UK 2019).

270 Blomsma and Roef, 'Justifications and excuses' in J. Keiler and D. Roef (eds), *Comparative Concepts of Criminal Law* (Intersentia: Cambridge, UK 2019) 157.

the importance of the distinction between the three tiers always is stressed in the tripartite structure, the concepts are to some extent compatible.[271]

One other important comparative distinction relates to the different forms of *mens rea*. Common law jurisdictions recognise intent, recklessness or negligence.[272] Direct and indirect intent have similar meanings in common law as well as civil law systems. However, whereas civil law jurisdictions recognise conditional intent as the lowest degree of *dolus*, common law jurisdictions use recklessness in such situations. Recklessness encompasses the conscious taking of an unreasonable risk. As such, this covers two of the civil law mental states, namely both conditional intent as well as conscious negligence. Conversely, as conscious negligence is already accommodated in recklessness, negligence in common law is therefore always unconscious (or inadvertent) negligence.[273]

Common law structures share some of the excuses mentioned before, such as the insanity defence and duress. The insanity defence in most common law jurisdictions is an all-or-nothing defence similar to the non-accountability excuse in the Netherlands. Most crucially, the lack of a volitional prong is generally not accepted in the insanity defence (i.e. it does not allow control-related impairments to be the basis of the defence), whereas volitional impairment is generally considered accepted as a reason for non-accountability.[274] Interestingly, the Dutch system recognises degrees of diminished accountability, which can mitigate the sentence or lead to an additional measure for all offences. This has a common law counterpart: diminished responsibility, which is accepted in cases of a substantially impaired ability to understand the nature of the act, to form a rational judgment, or to exercise self-control.[275] However, this partial defence may only be used to reduce a murder charge to the lesser charge of voluntary manslaughter and is, therefore, not generally applicable. It is, of course, still at the court's discretion to consider any impaired capacities in a reduced sentence for all offences.[276] Moreover, the law of England & Wales explicitly refers to 'intoxication rules', not as a separate defence, but as general rules and guidelines on how to assess intoxicated defendants.[277] In the Netherlands, just like in Germany, the effects of intoxication are usually discussed in the context of (diminished) accountability.

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271 Dubber, 'Comparative Criminal Law' 1319.

272 Traditionally, many scholars do not even consider negligence to be a genuine form of *mens rea*, as it does not contain an advertent state of mind on the defendant's behalf. Hence, it can be better considered as a type of legal fault, as it sets an objective standard to conform to. See also: Allen and Edwards, *Criminal Law* (15th edn, Oxford University Press: Oxford 2019) 123.

273 Blomsma and Roef, 'Forms and aspects of mens rea' in J. Keiler and D. Roef (eds), *Comparative Concepts of Criminal Law* (Intersentia: Cambridge, UK 2016) 146.

274 This is covered in more detail in section 3.5.3

275 Section 52, Coroners and Justice Act 2009. See also the more in-depth discussion in section 3.5.3.

276 Blomsma and Roef, 'Justifications and excuses' 175, 195.

277 Monaghan, *Criminal Law Directions* 364.

Now that the structure of criminal liability in the Netherlands is explained, as well as briefly compared with the common law structure, let us go more into detail about each specific element and relate this to the possible role of addiction.

3.4 Addiction in the context of the voluntary act

As mentioned, the fulfilment of the objective elements of statutory offence definition (*actus reus*), is the starting point of assessing liability. But what if the defendant acted unconsciously, or in a reflex? In such instances, has there actually been a 'guilty act'? Consider an individual who is bumped into and stumbles into another person, causing injury. Before addressing whether the defendant acted intentionally, or perhaps whether any justification or excuse can arise for the behaviour, we can ask ourselves whether the defendant even acted at all. In this example, the events were not a product of a deliberate movement by the actor: the defendant acted under the influence of a *vis absoluta*.[278] This is often referred to as the (voluntary) act requirement. The law requires an act to be *voluntary* in order to be held liable for it. Yet, the word voluntary in this context requires further clarification, as it may colloquially be understood as synonymous, or at least related to concepts such as intent, volition and freely willed. In chapter 2 we saw that addiction and addiction-driven behaviour is often considered as being able to impact these matters: often one may hear that behaviour is compelled, automatic, or 'unfree', or that is at least experienced as such.[279] Thus, it is necessary to outline the specific legal requirements for the requirement of voluntary act in order to understand that addiction, in fact, does not negate the presence of a voluntary act.

The most common understanding of the voluntary act requirement is that of a 'willed, bodily movement'.[280] Especially in England and Wales, this still serves as the basis of the penal system.[281] This perspective predominantly addresses a traditional notion of agency, meaning that the muscle contractions are caused and governed by human will. As such, this may seem to refer to the requirement of free will. How much (free) will is needed for the legal definition of a willed bodily movement? If free will does not exist, would that mean that the voluntary act requirement cannot be fulfilled? However, it seems that the law requires, or is at least compatible with the idea that the movement only be volitional: consciously willed. Thus, there seems to be no metaphysical free will (alternative

278 Allen and Edwards, *Criminal Law* 36.

279 See, for instance, the phenomenological reflections on addiction regarding self-determination: Schlimme, 'Addiction and self-determination: A phenomenological approach' (2010) 31 Theoretical Medicine and Bioethics 49-62.

280 Keiler and Roef, *Comparative Concepts of Criminal Law* 123.

281 For an overview of different theories of conduct, please see ibid 122-125.

possibilities) required for a voluntary act, allowing us to forego a discussion of determinism and free will.[282]

It is important to realise that the discussion of the nature of the voluntary act mostly arises in common law systems.[283] Conduct is involuntary, i.e. not willed, due to spasms and reflexes, but also if the offender was unconscious.[284] In cases of unconsciousness, the defendant is deemed an automaton and can rely on the defence of automatism. What is required is a complete lack of control over one's bodily movements: if there is some response to stimuli, or the defendant purposefully controls his limbs, the defence is not applicable.[285] English law then goes on to specify automatisms further and make a distinction between internal (e.g. sleepwalking, epilepsy) and external (e.g. a blow to the head, administration of anaesthetics) causes of the automatism. Although this conceptual difference seems clear enough, this has resulted in disagreement as internally caused automatisms fall under the header of the insanity defence.[286] This leads to unsatisfactory results, as a person with somnambulism (sleepwalking) or epilepsy is not colloquially considered 'insane'. Yet due to their internally caused automatism, they will not be given an unqualified acquittal as with the external causes, but rather be considered Not Guilty by Reason of Insanity. Hence, they can be subjected to compulsory treatment or confinement.[287] Addiction, resulting in drug use, leading to unconscious states, would amount to an external automatism, technically negating the *actus reus*. However, the English courts have made an exception for voluntary intoxication and lawyers argue that only the administration of non-dangerous drugs (provided the defendant was unaware of the risk of becoming an automaton) can lead to a successful automatism defence. If the automatism was caused by voluntarily consuming drink or dangerous drugs, (external) automatism does not apply.[288]

There is less discussion in the Dutch system, simply by hardly debating the requirement of voluntary act and subsequently the concept of automatism. Also in the Netherlands, voluntariness in the sense of a willed and bodily movement is required for criminal liability, as reflexes or seizures are considered to lack criminal relevance before even reaching the questions about intent, negligence or blameworthiness.[289] However, such examples seem to be mostly a theoretical exercise, as these cases are highly exceptional. Additionally, the

282 See for instance: Corrado, 'Is there an act requirement in the criminal law' (1993) 142 University of Pennsylvania Law Review 1529-1561, as well as Husak, 'Rethinking the act requirement' (2006) 28 Cardozo Law Review 2437-2459.

283 Allen and Edwards, *Criminal Law* 36-39.

284 Monaghan, *Criminal Law Directions* 23.

285 Allen and Edwards, *Criminal Law* 168.

286 Ibid p.169; Monaghan, *Criminal Law Directions* 359.

287 Child, Crombag and Sullivan, 'Defending the delusional, the irrational, and the dangerous' (2020) Criminal Law Review 309.

288 Monaghan, *Criminal Law Directions* 363.

289 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 158.

matter of *actus reus* and willed bodily movement seems primarily concerned with the lack of physical control, as with epileptic fits. Cases of unconsciousness are undoubtedly relevant, but in the Dutch context it seems conceptually if not pragmatically considered more in the question regarding intent or negligence, each employing its own requirements, although some legal scholars find the automatism doctrine in common law more appealing.[290] In practice, it hardly matters, as such exotic cases of sleepwalking or hypoglycaemia (low blood sugar) resulting in offences are very rare. Consequently, cases of unconscious automatism are restricted to scholarly debate or an occasional referral to the concept in case law, for instance in a 2009 murder case in which the murder was committed while the defendant/accused was in a dissociative state.[291] The defence first argued that the defendant acted under automatism, as his behaviour could be considered a reflex-like act, which should lead to an acquittal. This reasoning was rejected by the court. The defence secondarily argued that the automatism would lead to a lack of intent, again leading to a plea for acquittal. Again, this was rejected by the court. Lastly, the defence argued that automatism should lead to non-accountability. Here, the court rejected the claim, yet did take the dissociative state into account in ruling that the defendant should be held diminished responsible. This reasoning goes to show that unconsciousness or automatism-like behaviours are, in Dutch law, not so relevant on the level of *actus reus*.

What this comparative and descriptive account of the voluntary act requirement shows, is that voluntary act does not seem to be threatened by addiction in both legal systems. Addiction impairs certain capacities, as were discussed in the previous Chapter 2, but none of these negate the voluntariness in the sense of a 'willed, bodily movement'. As an example, consider a severe craving leading to an reduced ability to oversee long-term consequences and a reduced capacity to inhibit the urge to use drugs. None of these effects render the behaviour involuntary in the sense of 'unwilled', as the individual is still in control of his limbs and his movements.[292] Thus, related to addiction and related intoxicated states, it seems that for the Dutch system there is no theoretical relevance in the first tier of criminal liability. Neither the addiction nor any form of intoxication seem to negate the *actus reus* and its voluntary behaviour requirement.

290 Merckelbach and Van Oorsouw, 'Daders met geheugenverlies' in PJ Van Koppen and others (eds), *Reizen met mijn Rechter: Psychologie van het Recht* (Wolters Kluwer: Deventer, NL 2010).

291 Court of First Instance, Zwolle-Lelystad, April 23rd 2009, ECLI:NL:RBZLY:2009:BI2002.

292 The only situation in which addiction or substance use could perhaps result in a lack of voluntary act, is when addiction results in such a state of intoxication that that the defendant is unconscious. However, in such a state it would also be quite exceptional to produce bodily movements at all.

3.5 Addiction in the context of premeditation

Premeditation is an additional requirement for certain intentional offences.[293] It is, therefore, part of the first tier of the tripartite structure and serves as an aggravating circumstance, most notably by changing intentional manslaughter to the more serious offence of murder.[294] To recall, premeditation can be defined as "a moment of calm deliberation, of composed thinking; the opposite of an immediate, impulsive state of mind".[295] Again, at first sight, there is a seeming discrepancy with the capacities of the addicted defendant, who often experience craving-driven and reward-directed behaviour. 'Composed thinking' is not the first behavioural trait that comes to mind. Yet a closer look is necessary to address the exact legal requirements of premeditation.

The above definition of premeditation has evolved over the years and in doing so, has sparked much debate. Until a Supreme Court ruling in 2012, the concept had slowly been stretched from encompassing the actual contemplation of the offence, to merely having the time and the ability to do so.[296] This led to unsatisfactory results, as the concept could be interpreted and applied too broadly. Because the addition of premeditation to the offence has quite serious aggravating effects, there need to be sufficiently clear and strict requirements that justify doing so. After the 2012 ruling, the criteria have been more clearly (and strictly) conceptualised and now entail the following aspects.

First, there needs to have been time for deliberation: the offence should not have been on the 'spur of the moment'. The court has the discretion to decide this based on the factual circumstances. However, evidence-wise this can be problematic, as it is often just the defendant's statements that can indicate this. Therefore, a second element concerns the absence of contraindications suggesting the opposite, for instance an impulsive act or sudden rage.[297] This does not imply that if the court fails to find evidence for an impulsive act, that premeditation is immediately proven. As a third element, the Supreme Court specified that premeditation should not be assumed too quickly.[298] The court needs to weigh all elements carefully in order to make its judgment. Arguably, this still leaves room for a different interpretation, and the discussion remains, yet the general extent is clear: in order for premeditation to apply, the defendant needed to have considered his actions, and the presence of sufficient time and opportunity to do so can merely be considered an

293 E.g. Arts. 108, 115, 117, 289, 301 and 303 DCC.
294 Keiler and Roef, *Comparative Concepts of Criminal Law* (2nd edn, Intersentia: Cambridge, UK 2016).
295 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 261.
296 Supreme Court, February 28th 2012, ECLI:NL:HR:2012:BR2342. Also see: ibid 261 and Kelk, *Studiebook materieel strafrecht* 258.
297 Jörg, Kelk and Klip, *Strafrecht met mate* (14th edn, Wolters Kluwer: Deventer, NL 2019) 112-113.
298 Kelk, *Studiebook materieel strafrecht* 259.

important piece of evidence in this, but is not conclusive.[299] In all events, there needs to be concrete argumentation and detailed justification in the overall judgment in order to legitimise the severe aggravated consequences.

Based on the meaning that the court has attached to the concept of premeditation, the criteria seem to be relatively objective.[300] A central point is whether or not the act outwardly seems deliberate or impulsive, and to a lesser extent whether the actor had a capacity for acting thoughtfully, without feeling compelled or urged. This ability, and whether it may have been lacking due to an addiction, could potentially play a role as a contraindication. However, in a recent Supreme Court case the cocaine addiction of the defendant was not addressed in such manner.[301] In the case, the defendant asserted that he had been in a rage, could not foresee the consequences, had used a large number of drugs and that his body "screamed" for more.[302] This ought to have been a contraindication for premeditation, the defence stated. Yet the court argued that the multitude of actions performed by the defendant, and the associated decisions (finding a tool to strangle the victim, searching for his wallet, etc.) suggests that he deliberated the homicide. Arguably, there was enough time for reflection, as he was purposefully looking for money. Hence, premeditation was proven.

This case illustrates that the court interprets premeditation quite objectively, namely in light of the actual time and considerations of the defendant, and the purposeful actions, and not whether the considerations of the defendant were rational or whether the defendant was even able to think rationally. His purposeful actions showed an understanding of cause and effect (he understood that the strangulation led to the death of the victim, which enabled him to steal money and buy cocaine). Although annotator Keulen suggested addressing alcohol and drug intoxication as potentially relevant evidence in the assessment of premeditation, the courts' decisions do not yet reflect this.[303]

Courts seem to address the interesting relationship between disorders and premeditation quite variably, for instance in homicides committed whilst being psychotic. In some of those cases, the court did not hesitate to prove premeditation regardless of irrational or delusional beliefs, as long as the actions suggested a deliberate and logical cause-and-effect

299 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 263.

300 Objective in this context referring to an outward manifestation, i.e. how the behaviour can be interpreted by the judge. Subjectivity, in this context, rather refers to the intended meaning or mental states underlying the behaviour. Criminal law sometimes chooses to assess such mental states from an objective perspective, meaning that it is deduced from observable circumstances.

301 Supreme Court, January 27th 2015, ECLI:NL:HR:2015:122, annotated.

302 Statement during the hearings of the Court of Appeal, Arnhem-Leeuwarden, July 19th 2013, ECLI:NL:GHARL:2013:5260.

303 Annotation Keulen on the decision of the Supreme Court, November 5th 2013, NJ 2014/157, ECLI:NL:HR:2013:1112..

sequence.[304] In other cases, the court did accept that the defendant was shown to be incapable of deliberating adequately (due to mental disorders), which served as a contraindication for premeditation.[305] In one of these cases, the defendant additionally suffered from a frontal lobe syndrome, which was considered the reason that the defendant had severe volitional impairment, negating the possibility for premeditative deliberation.[306] Aside from providing an insight into the judgments on premeditation, this case additionally illustrates the use of neuroscience in criminal law, as the expert evidence from a neuroscientist was a decisive factor in the judgment.[307] The types of disorders underlying these decisions are mostly psychotic disorders, but also offenders on the autism spectrum, whose violent outbursts were considered sudden and unexpected.[308] This range of decisions in cases of premeditation and mental disorders – sometimes strictly objective, by referring to the amount of time for deliberation during the offence, and sometimes more subjective, by referring to the capacity to adequately deliberate – is criticised for being vague and inconsistent.[309] Schreurs and Ligthart have corroborated such variability in judgments on premeditation and mental disorders and suggest a framework similar to that of non-accountability to determine whether or not premeditation should be affected.[310] They suggest that either cognitive or volitional impairment could be valid markers and could serve as contraindications for the existence of premeditation. If such a framework were to be made more explicit, this may render judgments more consistent.

To relate this discussion back to addiction, it seems that there are currently no clear or consistent frameworks relating to premeditation and mental disorders. Although the requirements for premeditation itself have recently been clarified by the Supreme Court, contraindications due to mental disorders are not yet consistently assessed. It does seem that a range of impairments, including also volitional impairments, have been used as

304 See for instance the judgment of the Court of Appeal, Arnhem-Leeuwarden, February 24th 2014, ECLI:NL:GHARL:2014:1353: "Whilst psychotic, the defendant has performed a sequence of actions which follow each other logically and coherently, leading to one purposeful result. Because of that it cannot be considered a completely irrational, chaotic decompensation which would have warranted a lack of premeditation". See also Court of First Instance, 's-Hertogenbosch, June 29th 2010, ECLI:NL:RBSHE:2010:BM9468 in which the defendant's psychosis did not negate premeditation although it did fulfil the requirements for non-accountability.

305 Jansen and Stevens, 'Moord en waanzin. De betekenis van de psychische stoornis bij het bewijzen van voorbedachte raad' (2013) 43 Delikt en Delinkwent 639-648.

306 Court of First Instance, 's-Hertogenbosch, September 5th 2007, ECLI:NL:RBSHE:2007:BB2861.

307 de Kogel and Westgeest, 'Neuroscientific and behavioral genetic information in criminal cases in the Netherlands'.

308 E.g. Court of First Instance, Maastricht November 27th 2007, ECLI:NL:RBMAA:2007:BB8734 or Court of First Instance, 's-Hertogenbosch, September 5th 2007, ECLI:NL:RBSHE:2007:BB2861.

309 Jansen and Stevens, 'Moord en waanzin. De betekenis van de psychische stoornis bij het bewijzen van voorbedachte raad'.

310 Schreurs and Ligthart, 'Met voorbedachte raad en een psychische stoornis' (2020) Delikt en Delinkwent 225-252.

evidence in the past. As was discussed in chapter 2, addiction mostly impacts behaviour on a volitional level. Consequently, it seems that severe addiction-related impairments, for instance relating to cravings, could be relevant, although currently no cases were found in which this reasoning was applied. As Schreurs and Ligthart mention as well, experts could take on a more prominent role in addressing premeditation in cases of substance use or dependence.[311] By explicitly focusing on impairments that hinder careful deliberation (be it cognitive or volitional), courts may be more inclined to reflect on this advice, thereby potentially creating a clearer framework. However, based on the current trend that courts focus on assessing premeditation quite objectively, by addressing the amount of time during the offence and the purposeful and deliberate manifestation of the behaviour, it is unlikely that addiction will play a major role in negating it. Also, if the courts address a moment of deliberation based on purposeful action (as demonstrated by a logical cause-and-effect sequence of events), addiction is not likely to be influential. Even in the context of craving or severe addiction, the behaviour is still purposeful, thereby easily able to satisfy the conditions for premeditation. Thus, although we can make a theoretical case in which addiction negates premeditation due to volitional impairment, for now it does not seem to be very common in practice. Perhaps addiction can play a larger role in establishing intent or negligence, which is addressed next.

3.6 Addiction in the context of intent and negligence

Following the statutory offence descriptions, the offender needs to have acted with the required mental state for the offence in order to be held liable for the act, being intent or negligence. This can easily lead to translation problems, as the colloquial and psychological meaning of intent is not the same as the legal meaning. Intentional seems to refer to acting in a planned or purposeful way,[312] meaning that if one has volitional incapacities (potentially leading to problems controlling behaviour) or cognitive incapacities (potentially resulting in acting irrationally), in everyday or even psycho-behavioural contexts this would amount to unintentional behaviour. By this reasoning, there seems to be relevancy for addicted offenders, as their actions are often impulse-driven or seemingly irrational and self-destructive. However, as I show later, the legal requirements for intent are much more objective than that, resulting in very little to no leeway in the negation of intent. In order to explain this discrepancy as well as accommodate the common law reader, the theoretical foundations have to be explained in more detail.

311 Ibid.

312 See, for instance, the dictionary definitions of 'intentional', 'intentionally' or 'intend' in the Oxford Dictionary: https://www.oxfordlearnersdictionaries.com/.

As mentioned, Dutch law recognises three forms of intent: direct, indirect and conditional intent. Intent requires a cognitive aspect and a volitional aspect, referring to both knowing and wanting the outcome of the defendant's actions. The three gradations of intent differ mostly in terms of volition: for direct intent, a strong volition is required since the outcome needed to have been the primary goal of the defendant. For conditional intent, however, the defendant merely needs to have accepted and been reconciled with the potential outcomes, despite not necessarily desiring them.[313] Naturally, this form of intent is most difficult to assess and substantiate. The requirement for establishing conditional intent is that the defendant needed to knowingly and willingly have exposed himself to a *considerable chance* that the outcome (i.e. the criminal offence) would occur.[314] Proof for this requirement can be found in a risk component, a knowledge component and will component. The risk component proves that based on common knowledge and experience, the possibility of the outcome of the behaviour (for instance the death of another individual) was considerable. Secondly, the defendant needed to have known about this considerable possibility. If certain behaviour is commonly known to have risky consequences, it can automatically be assumed that the offender must have known about these as well. Lastly, the defendant needs to be reconciled with and accept the potential consequences. This (minimal) volitional component is indeed what distinguishes conditional intent from conscious negligence. Due to the inherent difficulty of proving this acceptance-requirement, it is often deduced from objective, factual circumstances of the case, in the absence of contraindications.[315]

Having outlined the requirements for intent, the question arises whether addiction, with or without associated intoxication, could negate this form of *mens rea*. Importantly, many scholars consider the notion of intent as largely normative: it is viewed as a legal concept, not a psychological one.[316] The potential application of impaired volitional or cognitive capacity is extremely small. According to case law, the only way in which (conditional) intent can be negated by a mental disorder is when "the defendant has such a serious mental disturbance that we should assume that he had lost complete insight into the scope of his behaviour and its potential consequences".[317] As such, most individuals are able to meet these minimal requirements of their mental capacities. Even cases in which the defendant operated in a psychotic episode, intent could be inferred objectively from

313 Kelk, *Studiebook materieel strafrecht* 258-263.

314 Ibid 263.

315 Ibid 268.

316 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 233.

317 Supreme Court, July 22nd 1963, NJ 1968, 217, annot. Enschedé, ECLI:NL:HR:1963:AB5623; Supreme Court, June 9th 1981, NJ 1983, 412, annot. Van Veen, ECLI:NL:HR:1981:AC0902; and Supreme Court, December 14th 2014, NJ 2006, 448, ECLI:NL:HR:2004:AR3226.

behaviour, as was eloquently explained by van Dijk: "Consider, for instance, a psychotic actor who kills his neighbour in the belief that God had ordered him to do so. One could assume that this is a matter of rational irrationality. The act consists of a rational, goal-oriented execution of his irrational, delusion-based plan".[318]

This is in stark contrast with some other legal systems. When briefly looking over the pond towards the common law jurisdictions, we find that mental disorders can negate intent. Insanity can be applied in two ways, namely as a defence proper (negating liability in situations where the requirements of *actus reus* and *mens rea* have been fulfilled) as well as a denial of offending (negating *mens rea*, or in extreme cases, voluntary act).[319] In the more common, latter case, this means that the *mens rea* of the legally insane defendant is negated and that the defendant had no criminal intent.[320] However, the insanity defence, as will be discussed in more detail later, is a rare exception, with only 122 successful cases in England between 2007 and 2011.[321] Hence, although insanity can negate *mens rea* (and intent) as a whole in theory, it is also not applied much in practice.

Although scholars, particularly non-legal scholars, have criticised this normative and rather objective interpretation of the Dutch notion of intent,[322] it seems to fit into the broader legal framework. After all, as will become clear later, the relatively wide scope of the non-accountability excuse (especially compared to common law countries) and the possibility of diminished accountability leave plenty of room to tailor towards mentally ill defendants. Moreover, there is a wide array of excuses available to defendants as well as many ways to reduce and customise sentences, as will be discussed in more detail later. Specifically, the measure of TBS[323] is interesting here, as it can be the most appropriate sentence for an offender with a disorder. However, sanctions including a TBS measure are not possible if the defendant is acquitted at the first tier of the liability structure.[324]As the

318 The author's translation of: "Neem bijvoorbeeld een psychotische actor die zijn buurman doodt, omdat hij gelooft dat God hem dat heeft opgedragen. Men zou kunnen stellen dat sprake is van rationele irrationaliteit. Het betreft een rationele, doelbewuste uitvoering van zijn irrationele, op wanen gebaseerde plan." In: Van Dijk, *Strafrechtelijke aansprakelijkheid heroverwogen. Over opzet, schuld, schulduitsluitingsgronden en straf* (Maklu-Uitgevers: Apeldoorn/Antwerpen 2008) 299.

319 Child and Ormerod, *Smith, Hogan, & Ormerod's Essentials of Criminal Law* (3rd edn, Oxford University Press: Oxford, UK 2019) 549.

320 "D explains her lack of *mens rea* (including, in extreme cases, her lack of voluntary movement) on the basis of what the law labels insanity.5 This includes all medical conditions which cause some bodily malfunctioning, which prevent D understanding the nature or quality of her acts. For example, D kills V under the insane delusion that she is breaking a jar.6 D, in this example, lacks subjective *mens rea* for any offence against the person." Ibid p.526. See also: Child and others, 'Defending the delusional, the irrational, and the dangerous'.

321 Mackay, 'Ten more years of the insanity defence' (2013) 12 Criminal Law Review 946-954.

322 See for instance Loonen, 'Opzet en vrije wil bij delicten door een psychische stoornis' (2016) 14 Nederlands Juristenblad 919-923.

323 See section 3.1.1.

324 Cleiren, 'Commentaar op art. 350 Sv' in C. P. M. Cleiren, M. J. M. Verpalen and J. H. Crijns (eds), *T&C Strafvordering* (Wolters Kluwer: 2021). See also Arts. 350 and 352 DCCP, stating that when an offence

tripartite system builds upon each consecutive element, intent needs to be proven first in order to reach the third tier, blameworthiness and excuses. If the court acquits a defendant due to a lack of intent, compulsory treatment based on TBS is not within the range of possible sentences.[325] Hence, this may partly explain the strict requirements for intent with regard to mental disorders. Importantly, as of 2020, criminal law courts have a new possibility to mandate compulsory treatment in a psychiatric hospital. As this is not a criminal measure but a civil procedure, the required fulfilment of the aforementioned tiers is not needed.[326]

The strict application of intent, also in relation to addiction, is nicely illustrated in the "Tolbert case", which is described in chapter 1. In this case, a lower court had first concluded that the defendant's psychosis negated his intent for the offence, which was later overruled as an unjust interpretation of the doctrine. The defence lawyer had claimed that intent was absent because it could not be established that the defendant had the intent to kill. After all, the mental capacities of the suspect at the time of the crime were limited, due to an amphetamine-induced psychosis. Moreover, the lawyer argued that conditional intent can also not be proved since there would have to be the awareness and acceptance of a considerable chance of becoming psychotic and as a consequence committing the offence. Since the defendant did not know, nor could have known, that this would happen and definitely did not reconcile himself with the outcome, he reasoned that conditional intent does not apply.[327] The court, however, concluded that the defence's reasoning was incorrect. The court claimed that the psychosis made the defendant unable to freely choose and act, at least not in concordance with reality, and hence there could not be intent regarding the offence. However, the court used a prior fault construction to claim that, *in casu*, the defendant still acted with (conditional) intent.[328] As will be discussed further in section 4.2, this is arguably an incorrect application of the Dutch prior fault doctrine.

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definition has been fulfilled (and the offence has been deemed unlawful and the defendant blameworthy), the court proceeds to impose a sentence or measure. In addition, when there is a successful defence or excuse, the court will issue a 'dismissal of prosecution' which will still allow for imposing a measure such as TBS. In other words, when the offence description has *not* been fulfilled, there is no possibility for a sentence or measure. The provision for TBS (Art. 37a DCC) also states this and specifies that it is applicable when there is a concurrent fulfilment of the offence description and a psychiatric disorder, i.e. the first tier of the structure has to be affirmed.

325 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 234 footnote 152; See also Knigge, *Strafuitsluitingsgronden en de structuur van het strafbare feit* (Den Haag 1993) 21.

326 More on this in section 3.6. See also Reijntjes-Wendenburg, 'Zorgmachtiging verplicht ggz in strafzaken: art. 2.3 Wfz' in M.F. Attinger et al. and P.A.M. Mevis et al. (eds), *Handboek Strafzaken* (Wolters Kluwer: Deventer, NL 2021).

327 Court of Appeal, Leeuwarden, April 16th 2007, ECLI:NL:GHLEE:2007:BA3007.

328 Ibid.

On appeal, the Supreme Court ruled that the decision regarding conditional intent was insufficiently motivated and that it showed an incorrect interpretation of the meaning of intent.[329] In order to prove that the defendant accepted the considerable chance of the event occurring, the court ought to have looked at the objective facts of the case to assess whether or not the defendant was behaving purposefully to achieve the result. Such behaviour can be considered as indicative of having intent. In this case, the court considered the defendant's violent behaviour to be objectively indicative of an intent to kill. Moreover, witnesses had seen that the defendant recognised the victim and therefore the court concluded that he was still able to understand the scope and consequences of his actions, thereby not fully diverged from reality. Ultimately, the defendant was considered to have acted with conditional intent.[330]

What this vacillating judgment of the case shows is the difficulty and ambiguity of mental disorders and negating intent.[331] Based on the requirements as currently set out by the Supreme Court, addiction as a mental disorder in itself can never take away the small amount of insight that the individual will have present, as the threshold to be considered fully unaware is high if not impossible to negate with a mental disorder.

Although intent is the standard requirement for criminal behaviour, the legislature has also chosen to criminalise certain negligent acts. Generally, these are offences that also have an intentional counterpart, in which the maximum sentence is higher.[332] Determining a negligent act requires two steps. First, it needs to be established that the defendant acted significantly inconsiderately or carelessly.[333] This is primarily an objective evaluation. The second step addresses the culpability of the actor. Hence, here we need to assess whether the defendant not only *should* have acted differently but also whether he *could have*, rendering this element more subjective. It is generally assumed that people could have avoided the negligent behaviour, so this second step only arises when there are specific indications that the actor did not act culpably.[334] As such, negligence is a highly normative concept, addressing the question of whether the defendant could have *reasonably* been expected to act differently than he or she did. In this, the law employs a 'reasonable person' standard resulting in an objective evaluation of the doctrine rather than a psychological one. Due to this normative framework, it is also very much subject to the societal standards of the time and circumstances of the offence: what kind of risks do we, as a society, deem

329 Office of the Procurator-General at the Supreme Court, December 9th 2008, ECLI:NL:PHR:2008:BD2775.

330 Court of Appeal, Arnhem, February 17th 2010, ECLI:NL:GHARN:2010:BL4185.

331 In addition to that, the case is well-known for its application of the prior fault doctrine. Hence, the case will be discussed in more detail later.

332 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 264-265.

333 "aanmerkelijk onachtzaam of onvoorzichtig" Kelk, *Studiebook materieel strafrecht* 294.

334 Kelk, *Studiebook materieel strafrecht* 296.

acceptable and reasonable, and when are they considered to be criminal? Consequently, the concept of *'Garantenstellung'* is highly relevant in assessing negligence: this entails that we can demand more responsibility from individuals with special abilities or characteristics, such as police officers or nurses.[335]

The objective elements of negligence clearly cannot be negated by a mental disorder, but what about the subjective elements? According to van Dijk, psychological conditions can play a role here if it can be proven that these disorders impeded the actor in preventing the violation of the law.[336] Addiction could, technically, be relevant here and thus, these elements are interesting to explore further.

If an individual does not have the capacity to conform to the reasonable man standard, either by not understanding the societal norm that is required (for instance, in the case of low intelligence) or obeying that norm (for instance, by being out of touch with reality due to a psychotic episode), the subjective elements cannot be fulfilled.[337] Addiction, as was explored in chapter 2, seldom comes alone. Individuals often experience a wide range of comorbid disorders – schizophrenia commonly being one of them[338] – and learning disabilities or mental retardation are common amongst addicts.[339] Consequently, do they fulfil the subjective requirements for negligence? Can they conform to the required standard of care? Even regardless of comorbid disorders, does the nature of addiction – especially during an episode of craving – not impact the ability to act diligently and violate one's duty of care more quickly? The reasonable man standard is supposed to reflect the average individual, i.e. the default position, which ought to express the capacities to understand cause and effect as well as act accordingly. This does seem to require a mental state that not every individual is capable of, particularly not when they are heavily dependent on substances and/or suffer from comorbidity. Hence, the reasonable man standard already excludes a group of individuals upfront.

Yet the law does not hold everybody to this reasonable man standard. After all, *Garantenstellung* can play a role, and we can adjust the norm to a higher standard to account for special characteristics and abilities. Nevertheless, it seems that we cannot adjust the bar downward to account for 'outliers' at the bottom end. If the special characteristics are weighed on the one side, should they not be weighed on the other? Similar arguments were made for adolescent offenders, and authors have addressed whether it is appropriate

335 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 272.

336 Van Dijk, *Strafrechtelijke aansprakelijkheid heroverwogen. Over opzet, schuld, schulduitsluitingsgronden en straf* 63.

337 Ibid 65.

338 American Psychiatric Association, 'Substance-Related and Addictive Disorders' 496.

339 Luteijn, Didden and der Nagel, 'Individuals with mild intellectual disability or borderline intellectual functioning in a forensic addiction treatment center: Prevalence and clinical characteristics' (2017) 1 Advances in Neurodevelopmental Disorders 240-251.

to hold them to a similar standard as they do for adults despite differences in their capacities.[340]

Of course, this is in practice hardly relevant. Only rarely does this subjective question, i.e. whether the carelessness was culpable, arise in case law, as courts prove negligence primarily based on the objective transgression of care.[341] Even if the addiction were to be considered as an impairment of capacities, it might simply be dismissed due to prior fault.[342] Let alone that adjusting a legal standard to exclude liability in certain circumstances may sound humane at first, but ought to lead to other forms of exclusion by analogy, which is of course not desirable in an equal society. Therefore, this discussion merely makes for an interesting theoretical reflection upon the standards that criminal law imposes, and how in severely addicted individuals, who arguably already have a much wider array of problems working against them than the average individual, are nonetheless competing in the same league. More practical, and also more appropriate, is a discussion about the role of addiction in the context of blameworthiness and excuses.

3.7 Addiction in the context of blameworthiness

The previous sections show that there is little (practical) relevance for addiction in establishing the objective and subjective elements of the statutory offence description. For many legal scholars, this would have been apparent already: many of the previous doctrines are highly normative and determined objectively, meaning psychological circumstances only play a very minor role. The current section is different. Mental disorders are a central aspect in excuses and their negation, wholly or partially, of the blameworthiness of the actor. The applicability of the offender's mental disorder (potentially including addiction) is clearly relevant for the excuse of non-accountability, the equivalent of the common law insanity defence. However, a small detour toward the excuses of duress, i.e. psychological necessity, is worthwhile. It seems that whereas a mental disorder is a requirement for non-accountability, duress is mainly concerned with psychological conditions or

340 Although this is (admittedly) most frequently discussed in a US context, for instance: Levick and Tierney, 'United States Supreme Court adopts a reasonable juvenile standard in JDB v. North Carolina for purposes of the miranda custody analysis: Can a more reasoned justice system for juveniles be far behind' (2012) 47 Harvard Civil Rights-Civil Liberties Law Review 501-527 or Northrop and Rozan, 'Kids will be kids: Time for a reasonable child standard for the proof of objective mens rea elements' (2017) 69 Maine Law Review 109-135.

341 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 273.

342 As I discuss in the next chapters, technically, prior fault is meant to negate defences only. But as I discuss later, oftentimes implicit prior fault statements are used throughout that influence our perceptions of the defendant's liability.

dysfunctions that cannot be diagnosed as such.[343] Interestingly, it is the exception rather than the rule that a behavioural report is drafted in cases that rely on the defence of duress, contrary to cases of non-accountability. Since duress relates to mental capacities just as much as non-accountability does, this already seems interesting to examine further.

Hence, this section covers a great deal of information. First, section 3.5.1 contains the details and applicability of the Dutch excuse of non-accountability. Second, the excuse of non-accountability knows a diminished counterpart, which is technically part of the sentencing phase. Yet due to the inherent connection to the full, excusing variant, the degrees of diminished accountability are also elaborated on in this section. And third, the concept non- or diminished accountability is addressed from a comparative perspective, to draw parallels and learn from other jurisdictions, specifically from Germany, and England and Wales. Lastly, this section discusses the doctrinal framework of duress and its potential applicability to addiction.

3.5.1 The non-accountability excuse

Article 39 of the DCC posits that 'an individual will not be considered criminally liable if he commits an act for which he cannot be held accountable due to a mental disorder, psychogeriatric condition or intellectual disability'.[344] As the provision itself already suggests, this is a very open definition: indeed, a clear framework and requirements for the excuse are absent, although case law and legal scholars have suggested more clearly delineated requirements, which I discuss later.[345] In this current relatively long section, I ultimately come to the conclusion that there is no reason to exclude (extreme cases of) addiction from the scope of the non-accountability excuse. This argument is predominantly based on the open standard that article 39 DCC provides, as well as based on these more clearly defined requirements from scholars and case law. What is more, due to the developments in understanding addiction and the knowledge from the neurosciences regarding long-term substance use and the effects on capacities, I argue that the possibility for non-accountability in cases of addiction should not be dismissed too quickly but warrant careful consideration. However, such an application would be very rare, and only relevant in extreme cases, and even then still subjected to the intricacies of a prior fault doctrine. These latter prior fault rules take central stage in the next chapter 4. In this section, I first elaborate further on the

343 Beukers, 'Over de grenzen van de stoornis' ("Mental Disorder in Criminal Law").

344 Author's translation of art. 39: "Niet strafbaar is hij die een feit begaat, dat hem wegens de psychische stoornis, psychogeriatrische aandoening of verstandelijke handicap niet kan worden toegerekend."

345 For now, see Bijlsma, *Stoornis en strafuitsluiting: Op zoek naar een toetsingskader voor ontoerekenbaarheid* (Wolf Legal Publishers: Oisterwijk, the Netherlands 2016) and Meynen, 'Een juridische standaard voor ontoerekeningsvatbaarheid?' (2013) 2013 Nederlands Juristenblad 1384-1390.

content of the excuse, the framework as suggested by Bijlsma, as well as the practical application thereof in the Bart van U. case.

Although it is considered the equivalent of the common law notion of the 'insanity defence', the Dutch term *ontoerekeningsvatbaarheid* is better translated as non-accountability. In practice, these excuses serve a similar purpose, but the semantic difference is interesting, nonetheless. The term insanity defence suggests a strong focus on the psychological disabilities and disorders of the defendant, i.e. whether the offender is 'insane'. Conversely, non-accountability is not merely about being disordered but rather emphasises that this is a matter of 'legal attribution', thereby reflecting the more normative character of this excuse to a larger extent than the insanity defence. Of course, as we will see later, the disorder still plays a central role in this attribution. The term non-accountability and its underlying meaning can be compared with the German term *Schuldunfähigkeit* (literally 'lack of capacity of guilt') which I refer to as the 'incapacity of guilt defence' from now on, and which stresses the excusing effect of the defence and focuses on negating the blameworthiness of the offender.[346] These semantic differences between the three jurisdictions, however small, already suggest that the doctrines have variations in their applicability.

Although the non-accountability excuse can be applied to all sorts of crimes, it is mostly discussed in serious crimes for which a long prison sentence or mandatory treatment is demanded. Theoretically, this is an all-or-nothing defence: cases of non-accountability can only lead to a full acquittal.[347] Although no punishment can be imposed on cases of an acquittal, it is possible to impose compulsory measures, most famously the TBS measure. These possibilities are further elaborated on in section 3.7. In addition to an excuse of non-accountability, there is also the possibility of diminished accountability pleas for cases of impaired rather than fully absent mental capacity. These do not lead to a full acquittal but serve as a mitigating circumstance. As such, they are distinct from a full excusing condition as meant in article 39 DCC, since the actor is still considered (somewhat) blameworthy. Consequently, in cases of diminished accountability, courts can still impose punishment in addition to measures.[348] In terms of structure and legal theory, determining degrees of accountability is therefore not a matter of the third tier of the tripartite structure, but rather a matter of sentencing. In practice, the possibility for a diminished accountability plea is considered after ruling out any exculpatory defences. However, as it is inextricably linked to the full excuse, I discuss it in this chapter rather than the chapter on sentencing.

346 See also: Blomsma and Roef, 'Justifications and excuses' 243.

347 See footnote 259: technically it would not be an acquittal but 'dismissal of prosecution' (*ontslag van alle rechtsvervolging – ovar*).

348 Brants, Jackson and Koenraadt, 'Culpability compared: Mental capacity, criminal offences and the role of the expert in common law and civil law jurisdictions' (2016) 3 Journal of International and Comparative Law 411-440.

While the applicability of the excuse may suggest a primarily psychological discussion, strengthened by the use of the term 'insanity' in other jurisdictions, the decision regarding non-accountability is reserved for courts. However, since it requires information regarding the mental capacities of the offender, courts often gather advice from forensic behavioural experts.[349] These experts are mostly forensic psychologists, psychiatrists or both. When the court determines the accountability of the defendant, it needs to do so by answering three questions.

Requirements for the non-accountability excuse. First, it needs to be established that at the time of the offence, the defendant was suffering from a 'mental disorder, psychogeriatric condition or intellectual disability'.[350] The exact scope of the concept 'mental disorder' is not entirely clear: is it a purely psychiatric requirement or are certain disorders inapplicable in the eyes of the law? I.e. is it a medical concept or a legal one? Some scholars believe the latter and consider alcohol intoxication, for instance, to fall outside the scope of the doctrine, despite its recognition in the Diagnostic and Statistical Manual of Mental Disorders (DSM)-5.[351] Others prefer the concept to just entail "all mental disorders" from a psychiatric perspective.[352] Arguably, it is not entirely relevant, as the legal relevance of the disorder has to be proven in any event in the second and third questions. Hence, even if there were no restrictions on the scope of potential mental disorders, this would not lead to unsatisfactory or over-exclusive results. Moreover, excluding certain disorders (such as intoxication) can also be accounted for in other ways, such as with a prior fault doctrine. As such, perhaps this particular sub-question would best be left as a psychiatric concept, leaving the normative weighing for the other steps.[353]

After the presence of a mental disorder is established, the second question concerns whether or not this disorder was the cause of the behaviour that led to the offence. This already seems like a more legal question than the previous one, although the behavioural experts still testify regarding this. Only a strong and compelling causal connection should

349 Kelk, *Studiebook materieel strafrecht* 324.

350 Note that the experts often divide this first question into two separate elements, namely first whether there is a disorder and then whether this disorder was present at the time of the offence. Thus, in many reports, including the reports that are discussed as part of the case law analysis of chapter 5, the experts specifically refer to four questions.

351 Remmelink and Hazewinkel-Suringa, *Mr. D. Hazewinkel-Suringa's Inleiding tot de studie van het Nederlandse strafrecht* (Kluwer: Deventer, NL 1996) 292-293.

352 Nieboer, *Aegroto suum; de toerekening in het strafrecht bij psychische afwijkingen (diss. Groningen)* (Boom: Meppel, NL 1970) 66-68.

353 In addition to that, the matter of whether to include intoxication as a disorder on this level, is also not a very practical one for two reasons. Usually, if there is only an intoxication and no further suggestion of co-morbidity, a behavioural report is not drafted, so the question of whether there is a disorder present is not even asked, avoiding the issue altogether. Alternatively, if there is a behavioural report, there are usually other disorders (that are arguably more 'legally relevant') on which to focus on, moving the matter of intoxication again to the background.

be the basis of a non-accountability conclusion, which in itself already suggests that the disorder ought to be severe.[354] Mooij additionally argues that a mere causal connection is not enough, but that the disorder ought to be thematically related to the offence, i.e. the actions and the offence must express the nature of the disorder and mental disturbance.[355] For instance, persecutory delusions (as part of a psychosis) do not thematically relate to offences such as fraud.[356]

The third, concluding question to be answered is whether the defendant is fully or (partially) not accountable for the offence. This final question is explicitly reserved for the court, as it contains the weighing of the previous elements on a normative level. Here, legal doctrines such as *culpa in causa* can be accounted for, and the court has the freedom and space to interpret all the evidence as a whole. Scholars such as Bijlsma but also Meynen have argued for a stricter framework of criteria that the Supreme Court can employ, to limit judges in some way but to ensure more legal certainty and consistency.[357] Others have contended this and believe that, after all, non-accountability is an exceptional phenomenon and that it does not need to be confined to a specific framework. The essence of the excuse ought to remain open and able to incorporate all the circumstances of an individual case, reflective of the purely normative and exceptional nature.[358]

In his doctoral thesis, Bijlsma did identify a structure, based on a thorough literature and case law review, that the courts need to satisfy in cases of non-accountability. Very simply put, these are: (1) a disorder requirement (*stoornisvereiste*), consisting of 'a pathological disorder of the defendant's mental capacities or impaired development'; (2) a causal connection between the disorder and the offence in question, more specifically, between the disorder and the impaired capacities mentioned under 3 and 4; (3) understanding the unlawfulness of the behaviour; and (4) the ability to act in accordance with his understanding of the unlawfulness of the behaviour.[359] Hence, to translate the wide and unspecific requirements of article 39 DCC into a capacitarian framework, the excuse of non-accountability requires a lack of rationality (cognitive capacity) or a lack of control (volitional capacity).[360] These two capacities require some further discussion.

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354 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 352.

355 Mooij, *Toerekeningsvatbaarheid. Over handelingsvrijheid* (Boom: Amsterdam 2004) p.124-128.

356 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 352.

357 Bijlsma, *Stoornis en strafuitsluiting: Op zoek naar een toetsingskader voor ontoerekenbaarheid* p. 199-204; Meynen, 'Legal insanity standards: Their structure and elements', *Legal insanity: Explorations in psychiatry, law, and ethics* (Springer: Basel, Switzerland 2016) 39.

358 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 353.

359 Bijlsma, *Stoornis en strafuitsluiting: Op zoek naar een toetsingskader voor ontoerekenbaarheid* p.245.

360 This framework clearly mirrors both the German approach to the incapacity of guilt defence (as discussed in section 3.5.3) as well as the framework that is outlined by the Model Penal Code, a model act designed

With regard to the cognitive capacity, i.e. understanding the unlawfulness, mere unawareness or ignorance that the act is a criminal offence, does not exculpate. Rather, the defendant has to be unable to understand that what he is doing is not lawful, for instance, due to psychosis. Moreover, an inability to understand the *moral* wrongfulness of the behaviour, such as due to a psychopathic personality disorder, is also not sufficient.[361] Volitional incapacity is also not an easy requirement to satisfy. An urge is not enough to satisfy this aspect, as all individuals may experience urges at some point in their life, and that merely giving in to impulses should not be excusatory. Because of the common nature of urges, and the problem of when there really was a volitional incapacity or perhaps just a weakness of will, makes the volitional capacity requirement a controversial one. Rather, the requirement entails that the urge must have led to the defendant being 'substantially unable to act in accordance with his understanding of the unlawfulness of the behaviour'.[362] 'Substantially unable' is thus not an absolute requirement: not all control needs to be lost.

A framework for non-accountability: Bart van U. A relatively recent case is interesting here, as a Court of Appeal used these criteria as formulated by Bijlsma in its decision.[363] In the case, revolving around Bart van U. who killed his own sister and a former Dutch politician, the court considered that the defendant was accountable for his actions despite his psychosis. However, initially the court of first instance of Rotterdam ruled differently. The behavioural experts reported that a non-accountability excuse could not be justified entirely. The experts' conclusions were reached primarily based on the content and nature of the defendant's delusions, which corresponded with somewhat realistic circumstances.[364] Nonetheless, the court believed that a realistic component to the offence should not negate the applicability of the excuse altogether: they ruled that the defendant was non-accountable.[365]

After the prosecution appealed the verdict, the Court of Appeal rejected the non-accountability excuse and ruled that Bart van U. was at least partially accountable.[366] The criteria by Bijlsma, outlined earlier, were used in order to reach this conclusion. Moreover, the court explicitly stated that "in cases like this, in which the defendant suffers from a severe psychiatric disorder, the starting point [*of non-accountability*] is that the behaviour of the defendant cannot have been (partially) prompted by realistic,

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by the American Law Institute to provide more consistency and standardisation across the US. See also: https://archive.org/details/ModelPenalCode_ALI.

361 Bijlsma, *Stoornis en strafuitsluiting: Op zoek naar een toetsingskader voor ontoerekenbaarheid* p.247-248.

362 "De drang moet tot gevolg hebben dat de verdachte in *onvoldoende mate* in staat is in overeenstemming met zijn begrip van de wederrechtelijkheid te handelen." Ibid 247.

363 Ter Haar, Meijer and Seuters, *Leerstukken strafrecht*, vol 4 (Wolters Kluwer: Deventer, NL 2018) 586.

364 For instance, the defendant felt bullied by his sister and opposed the political views of the politician, which rendered his psychotic anger breakdown not entirely irrational or motivated solely by delusional thoughts.

365 Court of First Instance, Rotterdam, April 13th 2016, ECLI:NL:RBROT:2016:2699.

366 Court of Appeal, The Hague, March 16th 2017, ECLI:NL:GHDHA:2017:684.

non-pathological motives. Only then can the behaviour be excused".[367] This suggests that, in order to be considered non-accountable, the behaviour has to be *solely* explainable by the disorder (the psychosis in this event) and cannot include any non-pathological components.[368] This leads to a very strict requirement of causality: one that does not clearly follow from the provision of article 39 in the DCC.[369] The authors Ligthart, Kooijmans and Meynen argue that this is not in line with the nature of human conduct and mental disorders, which are hardly one-dimensional and are often shaped by a multitude of factors, not necessarily all pathological.[370] I can only agree with this.[371] As such, a strict causality requirement can lead to unsatisfactory results and an under-inclusive norm for non-accountability.[372] The meaning of pathological is, from this case alone, not fully delineated: does that require that all relevant components that lead to the offence were caused by the disorder? Or does the requirement of only pathological motives mean that the behaviour needs to be irrational? If the Court interprets 'non-pathological motives' as a form of rationality, then this would be somewhat repetitive, as cognitive (in)capacity is also addressed in the later requirements. Hence, it would be more sensible to consider non-pathological motives as any motives that were not caused by the disorder.

In a recent case, a Court of Appeal reflected on the causality requirement and the non-pathological motives.[373] Malek F. was considered non-accountable due to his psychosis, despite the prosecutor's office arguing that Malek F. was partially prompted by "realistic, non-pathological motives", seemingly using the argument in the Bart van U. case. The Court followed the experts' opinions, however, and stated the following: "As the Court understands it, realistic motives can definitely play a role in apparently 'normal' behaviour, even though it is possible – and likely – that these realistic motives will become distorted

367 Original: "Het hof neemt in een geval als het onderhavige, waarin sprake is van een verdachte met een ernstige psychiatrische stoornis, als uitgangspunt [voor ontoerekeningsvatbaarheid – AEG] dat aannemelijk moet zijn dat het handelen van de verdachte niet (mede) is ingegeven geweest door reële, niet pathologische motieven. Eerst dan kan straffeloosheid volgen." Voor een discussie of "reëel" wel geïnterpreteerd dient te worden als "realistisch", zoals ik het heb vertaald, zie Ligthart, Kooijmans and Meynen, 'Een juridisch criterium voor de ontoerekeningsvatbaarheid: Een uitspraak van het gerechtshof Den Haag geanalyseerd' (2018) 1 Delikt en Delinkwent 101-110.

368 Ibid 103.

369 Ibid 105.

370 Ibid 105-106.

371 For instance, many disorders on the schizophrenia spectrum, such as in the present case, are characterised not only by bizarre but also non-bizarre delusions, such as the common persecutory delusion of being under surveillance by the police, which is often triggered by realistic (yet untrue) signs. See: American Psychiatric Association, 'Schizophrenia spectrum and other psychotic disorders', *Diagnostic and statistical manual of mental disorders (DSM-5®)* (Author: Washington, DC 2013) 87.

372 Ligthart, Kooijmans and Meynen, 'Een juridisch criterium voor de ontoerekeningsvatbaarheid: Een uitspraak van het gerechtshof Den Haag geanalyseerd' 107.

373 Court of Appeal, the Hague, May 11th 2021, ECLI:NL:GHDHA:2021:856.

at some point".[374] Moreover, the Court explained that although some of defendant's frustrations could be considered 'normal', or non-pathological, they (1) played a crucial role in fuelling the anger and the psychotic breakdown and (2) can be explainable through his psychotic vulnerability. Thus, it seems that Courts may be willing to interpret the causality requirement as less strict than sometimes suggested based on Bart van U., which is in line with both scholarly criticism as well as our understanding of human nature.

This judgment of the Bart van U. case gives further meaning to the two follow-up requirements that Bijlsma suggested, i.e. the two capacities of either understanding the unlawfulness of the behaviour or the ability to act in accordance with his understanding of the unlawfulness of the behaviour. The first capacity, the cognitive ability to understand the unlawfulness, is not necessarily a straightforward one. The court suggests a legal interpretation of the ability to understand the wrongfulness, meaning that the defendant ought to have not understood that he was committing a criminal offence. The restrictive legal interpretation of this capacity can lead to problems, for instance, if a defendant was aware that his actions resulted in the death of a victim, arguably being aware of the criminal nature of such conduct, yet acting out of a delusion in which the killing was the most appropriate thing to do.[375]

Lastly, the court addressed the volitional requirement in some more detail. For both victims, the judges concluded that no direct or acute necessity within the defendant's delusions explained the homicides. There was no evidence to suggest that the defendant was completely submerged in his psychosis to prevent him from acting differently.[376] Consequently, it seems that the court required quite a high degree of loss of control, caused by the disorder, as the delusion in the current case was not enough to strip the defendant

374 Author's translation of the original: "In schijnbaar 'normaal' gedrag, zo begrijpt het hof, kunnen reële motieven zeker een rol spelen al is het mogelijk en waarschijnlijk dat vervorming van die reële motieven op enig moment plaatsvindt." Court of Appeal, the Hague, May 11th 2021, ECLI:NL:GHDHA:2021:856.

375 The authors use the example of a well-known Dutch case of a mother who killed her child, believing it would save the child from a much more painful death. See also: Court of First Instance, Amsterdam, March 30th 2009, ECLI:NL:RBAMS:2009:BH8888. Ibid 07-108. Moreover, Bijlsma himself also reflected on the judgment of Bart van U., and stated that the cognitive awareness of the unlawfulness requirement should be interpreted more broadly than the court currently did. Not only should the court consider whether the defendant knew he was committing an offence, but more importantly whether the defendant *during the offence* considered that it was unlawful or that due to his disorder he believed he was acting under justificatory circumstances. See: Bijlsma, 'Wederrechtelijkheid of morele ongeoorloofdheid: welk inzicht moet de ontoerekenbare verdachte ontberen?' (2019) 10 Delikt en Delinkwent 809-811.

376 Court of Appeal, Den Haag, March 16th 2017, ECLI:NL:GHDHA:2017:684. "[D]e verdachte [verkeerde] weliswaar in bovenomschreven waan, maar er zijn geen aanwijzingen voor een directe, acute, aanleiding voor het doden van zijn zus binnen zijn waandenken. Evenmin zijn er omstandigheden aanwijsbaar die ervoor zorgden dat de verdachte op dat moment volledig werd beheerst door een met de waan samenhangende alles overheersende angst en dat hij daardoor niet anders kon handelen."

of all volitional capacity. This is not entirely in line with Bijlsma, who argues that the volitional requirement should not be an absolute one.[377]

To wrap up the discussion on the requirements, at its basis the Dutch non-accountability excuse lacks a clear legal standard. Yet from recent case law, it seems that both cognitive and volitional capacities can be relevant, although it is not yet clear which direction future cases will take. Based on the case Bart van U., the courts seem to adopt a criterion requiring a mental disorder, as well as a causal connection between this disorder and the behaviour, and finally the impairment of two potential capacities: cognition and volition. What happens if addiction, and criminal behaviour as a consequence of addiction, is tested against this framework? It seems that (very severe cases of) addiction as a basis of the non-accountability excuse is theoretically possible, albeit in very severe and limited circumstances, rendering its practical relevance questionable. It is worthwhile to explore this in some more detail.

Applying the non-accountability framework onto cases of addiction. The requirements for classifying as a disorder do not pose many problems. Although sole intoxication is sometimes discussed as falling outside the scope of the legal doctrine, addiction has never been excluded as such. Moreover, it is widely recognised and accepted as a psychiatric disorder. The causal connection between the disorder and the behaviour is not necessarily problematic either: in general, much of the craving-induced or substance-driven behaviour is highly causally connected to the addiction. The addiction can be considered the *conditio sine qua non* – especially in many cases of property crimes – as without the addiction there would not have been cravings, or high irritability and impulsivity, or financial necessity to commit an offence. With more serious offences, for instance, homicides, this is of course less obvious: arguably, this cannot be explained without addressing other psychological and circumstantial factors that led up to the offence. However, regardless of the type of offence, if the causal requirements are interpreted as strictly as in the Bart van U. case, this would pose problems. Addiction – and thus addiction-related crime – is highly multi-dimensional, as discussed extensively in chapter 2, and there is much influence of factors that are not only explainable by the addiction. The role of the environment as well as peers is essential in understanding the dynamics of the addiction. Hence, it seems that the general connection between addiction and criminal behaviour is very clear, but that it depends on the strictness of the causality criterion's application (i.e. whether it is strictly mono-causal) on whether it would be fulfilled. Moreover, as explained before, it would also depend on the meaning of 'non-pathological'. However, based on the more recent case of Malek F., in which 'normal' elements were still considered pathological, because they "can be explained based on the pathology [*the*

377 Bijlsma, *Stoornis en strafuitsluiting: Op zoek naar een toetsingskader voor ontoerekenbaarheid* 247.

psychosis] of the defendant".[378] With this interpretation in mind, it would not be far-fetched to consider certain addiction-driven behaviour to be fully pathological, despite certain 'normal' elements.

Nonetheless, as a thought experiment, let us assume that the causality requirement would be very strictly interpreted. Would the assessment of causality be different if the perspective of the Brain Disease Model (BDM) was emphasised more? As was discussed in chapter 2, several functional and structural brain changes can help explain why an addicted defendant acted the way he or she did. From their perspective, addiction is in its essence a brain disease, which is the root of the behaviour. Indeed, from that perspective, it would seem easier to fulfil a strict causal requirement. If the court would emphasise the ultimate drive behind the behaviour, i.e. whether the addiction is at the heart of the decision-making, then from a BDM perspective, it could satisfy such a strict causality requirement. The earlier decision by the court explained that there had to be no realistic non-pathological motives in order for non-accountability to apply.[379] When the behaviour was solely motivated by cravings, and if one would take the standpoint that brain changes cause the defendant to act impulsively or unable to oversee long-term consequences, this can be considered the direct cause of the cravings and the drug-using behaviour. Although most of the offences still have a clear purpose that is rationally motivated and shows a realistic understanding which aims to satisfy rewards, it is still triggered by addiction, which from the BDM point-of-view is a pathological cause. Consequently, whether or not the causality requirement is fulfilled may depend on the perspective taken by the respective courts, i.e. whether a disease-model perspective is taken or not. Moreover, as mentioned, it would also depend on the meaning of the causality requirement and the strictness of the mono-causality thereof. It would require additional cases to more clearly develop the meaning of the causality requirement, and clarify when behaviour can be considered fully pathologically-motivated.

Nevertheless, despite the defendant's behaviour (potentially) being pathologically-motivated, it is not necessarily illogical or incoherent conduct. As stated, there are often still clear goal-oriented and rational actions involved, despite being fuelled by substance dependencies. As such, after fulfilling the causal requirements – assuming these could be fulfilled – it is essential to address any impairments in capacities. Lack of cognitive capacity, especially when considering the interpretation that the court gave it in the Bart van U. case, seems to be hard to satisfy. Addiction generally does not impair the ability to understand the wrongfulness of the actions. When committing offences, such as property offences, to satisfy cravings, most will know that it is a criminal offence yet

378 Author's translation: "te verklaren zijn vanuit de pathologie van de verdachte." Court of Appeal, the Hague, May 11th 2021, ECLI:NL:GHDHA:2021:856.

379 See footnote 367. Court of Appeal, The Hague, March 16th 2017, ECLI:NL:GHDHA:2017:684.

continue anyway. There are various explanations possible, ranging from the distress of the addiction outweighing the (perceived) severity of the offence, to the difficulty to prioritise long-term consequences over short-term rewards. In all of these, there is no lack of awareness about the wrongfulness. If the perception of moral wrongfulness were central, this may be different: the defendant may feel like his actions are justified, for instance, due to perception that satisfying the craving is less wrongful than stealing. In that sense, it may feel like a situation of necessity to the defendant, thereby negating an element of moral wrongfulness. Yet, this is likely not the interpretation that the courts hold, as demonstrated by the analysis of the Bart van U. case.[380]

Then last but not least, the ability to conform the behaviour to the law. This volitional capacity is arguably the most relevant for addicts, yet also the least explained in case law.[381] Despite understanding the unlawfulness of stealing or breaking and entering, would an addicted defendant be able to conform his behaviour to this norm? Or is the underlying pathology too strong to resist? Clearly, this is a very casuistic question, as addiction can manifest itself very differently in the population and it would be too simplistic to say that all of them are able or unable to control themselves. However, it does seem possible that an addiction is so severe, resulting in such strong cravings, that an addict may feel compelled to act unlawfully. In chapter 2 it was shown that addiction can strongly affect impulse control which, combined with the increased salience of substances and impaired capacities for planning and overseeing consequences, can result in the individual being severely volitionally impaired. In that sense, the volitional prong of non-accountability – and the possibility for addiction to negate it – should at least be overtly discussed. Without a clear legal standard for non-accountability, it remains difficult to truly examine here the potential role of addiction and volitional impairment. Yet this same lack of standard may also open up possibilities for extreme cases of addiction, fuelled by increasing knowledge of the effects of addiction, to qualify as a sufficient basis for non-accountability. Importantly,

380 See Ligthart, Kooijmans and Meynen, 'Een juridisch criterium voor de ontoerekeningsvatbaarheid: Een uitspraak van het gerechtshof Den Haag geanalyseerd' as well as Bijlsma, 'Wederrechtelijkheid of morele ongeoorloofdheid: welk inzicht moet de ontoerekenbare verdachte ontberen?'.

381 According to some authors, such as Morse from a common law perspective but also Van Dijk from a civil law perspective, the presence of cognitive awareness is inevitably connected with a volitional impairment. When somebody is capable of understanding what is happening, there also is the capacity to act otherwise. Conversely, if the defendant is unaware of the circumstances, how can we claim that they had any volitional capacity to change the outcome? As such, volitional capacity is perhaps not a separate capacity of itself but rather can be submerged under a cognitive umbrella. "Human beings control themselves by using their reason. If they cannot use their reason, it is very difficult to behave properly. No logical or legal reason prevents a court from understanding and interpreting "control" problems as rationality defects." Morse, 'Uncontrollable urges and irrational people' (2002) 88 Virginia Law Review 1064. Others have argued the opposite, that all mental impairment is ultimately a problem with control. When a defendant suffers from cognitive distortions, or is unable to understand their actions, then this means there is no control over their thoughts, no control to correct their reasoning. See: Corrado, 'The case for a purely volitional insanity defense' (2009) 42 Texas Tech Law Review 484-486.

whether this is also desirable, requires a further discussion that I do not have here: this requires other elements as well, such as societal perspectives and a more extensive normative framework.

Of course, even if a volitional prong were clearly defined and delineated as an element in non-accountability, this does not solve the problem of quantifying the loss of control and identifying the degree of control that was lost (versus simply not resisted). The courts do not require a complete loss of control, however, as they specify that the volitional criterion assesses whether the defendant was "not able or insufficiently able" to conform his behaviour.[382] Without further case law or scholarly specifications, this seems to leave some space for addiction-related offences to apply. Also, as we will see in the next chapter, a potential application of non-accountability may still be undone by a prior fault doctrine, even though from a theoretical perspective, there seem to be doctrinal possibilities. Thus, already from the outset, it seems that addiction is most commonly (and arguably most suitably) dealt with under the doctrine of diminished accountability. This is discussed in the next section.

3.5.2 Diminished accountability

As explained before, the 'defence' of diminished non-accountability is formally not part of the tripartite structure but is dealt with after liability is established, in the context of determining the most appropriate sanction.[383] In fact, the legislature has not even specified the possibility of a diminished accountability plea, as there is no such provision in the DCC, unlike in German law where there is a specific paragraph about diminished capacity of guilt (§ 21 German Criminal Code, GCC) following the full incapacity defence (§ 20 GCC). Yet the possibility is widely used and accepted as an explanatory factor in the sentencing phase, often leading to mitigation of punishment. Currently, the Netherlands allows for three degrees within the accountability scale: accountable, diminished accountable and non-accountable. Previously, a five-point scale was employed, resulting in two extra options, namely somewhat diminished accountability and severely diminished accountability.[384] This scale was abolished as a general practice in 2012 (although it is sometimes still used to date) as it was criticised for, amongst other things, creating a false sense of quantifiable and empirical assessment of mental capacities. After all, such seemingly

382 Original: "zo ja, of de gebrekkige ontwikkeling of ziekelijke stoornis van zijn geestvermogens ten tijde van het bewezen verklaarde het handelen van de verdachte ten volle bepaalde, in die zin dat de verdachte niet of onvoldoende in staat was in overeenstemming met zijn begrip van de wederrechtelijkheid van de feiten te handelen". Court of Appeal, The Hague, March 16th 2017,ECLI:NL:GHDHA:2017:684.

383 Koopmans, *Het beslissingsmodel van 348/350 Sv*.

384 Meynen, *Legal insanity: Explorations in psychiatry, law, and ethics*, vol 71 (International Library of Ethics, Law, and the New Medicine, Springer: Basel, Switzerland 2016) 162.

clear-cut boundaries between the phases are not supported by evidence from behavioural sciences that such categories are even possible to consistently demarcate. Hence, in the guidelines for forensic psychiatric assessment that followed, a three-point scale was suggested.[385] Importantly, the doctrine is available as general mitigation to the offence, meaning it applies to all crimes.

The option of diminished accountability is very relevant for cases of addiction. The doctrine covers circumstances that impacted the offender's mental capacities, yet did not rob him of his full ability to understand the wrongfulness or act accordingly. As was explained in the previous section, a non-accountability excuse is not a likely option for addicts, leaving the diminished counterpart as a viable alternative. Not only for addiction but also in cases of personality disorders, this doctrine is often brought up. It allows for incorporating personal circumstances and it allows for imposing measures (such as the TBS measure) in addition to punishment. In other words, when the defendant is considered diminished accountable, he can receive punishment (e.g. prison sentence) reflecting the blameworthy aspects of the offence, but also receive measures to reflect the reduced blameworthiness due to diminished capacities. Importantly, courts are not mandated to lower the sentence because of diminished accountability and remains free to impose the sentence that it deems fit, although it is common to view diminished accountability as mitigation in the sentence.[386]

The requirements for diminished accountability mirror those of non-accountability, albeit being more freely interpreted and applied.[387] After all, non-accountability ought to be an exceptional circumstance, meaning all variations of reduced capacities automatically should be shared under the diminished counterpart. Naturally, this results in a much wider range of application. The presence of a mental disorder and a causal connection with the offence remains. As for the capacity requirements, the court needs to find that either the defendant has been not been fully able (or fully unable) to understand the unlawfulness of his behaviour, or that the defendant is diminished in his capacity to conform his behaviour to the law.[388] The latter is clearly relevant for many cases of addiction, with or without intoxication. The Court of Rotterdam, for instance, accepted the behavioural experts' conclusions that "During the offence, the defendant had serious disinhibition due to excessive substance use, combined with an unempathetic and unconscientious personality, and impulsivity. Diminished accountability applies to the defendant."[389] This

385 Psychiatrie, *Richtlijn psychiatrisch onderzoek en rapportage in strafzaken*, 2012 https://www.nvvp.net/stream/richtlijn-psychiatrisch-onderzoek-en-rapportage-in-strafzaken-2013.pdf 60-62 accessed 16 August 2018.

386 Claessen and de Vocht, 'Straf naar de mate van schuld?' (2012) 42 Delikt en Delinkwent 652-674.

387 Bijlsma, *Stoornis en strafuitsluiting: Op zoek naar een toetsingskader voor ontoerekenbaarheid* 256.

388 Ibid 256.

389 Original: "Tijdens het ten laste gelegde was sprake van forse ontremming door excessief middelengebruik bij een persoonlijkheid met een gebrekkige gewetensfunctie en empathisch vermogen en impulsief handelen.

illustrates that in this case, reduced volitional capacities ('serious disinhibition') as a result of substances is a valid basis for diminished accountability arguments.

Consequently, cases of addicted offenders often appeal to diminished accountability in practice, as will be illustrated in chapters to follow. This is also consistent with the way that addiction manifests itself: in degrees of severity and gradations of incapacitation. In chapter 2 it became clear that irrespective of theory or model, addiction evidently results in a range of impairments, most notably reduced volitional capacities. As there are likely too many other, non-pathological causes for the behaviour, and the volitional impairment is often not entirely debilitating, non-accountability is difficult to appeal to. Those impairments, however, would be highly relevant for diminished accountability. In order to facilitate the application of addiction to diminished accountability, and maybe even address cases of addiction in the context of non-accountability, it would be relevant to better differentiate between 'types' of addicted individuals (in terms of severity of impairment) as chapter 2 concluded. A taxonomy of capacities and of severity would also render the role of addiction on (diminished) accountability more explicit, by compelling courts to address the addiction in a clearer framework. Nonetheless, courts may still be hesitant to adopt a diminished accountability argument, but rather due to prior fault arguments. For instance, the Court of Appeal of Amsterdam overruled a decision by a Court of First Instance, which claimed diminished accountability due to a severe and long-lasting addiction, due to prior fault.[390] Instead, the defendant was considered fully accountable. This illustrates that even though the requirements may be more freely interpreted for diminished accountability as opposed to non-accountability, the challenges posed by prior fault in addiction and addiction-related behaviour remains the same and are thus highly relevant in this context, too.[391]

The presence of a general diminished accountability option is likely also one of the reasons that the requirements for more extreme counterparts, such as non-accountability, are relatively strict. After all, non-accountability can be reserved for exceptional cases due to the possibility for courts to impose measures in cases of diminished accountability as well. This is different in the law of England and Wales, in which no such generalised diminished insanity defence exists, but only in cases of murder. Germany, on the other hand, does have a generalised provision, even a codified one. Not only in the diminished accountability discussion, but also in the above presentation of the non-accountability requirements, some parallels can be drawn with other jurisdictions. Indeed, as others have noted as well, the recent developments of the non-accountability criteria are highly similar

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Het ten laste gelegde kan de verdachte in verminderde mate worden toegerekend." Court of Rotterdam, May 23rd 2017, ECLI:NL:RBROT:2017:4529.

390 Court of Appeal, Amsterdam, August 25th 2020, ECLI:NL:GHAMS:2020:2366.

391 Consequently, the topic on prior fault warrants more detailed and critical reflection, which is provided in the next chapter.

to some other legal standards.[392] In order to put the Dutch system in perspective, and learn more about potential applications of addiction, it is worthwhile to briefly explore other jurisdictions.

3.5.3 The excuse of non-accountability from a comparative perspective

Before delving into the discussion, let me point out that there have been much more thorough and detailed legal comparisons that the one I am presenting here.[393] For the current purpose, which is to use other jurisdictions illustratively rather than to conduct an in depth comparative study, I will limit myself to the law of England and Wales and their insanity standard as well as the German equivalent *Schuldunfähigkeit*, translated here as the 'incapacity of guilt defence'. Their theoretical frameworks are addressed and related to addiction in turn. The practical assessment of addiction onto these standards was also discussed elsewhere in more detail, which is provided as further reference.[394]

The *M'Naghten Rule* specifies the requirements for the insanity defence in England and Wales, as well as certain US states. The rule arose from the case of the same name, where the defendant Daniel M'Naghten killed a man while suffering from delusions. As a result, he was acquitted and the following ruling became a guide in similar cases of legal insanity. "At the time of committing the act, the party accused was labouring under such a defect of reason from disease of the mind, as not to know the nature and quality of the act he was doing; or if he did know it, that he did not know what he was doing was wrong."[395] If we compartmentalise the requirement, it seems to be twofold: the presence of a (mental) pathology, a defect of reason, and lack of knowledge.[396] It, therefore, seems that the *M'Naghten Rule* mainly focuses on disorders that influence the individual's sense of rationality. This exclusively cognitive focus has been the topic of debate, as it is deemed under-inclusive for disorders with consequences for other capacities.[397] Moreover, several elements of the rule are not entirely clear.[398] First, the scope of 'disease of mind' is not

392 See for instance Ligthart, Kooijmans and Meynen, 'Een juridisch criterium voor de ontoerekeningsvatbaarheid: Een uitspraak van het gerechtshof Den Haag geanalyseerd'.

393 Both Bijlsma and Meynen do so very elaborately in their works: see Bijlsma, *Stoornis en strafuitsluiting: Op zoek naar een toetsingskader voor ontoerekenbaarheid* as well as Meynen, 'Legal insanity standards: Their structure and elements'.

394 Goldberg and Roef, 'Addiction, capacities and criminal responsibility – a comparative analysis' in A. Waltermann and others (eds), *Law, Science and Rationality* (Eleven International Publishing: The Hague 2019).

395 [1843] 10 Cl & Fin. 200, 8 Eng. Rep. 718 (HL).

396 Meynen, 'Legal insanity standards: Their structure and elements'.

397 Mackay, 'Righting the wrong? Some observations on the second limb of the M'Naghten rules' (2009) 2 Criminal Law Review 80.

398 Shea, 'M'Naughten revisited - Back to the future? (The mental illness defence - A psychiatric perspective)' (2000) 12 Current Issues in Criminal Justice 347.

specified entirely.[399] Second, the question of whether it really is only a cognitive capacity that is required also sparks debate. Just like my previous discussion of moral versus legal wrongfulness, this is a similar problem from the wording of the English rules: "or if he did know it, that he did not know what he was doing was wrong". Does that imply an awareness of the legal rules or rather an inability to sense moral wrongdoing? Some have argued that it does not add anything to a cognitive capacity, as the only reason one may think that a serious offence such as killing is not morally wrong, is when that person does not know 'the nature and quality of the act he was doing'.[400] As in general, unawareness about the law does not exculpate, so it seems to suggest a moral capacity. Similar to Bijlsma, scholars have also suggested that the perceived presence of a justification by the defendant would be evidence that the defendant thought his actions were not wrongful.[401] Such a requirement would make the discussion of legal or moral wrongfulness less important, as a (perceived) justification can arguably negate both types of wrongfulness.

Regardless of the precise meaning and interpretation of the *M'Naghten Rule*, one thing stands out: there seems to be no volitional limb. This implied lack of an exculpatory volitional capacity is confirmed by case law. A landmark decision, *R v Kopsch*, addresses this by stating that "[uncontrollable impulses] are not yet part of the criminal law, and it is to be hoped that the time is far distant when it will be made so."[402] In *Henderson v Dorset Healthcare* it was additionally outlined that a case of legal insanity is limited to the cognitive capacity to form intent.[403] This sole cognitive focus is undoubtedly the biggest difference with some other standards, such as the German incapacity of guilt defence and the (largely German-inspired) Modal Penal Code, which is used in certain states of the USA.[404] This makes it highly problematic, if not completely impossible, to have a successful insanity defence plea based on addiction only. Even if the plea would be successful, there are still potential additional prior fault rules to account for. As will be covered more extensively in chapter 4, even if the effects of substance use or addiction did interfere with cognitive capacities, these may still be denied. In *Majewski*, the court made it very clear that "if a man of his own volition takes a substance which causes him to cast off the restraints of reason and conscience, no wrong is done to him by holding him answerable criminally

399 McSherry, 'Defining what is a 'disease of the mind': the untenability of current legal interpretations' (1993) 1 Journal of Law and Medicine 76-90.

400 Glanville Williams, Textbook of Criminal Law 2nd edn (1983) 645.

401 Mackay, 'Righting the wrong? Some observations on the second limb of the M'Naghten rules' 83.

402 [1925] 19 Cr App Rep 50.

403 [2016] EWHC 3275 (QB).

404 Without discussing it any further here, it reads that "a person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he lacks substantial capacity either to appreciate the criminality (wrongfulness) of his conduct or to conform his conduct to the requirements of the law". This clearly also include a volitional ('conforming the conduct to the requirements of the law') element and strongly resembles the requirements in the Dutch and German system. See also: Meynen, 'Legal insanity standards: Their structure and elements'.

for any injury he may do while in that condition".[405] Intoxication and addiction seem to be clearly excluded as an exculpatory condition, aside from a limited relevance for specific intent offences.[406] Thus, a more viable alternative seems to be the possibility for diminished responsibility, addressed further below.

The German Criminal Code (GCC) specifies the requirements for incapacity of guilt in § 20, the provision for *'Schuldunfähigkeit wegen seelischer Störungen'*. The translation reads as follows: "Any person who at the time of the commission of the offence is incapable of appreciating the wrongfulness of their actions or of acting in accordance with any such appreciation due to a pathological mental disorder, a profound consciousness disorder, debility or any other serious mental abnormality, shall be deemed to act without guilt."[407] The wording of this provision suggests that rationality-related capacities ('appreciating the wrongfulness') as well as control-related capacities ('acting in accordance') due to a mental pathology could be excusing. This sounds promising but shows to uphold a high threshold in practice. Similar to the Dutch system, however, there is also the possibility of a general diminished capacity plea, codified in § 21 GCC (in contrast to the non-codified Dutch doctrine), which lowers the need for a widely applicable excuse.

The issue of the pathological requirement is less problematic than other jurisdictions due to their specifications of the types of mental disorders. *Prima facie*, this does not exclude any disorders. However, when it comes to the capacities, the Supreme Court made it clear that addiction has very little chance of success: only severe cases of addiction, which resulted in the fulfilment of additional (psychological as well as legal) requirements, can exculpate.[408] Such cases only exist when addiction has led to serious personality changes, when severe withdrawal symptoms led to procuring drugs via a crime, or when the offence was committed under severe intoxication.[409] The procurement of drugs is interesting, as this means that volitional incapacity due to addiction can be a ground for exculpation, at least in theory, but any violent offence or other non-property offences are excluded from § 20 GCC on the basis of volitional impairment. Such offences can still be negated, but only in case of serious personality changes, which is arguably more uncommon. Hence, the instrumental purpose of the offence seems to be of importance, although this always needs to be accompanied by severe withdrawal symptoms as well. Importantly, although this seems like a minor possibility, it seems to provide more leeway compared to the Dutch system. Moreover, the connection between the purpose of the offence and the addiction

405 [1977] AC 443, 474.
406 Simester, 'Intoxication is never a defence' (2009) Criminal Law Review 3-14.
407 Own translation, but largely based upon the translation by Michael Bohlander of the GCC from www.legislationonline.org, accessed on 28 January 2019 via https://www.legislationline.org/ download/action/download/id/6115/file/Germany_CC_am2013_en.pdf.
408 Goldberg and Roef, 'Addiction, capacities and criminal responsibility – a comparative analysis' 223.
409 Ibid 224.

that the German system requires is not necessary for the Dutch system, although it is somewhat implicit in the strict causality requirement.

Their approach to severe intoxication is equally interesting, as such a situation can thus be used to allow an appeal for the incapacity of guilt defence. However, the German system does not wish to create unlimited possibilities for becoming intoxicated and committing offences. The solution is quite simple and doctrinally sound: if the offender is so intoxicated that this amounts to a situation of legal insanity, the offender cannot be held liable for the offence committed, as this would go against the premise of the incapacity of guilt paragraph. Yet there is an additional provision, the *Vollrausch* offence (§ 323a GCC), which criminalises (with a penalty up to 5 years imprisonment) committing an offence whilst being severely intoxicated.[410] Hence, the intoxication would not become a 'free pass' to escape liability. This seems to do justice to the legal framework of the incapacity of guilt defence, as well as acknowledging the potential problem and societal disapproval of excusing intoxication. This is a unique approach by the German system. Notably, German law also enables another route in cases of intoxication and prior fault: the *action libera in causa* doctrine. These two routes are discussed in more detail in section 4.7.1.

Aside from the incapacity of guilt defence, Germany has a generalised diminished capacity defence, similar to Dutch law, but codified under § 21 GCC. Cases of mild intoxication, or cases of addiction in which the capacities are only (substantially) diminished and not entirely absent, are covered by this provision.[411] Importantly, here the level of intoxication is not evaluated in isolation, but the judge assesses the defendant's behaviour before, during and after the offence, including various personal circumstances such as their physical condition.[412] Interestingly, the fear of serious withdrawal symptoms can already be the basis for a diminished capacity defence.[413] Also in this legal system, the courts are not required to reduce punishment when this provision is applicable, yet they often will do so.

In stark contrast is the lack of generalised diminished responsibility defence in the law of England and Wales. The insanity defence exists only in full, which is criticised for its unrealistic reflection of the human psyche, which is not black or white, sane or insane. Unlike the Dutch and the German jurisdictions, defendants cannot rely on diminished responsibility for any offence except for murder, which is important due to the mandatory life sentence in case of a conviction for (first degree) murder.[414] Section 2 of the Homicide Act 1957 created the diminished responsibility defence, which would, if successful, result

410 Ibid.

411 Keiler and Roef, *Comparative Concepts of Criminal Law*.

412 Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands' (2021) 8 Journal of International and Comparative Law 67-68.

413 Goldberg and Roef, 'Addiction, capacities and criminal responsibility – a comparative analysis'.

414 Allen and Edwards, *Criminal Law* 360.

in an acquittal for murder but a conviction for the lesser offence of voluntary manslaughter.[415] Importantly, in such cases, the court has discretion to impose a wide range of sentences, allowing for much more space to incorporate personal circumstances.[416] Yet Section 2 has been subject to criticism, for instance, due to the vague language leading to a wide range of applications, which resulted in a reform in the 2009 Coroners and Justice Act.

The new provision attempted to better reflect the medical nature of the defence by specifying the conditions under which diminished responsibility would be allowed. The requirements are now as follows. First, there must be an 'abnormality of mental functioning' as a result of a 'recognised mental condition'. This ought to have *substantially* impaired one of two possible capacities, namely a cognitive one ('understand the nature of his conduct or to form a rational judgement') or a volitional one ('to exercise self-control').[417] This latter aspect is, of course, very interesting as it departs from the cognitive focus of the *M'Naghten Rules*. This opens up possibilities for addiction as well, which is indeed supported by case law. Not every addiction or any manifestation of addiction can be immediately applied: the case law emphasises the diminished capacities. In *R v Bunch*, the defendant could not rely on alcohol dependency, as this was not considered to have led to an abnormality in functioning.[418] When capacities are influenced, the focus is on the volitional impairment, as expected. In *R v Wood* the defendant successfully appealed against his murder charge, and the court acknowledged that despite the voluntary aspects in alcoholism (i.e. that not every drink is always involuntary), this does exclude the defendant from the diminished responsibility offence.[419] The appeal case of *R v Kay*, a schizophrenic who killed under the influence of drugs, also discussed voluntariness.[420] The court stipulated that diminished responsibility is only possible if the psychosis arose from a recognised medical condition: dependency syndrome would be valid, but voluntary intoxication does not suffice.[421]

415 The original text: "Where a person kills or is party to the killing of another, he shall not be convicted of murder if he was suffering from such abnormality of mind (whether arising from a condition of arrested or retarded development of mind or any inherent causes or induced by disease or injury) as substantially impaired his mental responsibility for his acts and omissions in doing or being a party to the killing."

416 Allen and Edwards, *Criminal Law* 362.

417 Wake, 'Recognising acute intoxication as diminished responsibility? A comparative analysis' (2012) 76 The Journal of Criminal Law 71-98.

418 [2013] EWCA Crim 2498.

419 [2008] 2 Cr. App. R. 30.

420 For instance, the defence in *R v Kay* stated the following: "[the defendant's] intoxication was not voluntary because he also had an alcohol and drugs dependency syndrome which combined with schizophrenia, led to an irresistible craving for and/or compulsion to drink and take drugs and prevented him from forming a rational judgment or exercising self-control.".

421 [2017] EWCA Crim 647.

What this quick detour to the other jurisdictions show is that the provisions under the law of England and Wales are the most limited, both in the scope of applicable capacities (with their sole cognitive focus on the insanity defence) as well as the lack of a generalised diminished responsibility alternative. The diminished responsibility defence shows much potential for accurately accounting for addiction and related impairments, yet this is only applicable to murder. Germany is on the other side of the spectrum, offers many doctrinal possibilities to account for addiction, leading to a very theoretically sound framework. In particular the possibility for volitional impairment to play a role, and the role that intoxication can still fulfil, stand out. These possibilities result in more successful defences based on addiction compared to the Netherlands or England and Wales. Nonetheless, it is clear that a successful non-accountability (or equivalent) defence is very unlikely to happen based on addiction alone. The final possibility in the context of blameworthiness is duress, which is discussed next.

3.5.4 The excuse of duress

Article 40 of the DCC states that 'an individual will not be considered criminally liable if he commits an act as a result of an irresistible force'.[422] It is considered the equivalent of both common law's necessity and duress, as it covers both justificatory necessity as well as the excusatory counterpart. Importantly, the definition of *irresistible force* is not literal: it does not refer to a power that is impossible to physically withstand, but rather a power that one is reasonably not expected to resist. A force that is literally beyond one's control can be considered an absolute *force majeure* or *vis absoluta*, such as a third party who pushes another who consequently damages or injures something or someone.[423] As the excuse of duress also focuses on psychological pressure and mental states, one may wonder if addiction affects the applicability of the excuse.

From the wording of article 40, it is clear that it is a highly plain and sober definition. The requirements for duress are therefore mostly clarified in case law. The main rule for applying duress is that the defendant acted under external pressure which he could not resist and reasonably should not have had to resist.[424] This encompasses four important characteristics regarding the situation of the defendant. First, it assumes that there must be serious, pressing circumstances. Although emotions or moral pressure may be understandable, they ought to be demanding and immediate enough to be exculpatory. Second, principally, the pressure ought to be external. Thus, the (academic) discussion of

422 Author's translation of the original: "niet strafbaar is hij die een feit begaat waartoe hij door overmacht is gedrongen."
423 Kelk, *Studiebook materieel strafrecht* 335.
424 Ibid 338.

the role of disorders in duress is limited. Nonetheless, over the years it has been recognised that pressure can also be the result of fear or another affect. In fact, the personality of the defendant and the susceptibility to pressure may weigh into the assessment of duress.[425] Third, the simultaneity of the pressure with the offence is necessary when considering duress. That is not to say that only sudden and direct pressure is allowed: of course, cases of blackmail or enduring stressors are equally relevant. The important matter is that at the time of the offence, the pressure plays a substantive role in the defendant's behaviour. Fourth and last, duress is a normative concept. Despite the relevance of the defendant's mental state, it remains a legal judgment on the reasonableness of resisting pressure. As such, the legal principles of subsidiarity and proportionality play an important role, albeit to a lesser extent than they do in the justificatory counterpart of necessity.

What would be the role of mental disorders in the application of duress? Over the years it has become more acceptable to assess the reasonableness to resist pressure on an individual level rather than using a reasonable person standard. As such, a case of a mentally disordered defendant can be deemed to be an individualised circumstance in which it was unreasonable to resist pressure.[426] This seems sensible, as the excuse of duress is by definition a personal one, in which the defendant's experience of pressure is central. If this experience is influenced by a disorder, that seems relevant to account for. By allowing disorders to impact the defence, the concepts of non-accountability and duress arguably move closer towards one another.[427] In a recent Supreme Court ruling, however, it has become clear that the role of the defendant's personality and mental state can play a role but should not be decisive: "The psychological aspect of duress can be relevant in the sense that it needs to be assessed and weighed what is reasonable to expect from the defendant in a particular situation. Admittedly, the personality of the defendant can be considered in the assessment of the question of whether he could not and should not resist the external pressure, but it cannot be the decisive factor."[428]

Importantly, this nuance still places the *origin* of the pressure outside the individual: the duress situation ought to arise from an external circumstance, whereas any internal (psychological) elements could potentially play a role in how this external pressure is dealt

425 Ibid 340.

426 For instance, see Court of First Instance, Limburg, November 24th 2014, ECLI:NL:RBLIM:2014:10079.

427 De Rade, 'Over de rol van de stoornis in de psychische overmacht' (2020) 6 Delikt en Delinkwent 422-448.

428 Author's translation of the original: "Het psychologische aspect van de psychische overmacht kan hierbij van belang zijn, in de zin dat gewogen wordt wat in redelijkheid van de verdachte in kwestie kon worden verlangd. De persoonlijkheid van de verdachte kan bij de beoordeling van de vraag of redelijkerwijze geen weerstand van hem kon en behoefde te worden verlangd tegen de van buiten komende drang weliswaar worden meegewogen, maar niet van doorslaggevende waarde zijn." Conclusion of A. E. Harteveld in Office of the Procurator-General at the Supreme Court, ECLI:NL:PHR:2018:719, on the Supreme Court ruling of July 3rd 2018, ECLI:NL:HR:2018:1061.

with.[429] In a theoretical discussion on the role of addiction, as there is no case law in which this is mentioned,[430] this would mean that addictive urges or cravings cannot be the cause of the situation of duress, but that it could possibly determine how well the addicted individual resisted the pressure. Thus, there would need to be, *prima facie*, a situation of duress that is unrelated to addiction. Only then can the defence argue that it was the addiction (for instance, when experiencing a strong craving or inability to adequately weigh long-term consequences versus short-term rewards) which rendered the defendant unable to reasonably resist the pressure. Such an argument would, nevertheless, be equally relevant for other defence (such as self-defence), which would not be negated by addiction upfront, but in which the effects of addiction could be influential. As a consequence, I would argue that addiction remains relevant for various defences simply by providing background about the defendant and his mental state without necessarily being part of an assessment framework. Again, cases in which addiction was explicitly weighed in the assessment of a defence are yet to appear in practice. If they do, then naturally the element of prior fault may also play a role and the court will need to decide on how to address and weigh all these elements. For now, the discussion remains mostly theoretical.

3.8 Addiction in the context of sanctioning

This final section aptly focuses on the final step of the sequential provision of art. 350 DCCP. After liability is established, the court proceeds to issue a verdict which includes the most appropriate sanction. Here, addiction features most prominently, especially because its role in the previous stages was shown to be limited in practice. Moreover, the element that has shown to be the most adequately capable of accounting for the effects of addiction was diminished accountability. Although covered under the tier of 'blameworthiness' in this chapter, diminished responsibility is in practice part of the sentencing phase as it generally results in a mitigated sentence, although the court is not obliged to do so. Thus, this section discusses any remaining issues relating to sanctioning. Importantly, the effectiveness of sentences has been effectively researched before[431] and this will not be covered further in this chapter. The aim is to outline, more descriptively, the possibilities for the potential role of addiction.

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429 De Rade, 'Over de rol van de stoornis in de psychische overmacht' 430.

430 After a search on a combination of the terms 'addiction/substance dependence/substance abuse' and 'duress', no cases were found in which the addiction of the defendant played a role in the arguments pro/con the applicability of duress.

431 See, for instance, this overview: Wartna, Alberda and Verweij, *Wat werkt in Nederland en wat niet? Een meta-analyse van Nederlands recidiveonderzoek naar de effecten van strafrechtelijke interventies*, 2013.

To recapitulate, measures and punishment are both a form of sanctioning, despite serving a different (ulterior) purpose. Punishment can only be issued once the offender is found guilty: in other words, when there are no applicable justifications or excuses. Punishment is inherently aimed at causing suffering, whereas a measure primarily has a rehabilitative purpose.[432] The main sentences are codified in art. 9(1) of the DCC, namely imprisonment, detention,[433] community service, and a monetary fine. The most relevant measures are the TBS measure (art. 37a-38lb DCC) and the ISD measure (*inrichting voor stelselmatige daders*, institution for repeat offenders; art. 38m-38u DCC).[434] Previously, art. 37 DCC provided the opportunity for mandatory treatment in a psychiatric hospital for a period of one year. Since the beginning of 2020, this measure has been abolished and has been replaced by a civil law possibility that mandates treatment.[435]

Generally, the court has a wide array of sanctioning possibilities available. This may also encompass a combination of punishment and measures. Personal circumstances of the defendant and the offence, which potentially also includes a diminished accountability verdict, all play a role in the court's assessment of the most appropriate consequence. In addition to the main sentences, there are many special conditions such as mandatory abstinence from substances that may be demanded on top of a (suspended) sentence. Yet the court is not entirely free in its choice of which punishment or measure to impose, as the DCC prescribes the maximum punishment, which the court may not exceed.[436] Similarly, measures are also bound to requirements that have to be fulfilled in order to be imposed. Deciding on the most appropriate as well as applicable punishment or measure is, therefore, not always easy. One important element in this decision, at least for the more serious offences, is the risk of recidivism, and the experts' assessments of this, as reducing recidivism is an important aspect of the sentence. In the more serious offences where a behavioural report is drafted, this usually contains statements on risk assessment since most experts are asked to report on this. Addiction plays a large role here, as this can be indicative of certain risk of recidivism, thereby calling for a tailored sentence that minimises this risk.

Hence, section 6 is structured as follows. First, the possibilities in terms of punishment are discussed, as well as the most appropriate options for addicted defendants. Then, this chapter considers the range of measures available, and the requirements that need to be fulfilled in order to the court to impose these. Lastly, the nature and role of risk assessment

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432 Verbaan, *Straf(proces)recht begrepen* (6th edn, Boom juridisch: Den Haag, the NL 2019) 350.

433 The difference between detention and imprisonment lies with the distinction between a felony (*misdrijf*) and a violation (*overtreding*). Both are custodial sentences.

434 In addition to those, retraction from traffic (art. 36b-36d DCC); confiscation of unlawfully obtained advantage (art. 36e DCC); compensation for damages (art. 36f DCC); and other restraints (art. 36v-38ij DCC) are amongst the possibilities. However, they are not related to the discussion on possible interactions between addiction and the law.

435 Reijntjes-Wendenburg, 'Zorgmachtiging verplicht ggz in strafzaken: art. 2.3 Wfz'.

436 Verbaan, *Straf(proces)recht begrepen* 343.

are explained. The effects that addiction has on this and the influence that a low versus a high risk of recidivism has on sentences are discussed.

3.6.1 Incorporating addiction in punishment

The most common way to accommodate addiction in forms of punishment, without altering the purpose or severity of the punishment, is to include addiction-related special conditions to a (suspended) custodial sanction. This could, for instance, be a prohibition on drugs or alcohol use (governed by mandatory urine controls); mandatory treatment at an addiction health care centre, inpatient or outpatient; or accommodating the offender with specialised addiction parole officers, as opposed to regular parole officers. These special conditions allow for a customised sentence and have many ways to incorporate the addiction.[437] Moreover, there is a possibility for treatment in custodial settings. There is a standard care and treatment policy in prisons, primarily aimed at creating a continuous flow of care before, during and after detention.[438] Ideally, addicted offenders move towards treatment settings after their prison sentence is completed. Continuing after treatment can be done on a voluntary basis, but also various degrees of coercion may be used. This means that it is not mandated, yet pressured by use of positive stimuli (e.g. an earlier release from prison when moving into a treatment programme) or negative stimuli (e.g. executing a suspended part of the sentence).[439]

Generally, however, the standard treatment options available during detention are met with hurdles for addicted offenders, as substance disorders are characterised by comorbidity or other psychosocial problems.[440] The standard care and treatment methods are not always sufficient for this: in a study by Bulten and Nijman, half of the prisoners who expressed the need for help actually received this.[441] Either the needs of the offenders are too complex, or there is not enough space to accommodate everyone. Besides, many elements of addiction are related to environmental cues and circumstances, which are absent in prison, rendering the treatment suboptimal. Moreover, there is often a discrepancy or a delay between the moment that detention is over until treatment can be resumed outside custodial settings. For addicted individuals, this is often a moment to relapse into old habits or environments.

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437 Imposing special conditions on addicted defendants pose its own problems: see section 7.2.3.

438 Bulten and Van der Hurk, 'Verslavingszorg in detentie' in Eric Blaauw and Hendrik Roozen (eds), *Handboek forensische verslavingszorg* (Bohn Stafleu van Loghum: Houten, NL 2012) 190.

439 Ibid p.190 Even though such treatment cannot be mandated (unless specifically imposed as a measure, see 3.6.2) and treatment remains voluntary, by using coercive methods the alternative is often made so much less appealing that one may wonder how 'voluntary' the choice between the options truly is.

440 Ibid 186.

441 Bulten and Nijman, 'Subjective help needs among Dutch prisoners' (2010) 6 International Journal of Prisoner Health 95.

Aside from offering basic treatment and support options, there are four specific penitentiary psychiatric centres (PPCs) in the Netherlands.[442] Together, there is space for 700 individuals.[443] These PPCs are detention centres, thereby fulfilling the sentence of incarceration, but which offer more specialised and intensive psychiatric healthcare. The goal of PPCs is to "diagnose, stabilise, motivate, and forward to regular healthcare". Severe substance use problems, especially combined with other comorbid disorders, can be treated there.

Something else entirely is the role of addiction in determining a sentence. There are certain offences in which intoxication (and by proxy, therefore, relevant for addiction) serves as an aggravating circumstance in the sentence that the public prosecutor demands. The public prosecutor as well as the court bases the recommended sentence on the "sentencing guidelines" (*strafvorderingsrichtlijnen*) or "orientation points" (*oriëntatiepunten*), both of which are sets of rules that help to formulate an appropriate sentence.[444] Especially for prosecutors, these rules include a wide range of circumstances, for instance, the amount of injury caused, the type of weapon used or the fact that the offender was a first-time offender, and provide a standard sentence based on these circumstances. The use of alcohol or drugs is, for certain offences, an element that is part of these sentencing guidelines. Hence, this is not a codified element, but a standard factor to incorporate in the sentence. As an example, violence in public (art. 141 DCC), when committed during clubbing and under the influence of alcohol or drugs demands a 75% increase in the sentence suggested compared to 'regular' public violence.[445] The reason for the intoxication (i.e. whether it is motivated by an underlying addiction) is not important here. Of course, this may then influence the terms and special conditions of a sentence, but it is an aggravating circumstance nonetheless.

This is interesting, however, as it could lead to a curious sequence of events. As a thought experiment – I have yet to find this in case law – imagine an addicted offender who has been using substances for years. If this individual is intoxicated and commits an offence of public violence, the prosecutor will demand a higher sentence than an offender who was not intoxicated. Nonetheless, I concluded previously that there are serious cases of addiction in which it is defensible that the offender's liability is reduced (for instance by considering him diminished accountable). This is likely to lead to a mitigated sentence:

442 See also: https://www.dji.nl/justitiabelen/volwassenen-in-detentie/zorg-en-begeleiding/penitentiair-psychiatrisch-centrum/index.aspx.

443 Bleichrodt and Vegter, *Sanctierecht* (Ons strafrecht, 2nd edn, Wolters Kluwer: Deventer, NL 2016)126.

444 For the prosecutors, these can be found on: https://www.om.nl/onderwerpen/beleidsregels/richtlijnen-voor-strafvordering. For the courts, these can be found on: https://www.rechtspraak.nl/SiteCollectionDocuments/Orientatiepunten-en-afspraken-LOVS.pdf. Both last accessed on 6 May 2021.

445 https://www.om.nl/onderwerpen/beleidsregels/richtlijnen-voor-strafvordering-resultaten/richtlijn-voor-strafvordering-openlijke-geweldpleging-2019r002 last accessed on 6 May 2021.

thus resulting in a possibility in which the addiction leads to both aggravating and mitigating circumstances.

Another interesting question is whether the presence of addiction influences the type and severity of the sentence, i.e. whether courts view and sentence addicted offenders differently than non-addicted offenders in an equivalent case. Some legal psychological research addresses these questions, albeit not specifically with the focus on addiction. For instance, a study by Berryessa showed that providing a psychiatric label to the defendant led to significantly more lenient punishment.[446] Naturally, these results, based on a sample of laypersons from the US, cannot be extrapolated onto a professional sample in a different jurisdiction, yet it does demonstrate that the mere presence of a diagnosis affects perceptions of punishment. Other studies using different types of disorders found that certain diagnoses have an aggravating effect on punishment, such as in the case of psychopathy.[447] Findings such as these are not surprising given the vast body of research on biases and offender characteristics such as gender, age or ethnicity that influence legal decision-making.[448] Thus, it is highly likely that the presence of addiction has an impact on the perception of the courts, thereby affecting decisions on sentencing. Chapter 6 further explores what the exact role of the conceptualisation of addiction is in this regard. To date, unfortunately, no studies have been conducted in which cases of addicted and non-addicted offenders were compared in terms of sentencing.

3.6.2 Incorporating addiction in measures

As opposed to punishment, measures are more catered towards addressing mental health matters. There are three relevant options for offenders with addiction, namely the TBS measure (art. 37a-38lb DCC), the ISD measure (art. 38m-38u DCC) and relatedly, although not a criminal measure, the civil possibility for mandatory treatment (art. 2.3 Forensic Care Act [*Wet forensische zorg, Wfz*]). I discuss each of these in turn.

The Forensic Care Act is the odd one out, as it is not a criminal mandate any more, even though it used to be. This act has replaced the psychiatric hospital order that was embedded in art. 37 DCC since the start of 2020. Currently, compulsory psychiatric treatment is incorporated in two civil laws: the Mandatory Mental Healthcare Act (*Wet verplichte geestelijke gezondheidszorg, Wvggz*) and the Care & Constraint Act (*Wet zorg*

446 Berryessa, 'The effects of psychiatric and "biological" labels on lay sentencing and punishment decisions' (2018) 14 Journal of Experimental Criminology 241-256.

447 Scurich, Gongola and Krauss, 'The biasing effect of the "sexually violent predator" label on legal decisions' (2016) 47 International Journal of Law and Psychiatry 109-114.

448 For a well-known study about offender characteristic bias, see for instance Steffensmeier, Ulmer and Kramer, 'The interaction of race, gender, and age in criminal sentencing: The punishment cost of being young, black, and male' (1998) 36 Criminology 763-798.

en dwang, Wzd). Although this is a civil procedure, and thus has a much wider scope than is relevant for this research, a criminal law court may impose mandatory treatment based on these acts via art. 2.3 of the Forensic Care Act (*Wfz*).[449] Redirecting criminal courts to civil law if they opt to impose mandatory treatment has also significantly affected the requirements for imposing this treatment order. The old measure required the defendant to have a successful non-accountability defence. Now, there does not need to be a connection between the offence at hand and the mental disorder: in fact, there does not need to be a (proven) criminal offence at all.[450]

The TBS measure, on the other hand, is clearly a criminal law-based measure that is aimed at repression as well as treatment. It can be imposed when the defendant is non-accountable, but also in case of diminished accountability. Further, the requirements are the presence of a disorder and the presence of a danger to the offender himself or others or 'the general safety of persons or goods'.[451] This latter requirement is assessed via the use of risk assessment tools, and is discussed in the next section. In order to adequately assess the danger and the disorder requirement, a report by a behavioural expert is required. Only when two experts from different disciplines (a psychiatrist and another discipline, most commonly a psychologist) have reported on the matter, can the measure be imposed. They do not necessarily need to advise the measure: the fact that they have given advice, in general, is sufficient. Hence, the ultimate decision lies with the court.[452] Consequently, when the defendant is uncooperative, this does not negate the option to impose the sanction. In addition to these requirements, TBS can only be imposed for crimes that carry a maximum sentence of four years or more, meaning that it is reserved for only the most serious of offences.[453]

The main principles governing the TBS measure are safety and rehabilitation by assuring detention and (temporary) removal from society, and at the same time offering intensive treatment. As public safety is an important reason for imposing TBS, it is possible for the offender to be in a TBS institute for a long time, potentially for life, if a danger of harm to others remains. There are two versions of the TBS measure.[454] Most common is TBS with compulsory treatment (*TBS met bevel tot dwangverpleging*). In cases were the criterion of danger is less pressing, the court may also decide on conditional TBS (*TBS met voorwaarden*). TBS with compulsory treatment has, as the name suggests, a high-security level in which the offender is also detained, whereas conditional TBS can often be fulfilled

449 Reijntjes-Wendenburg, 'Zorgmachtiging verplicht ggz in strafzaken: art. 2.3 Wfz'.
450 In the first paragraph of art. 2.3 Forensic Care Act, 11 situations are provided that allow for the imposition of this treatment order.
451 Bleichrodt and Vegter, *Sanctierecht* 159.
452 Ibid 160-161.
453 Ibid 166-167.
454 Van der Wolf, *Oplegging van TBS* (Wolters Kluwer 2015) accessed on navigator.nl.

in an outpatient setting. Moreover, conditional TBS has a maximum duration of nine years.[455]

About three-quarters of the population in a TBS setting are or have been struggling with substance abuse and addiction.[456] Often this is combined with other comorbidities. The relevancy of addiction for the TBS measure is that substance abuse disorder is sufficient for the criterion of disorder, as well as relevant in the assessment of the risk of recidivism. But whether the presence of addiction plays a substantial role in the decision on imposing TBS or not is not known or studied yet. In chapter 5, this is partly addressed by examining the presence of addiction in court cases in which TBS is often discussed as a potential measure.

Lastly, the ISD measure is worth explaining. In order to tackle the magnitude and costs of repeat offenders, this measure was enacted in 2004.[457] It has an extremely high rate of addiction amongst its individuals: almost 100% of those who receive this court order are diagnosed with substance use disorder.[458] The purpose of the measure is to ensure societal safety by allowing relatively long detention for relatively small offences and combating the risk for recidivism. The requirement for imposing this measure is the offender needs to have been convicted for at least three offences in the previous five years for which he has received a custodial sanction or a community service sentence. In addition, the chances of a repeated offence are high.[459] Aside from recidivism, the ISD measure also has a safety criterion, albeit different from that of the hospital order and TBS. The reason for imposing the ISD measures needs to relate to public safety or goods, but this mostly is in connection with the nuisance and societal costs that stem from a multitude and combination of offences.[460] The length of the measure is mostly two years to be completed in specific ISD sections of prisons. The approach contains, aside from detention, a personalised treatment plan aimed at addressing the underlying causes of recidivism, such as addiction.[461] Consequently, for many addicts who engage in more minor criminal activities than those that warrant a TBS order, ISD is an important option.

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455 Ibid.

456 Hildebrand and de Ruiter, 'PCL-R psychopathy and its relation to DSM-IV Axis I and II disorders in a sample of male forensic psychiatric patients in the Netherlands' (2004) 27 International Journal of Law and Psychiatry 233-248; Timmerman and Emmelkamp, 'The prevalence and comorbidity of Axis I and Axis II pathology in a group of forensic patients' (2001) 45 International Journal of Offender Therapy and Comparative Criminology 198-213.

457 Tang, *Maatregel tot plaatsing in een inrichting voor stelselmatige daders* (Wolters Kluwer 2015).

458 For a study on male offenders, see Goderie, *Problematiek en hulpvragen van stelselmatige daders (Problems and needs of systematic offenders)* (Verwey-Jonker Instituut, 2009). For female offenders, see Blaauw and others, 'Dual diagnoses among detained female systematic offenders' (2016) 9 Advances in Dual Diagnosis 7-13.

459 Tang, *Maatregel tot plaatsing in een inrichting voor stelselmatige daders.*

460 Ibid.

461 Bleichrodt and Vegter, *Sanctierecht* 196-206.

It is to be noted that the effectiveness of the ISD measure is contested. In terms of reducing recidivism, a large empirical cohort study suggests the following. In the period between 2007 and 2014, individuals who received the ISD measure had a 12% lower chance of re-offending within two years, and 9% lower chance within for years, compared to similar repeat offenders who did not receive an ISD measure. Within a ten-year span, this percentage was reduced to a difference of 6%.[462] Thus, the rehabilitative nature does not seem to be very effective. What is left is the purpose of incarceration of the measure, which in itself prevents further offences being committed, of course. It was estimated that on average, four criminal cases are prevented during the course of the incarceration.[463] As the (almost exclusive) majority of the ISD individuals are addicted, these findings beg the question of whether or not this measure is appropriate for governing addicted defendants and whether it lives up to its aims and purposes. Yet the exact execution of this measure is more a matter of procedural law. Consequently, a more thorough discussion on how addiction may be more effectively incorporated in measures requires a broader legal framework than the one I have provided here. Nonetheless, it is an important point to emphasise.

All in all, it seems that in the decision of punishment and measures, there are the most opportunities and diverse ways in which the addiction can be accounted for out of all aspects of the Dutch legal framework. The different combinations of punishments, measures and special conditions are quite adequately capable of reflecting the heterogeneity of the condition in combination with the offence. It is thus not surprising that addiction would be most prominently featured in this phase: not only due to the option of a diminished accountability plea, motivated by addiction, but also due to the range of sanctioning possibilities themselves. Indeed, in chapter 5 it becomes clear that legal actors are inclined to deal with the addiction in the final stage of the criminal liability process in comparison to the other stages.

3.6.3 Risk assessment

Risk assessment is the umbrella term for different methods of assessing the degree of the risk of recidivism of an offender. Such methods are based largely on scientific data in which behavioural, circumstantial and psychological elements are linked to increased recidivism. There are different types of risk assessment methods. In the past, experts would simply assess the defendant based on a broad clinical judgement: they would rely on their expertise

462 Tollenaar and others, *Effectiviteit van de ISD-maatregel* Cahier, 2019.
463 Ibid.

with forensic patients.[464] This is commonly referred to as *unstructured clinical risk assessment*.[465] Such methods are considered to lead to inaccurate conclusions and lack a transparent methodology. A need for a more systematic and research-based method led to the development of specific risk assessment tools. Such tools typically consist of static or dynamic predictors, or both.[466] Static factors generally no longer change, for instance, the age of first arrest or gender, whereas dynamic factors can still be altered, such as occupational status or substance use. All these elements are assessed and graded, and the final outcome puts the offender in a category of low, moderate, or high risk, and such tools are able to predict the risk with moderate accuracy.[467] If only the items are assessed and the weight of each item is predetermined, it is called *actuarial risk assessment*. If the expert, in addition to the predetermined values and the consequent final score, also gives their own professional opinion on the matter, and also takes protective factors into account, it is referred to as *structured professional judgment* (SPJ).[468]

Nowadays, behavioural experts most frequently employ SPJ methods, as these methods allow for more contextual variation and special circumstances of the offender, whilst still using statistical probabilities as a basis. Hence, the sum score based on the tool is often provided, but not necessarily, and always accompanied by an elaboration on the results. The HCR-20[469] and HKT-30[470] (and the updated version, HKT-R) are two instruments that are frequently used by Dutch forensic experts. The HCR-20 is an international tool whereas the HKT-30 is specifically developed in the Dutch context.[471] Both tools measure historical items, clinical (dynamic) items, and protective items. Importantly, both instruments specifically predict violent recidivism. Substance use or abuse features in almost all risk assessment tools. In the HKT-R, it is even considered twice: as a historical element, namely item H10 (history of substance abuse), but also as a clinical item, namely item K03 (current addiction(s)).

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464 de Ruiter and Hildebrand, 'Risk assessment and treatment in Dutch forensic psychiatry' (2007) 63 Netherlands journal of psychology 153.

465 Emmerik and Brand, 'Risicotaxatie in de forensische psychiatrie' in H. J. C. van Marle, P. A. M. Mevis and M. J. F. van der Wolf (eds), *Gedragskundige rapportage in het strafrecht* (Wolters Kluwer: Deventer, NL 2013) 665.

466 Campbell (ed), *Risk assessment and sentencing in the criminal justice system: Considerations and proposals* (Law, Crime and Law Enforcement, Nova Science Publishers, Inc. 2016) 4-5.

467 Ibid p.5.

468 Emmerik and Brand, 'Risicotaxatie in de forensische psychiatrie' 667-669.

469 HCR-20 stands for Historical Clinical Risk management, with the '20' referring to the amount of items. See also: Webster and Jackson (eds), *Impulsivity: Theory, Assessment, and Treatment* (Guilford Press 1997).

470 HKT-30 stands for Historisch ('historical') Klinisch ('clinical') Toekomst ('future'), with the '30' referring to the amount of items. See also: Werkgroep Risicotaxatie Forensische Psychiatrie, *Handleiding HKT-30 versie 2002. Risicotaxatie in de forensische psychiatrie*, 2002.

471 de Ruiter and Hildebrand, 'Risk assessment and treatment in Dutch forensic psychiatry' 155.

The role of risk assessment in the context of sanctioning is twofold. First, it features in the general behavioural expert report and informs the court about the offender and the circumstances of the offence. In addition to informing the court about accountability and mental disorders, the expert also informs the court about the risk of recidivism, primarily to address the relevancy of the potential sanctioning options. However, risk assessment is also commonly used to assess the 'danger criterion' (*gevaarscriterium)* that needs to be fulfilled in order to impose or prolong the TBS measure.[472]

The role of addiction in risk assessment is omnipresent. In most risk assessment tools, addiction or substance misuse features as an item (historical or dynamic/clinical) as it is a common factor for recidivism, thereby almost automatically yielding a higher score on those measures for addicts. However, the perspective that addiction is immediately risk-inducing is arguably too simplistic. The Risk, Need, Responsivity (RNR) model[473] suggests that not only risk factors but also the needs of the offender as well as the susceptibility to various types of interventions and treatments are crucial in determining the risk of recidivism and thus appropriate sanctions.[474] As addiction exists in varying severity but also combined with other comorbidity and personality factors, it does not automatically result in higher risks and should not be treated as such. However, as is discussed in chapter 5, addiction is frequently mentioned in the discussed of risk of recidivism, indicating that it is often weighed in as a factor for recidivism.

3.9 Concluding remarks

This chapter outlined the areas of substantive criminal law in which addiction may play a role. This overview of theoretical possibilities is important to keep in mind for the next chapters, which focus more strongly on the current applicability and effects of addiction on specific criminal cases. As such, this chapter can serve as a framework for understanding the remainder of this study. Moreover, this chapter introduces the criminal legal arena to those who may not yet be familiar with it, such as jurists from other jurisdictions or readers from other disciplines. This reduces potential issues being 'lost in translation' by having

472 Emmerik and Brand, 'Risicotaxatie in de forensische psychiatrie' 655-656.

473 This a model that primarily focusses on the reduction of risks and is structured along the lines of three core elements. The first, Risk, specifies that the type of intervention should be proportional to the level of risk that the offender poses to society. Need specifies the concrete, dynamic factors that are most causally connected to offending. Lastly, Responsivity ensures that the intervention matches the characteristics of the defendant and would thus be an effective tool in reducing recidivism. For a thorough discussion on this model, see: Ward, Collie and Bourke, 'Models of offender rehabilitation: The Good Lives Model and the Risk-Need-Responsivity Model' in Anthony R. Beech, Leam A. Craig and Kevin D. Browne (eds), *Assessment and treatment of sex offenders: A handbook* (Wiley-Blackwell: Chichester, UK 2009) 299-303.

474 Taxman, Thanner and Weisburd, 'Risk, need, and responsivity (RNR): It all depends' (2006) 52 Crime & Delinquency 28-51.

introduced and explained what terms and doctrines mean and what their requirements are.

To summarise this chapter, it started by outlining the basic structure of criminal liability in the Netherlands. Being a tripartite system, Dutch criminal law requires the description of statutory offence (*actus reus* and *mens rea*) to be fulfilled first, followed by addressing unlawfulness and ending with the concept of blameworthiness. If all steps are proven, courts can continue to sentencing. The previous analyses showed that there is little room for addiction to play a role in the first step, despite the terms 'voluntary act', or 'intent' potentially suggesting so. These concepts require very little in-depth analysis of mental states but are rather addressed as normative and largely objectified concepts that are mostly determined based on objective, behavioural evidence. Premeditation, as an exception to the other two, may be affected by addiction. Yet case law does not consistently show that this is done. Addiction is much more relevant for the excuse of non-accountability, although this remains a predominantly theoretical discussion, not only because of its high threshold, but also, as we will see in the next chapter, because of the concept of prior fault that negates any potential application of addiction as an excuse. Importantly, the diminished counterpart of non-accountability is a suitable concept to accommodate the effects of addiction, and is frequently used to that purpose. As such, this results in an application of addiction that mainly occurs in the sentencing phase of the criminal liability structure. Here, there are multiple ways in which to account for addiction, in types of punishment as well as measures. To determine its sentence, a court often takes risk of recidivism into account and in that determination, addiction has an important say.

Before exploring the practical applicability of this in case law and empirical studies, the final matter of prior fault needs to be addressed. The following chapter does this and reflects how prior fault can potentially negate an applicable excuse or mitigation.

4 Prior Fault, Intoxicated Offenders and Addiction

The previous chapter briefly mentioned the potential role of prior fault. Even if addiction would have an exculpatory or mitigating effect, prior fault mechanisms may be capable of negating these effects. This is a relevant matter, especially in light of my argument from the previous chapter regarding non-accountability and addiction. As I explain there, there does not seem to be any doctrinal or theoretical basis on which to deny addiction as a reason for non-accountability: the open definition from art. 39 DCC, the framework that was applied in case law and the knowledge regarding addiction suggest that, *a priori*, extreme cases could be addressed within the context of the excuse.[475] Yet this potential application of non-accountability may still be denied despite all the requirements for non-accountability being fulfilled. Based on prior fault rules, exculpatory conditions – such as addiction, potentially – can be negated when these exculpatory conditions are considered to be culpably caused. The central research question of this chapter is thus what the legal framework of prior fault is and how this applies to addiction.

An important legal question is whether an individual can rely on a defence, if the individual played a culpable role in bringing about the conditions of that defence. This is, in essence, the idea of the Dutch prior fault doctrine, called *culpa in causa*: negating the defence of the defendant, despite a justificatory or excusatory situation being applicable, because the defendant has culpably manoeuvred himself or herself in a high-risk or dangerous situation.[476] This mechanism is often discussed in the context of intoxication, as it is commonly used to deny intoxication-induced exculpatory conditions, such as non-accountability. Often, the intoxication is straightforwardly voluntary, and establishing responsibility for the consequences is thus generally not controversial. Yet this reasoning can also be applied to addicted defendants.[477] In such cases, arguably, the intoxication or general impairments arising from the substance dependency is not straightforwardly voluntary. In fact, what does 'voluntary' mean in the context of prior fault? As chapter 2

475 For the full discussion, please refer to the previous chapter 3, section 3.5.1.

476 Van Netburg, *Eigen schuld!? 'Culpa in causa' bij wettelijke strafuitsluitingsgronden*, 1994 https://www.wodc.nl/binaries/k34-volledige-tekst_tcm28-77413.pdf.

477 See for instance in this case, which emphasises the genetic predisposition of the addiction and the consequent volitional impairments of the defendant. "The defendant can be considered to not be in a state of 'brain intoxication' prior to the consumption of alcohol, and thus be capable to resist the temptation of starting to drink, although less so than an average person. Given his long experience with relapsing, he had considerable knowledge of the effects that alcohol had on him." Office of the Procurator-General at the Supreme Court, October 2nd 2012, ECLI:NL:PHR:2012:BX0799.

of this study clearly showed, many addicts are able to recover or (temporarily) cease their drug intake, with or without treatment.[478] That chapter also showed how addiction can result in vast impairments of impulsivity and compulsivity.[479] What do these findings mean for the application of prior fault? Can the mental incapacity resulting from addiction and/or intoxication be blamed on the defendant, either by being held responsible for the addiction or by being held responsible for not preventing the behavioural impairment stemming from this addiction? Such a conclusion would have implications for the presence of defences or mitigating circumstances, potentially rendering those defences invalid.

The application of *culpa in causa* to cases of intoxication and related mental conditions (such as addiction or substance-induced disorders) results in a lively debate on what it means to 'culpably manoeuvre' oneself in a situation of a defence when intoxication (or subsequent behavioural impairment) is voluntary. Also, the question rises what the normative framework is for denying a defence even when its requirements are technically fulfilled. Lastly, it is important to recognise that there are two distinct situations. The first is when prior fault is focused on the (lack of) responsibility for bringing about a certain condition, such as being intoxicated or becoming psychotic due to substance abuse. The culpability is then part of the defendant's failure to prevent these conditions, for instance by taking diachronic control.[480] A related, but distinct topic is whether becoming and remaining addicted itself is considered a culpable condition, which would mean that the state of being addicted is sufficient to constitute prior fault. As I discuss in this chapter, the first situation has a valid justification, but requires a clear assessment framework, whereas the latter is an erroneous argument, hinting towards a general lifestyle blame.

In the remainder of this chapter, I delve into the complexities and controversies of prior fault. On a practical level, this chapter first explains the theoretical foundations of the *culpa in causa* doctrine as it relates to intoxication in section 2. By means of an internal comparison, I briefly explain the rules and application of prior fault in defences other than those related to intoxication in section 3. The next section 4 includes the general justification and purpose of having such doctrine, as well as the theoretical reflections on how it ought to materialise in practice. Especially when cases become more complex (for instance, when moving away from *sec* intoxication to substance-induced psychoses), case law exemplifies the gaps between the theoretical foundations of the doctrine and the practical use thereof. These cases illustrate an overly broad application of *culpa in causa* criticised by several legal scholars. Based on these cases, I outline several points of contention afterwards in section 5. These include the concept of a 'free pass', the role of addiction, the meaning of

478 See section 2.3.2.

479 See section 2.3.1.

480 To recapitulate, diachronic control refers to rational and controlled behaviour in anticipation of moments where no such control is possible. See the discussion in section 2.4.1.

'knowingly and willing' creating one's exculpatory condition, and the causal pathways leading to substance-induced disorders. In the sixth section, I suggest a practical way of distinguishing between cases in which *culpa in causa* is relevant and appropriate, and in which it is not. Finally, I address prior fault from a comparative perspective. In order to learn from the problems that other systems encounter and to reflect on the Dutch doctrine, I then provide a succinct external comparison with Germany as well as England and Wales for illustrative purposes.

Importantly, a prior fault discussion is most frequently discussed in the context of intoxication, and not addiction in itself. Although this study generally examines addiction in criminal law, the current chapter also focusses on intoxication itself, as intoxication is central to both the theoretical background as well as case law regarding prior fault. In fact, it seems that prior fault rules is sometimes used as synonymous with intoxication rules, limiting the discussion.[481] However, special attention is paid to the question whether addiction in itself can be considered a form of prior fault.

4.1 Introduction to the Dutch culpa in causa doctrine

Dutch criminal law scholar Willem Pompe introduced the definition of *culpa in causa* in the 1930s.[482] It refers to a type of fault (*culpa*) regarding an offender who committed an illegal act under otherwise justificatory or excusatory conditions because he created those conditions himself.[483] The principle is not codified in the Dutch Criminal Code and thus, over the years, the meaning and application of the principle has developed from case law and critical reflection of legal scholars. Nijboer and Wemes suggest that *culpa in causa* is meant to serve as an exceptional condition, negating the application of an equally exceptional exculpatory defence, and should not be set in stone and limited to a substantive description. As such, the principle ought to be applied individually and differently depending on the case at hand.[484] Later in this chapter, I argue that this individual case-by-case assessment, as propagated by these authors and others[485] is sometimes overlooked.

481 Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands' (2021) Journal of International and Comparative Law 66.

482 Van Netburg, *Eigen schuld!? 'Culpa in causa' bij wettelijke strafuitsluitingsgronden*.

483 Ibid.

484 Nijboer and Wemes, *Rechtspraak, dogmatiek en dogmatisme: de analytische waarde van het onderscheid tussen materieel en formeel strafrecht* (Gouda Quint: Arnhem 1990) 38.

485 Also De Hullu advocates a careful consideration of all circumstances rather than a uniform application. See De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 354-356.

According to those same authors, a general definition of the principle is as follows: "*culpa in causa* concerns criminal cases in which the defendant's lack of criminal responsibility is not justified because the defendant voluntarily has allowed himself, negligently or intentionally, to be in that situation in the first place".[486] Backward-looking as it is, the principle therefore replaces the non-responsibility for the crime with the responsibility for creating the exculpatory conditions anteriorly. *Culpa in causa* may be applied to intentional as well as negligent crimes. Although the phrase *culpa in causa* entered the Dutch legal system in the 1930s, similar concepts had been applied before. The term *versari in re illicita* was already employed in the 12th and 13th centuries to hold priests accountable for any consequences stemming from unauthorised behaviour, even though those consequences were unwanted and unforeseen.[487]

The application of *culpa in causa* is mostly connected to the second and third aspects of the tripartite system, being unlawfulness and blameworthiness, and the defences that negate them.[488] Aside from its application to the defences, *culpa in causa* is sometimes used to accept the presence of intent, but this is generally not necessary or appropriate due to the objective framework in which intent is assessed.[489] This means that generally, *culpa in causa* can be considered a 'negative requirement for the defences'.[490] Specifically, the principle has been applied in the defences of non-accountability, necessity, duress, self-defence (excess), acts of carrying out a legal rule, and acts under (il)legitimate authoritative orders. This makes the doctrine very normative: (ex)culpatory conditions are by definition a judgment of behaviour, culpability and reasonableness.[491] Consequently, an important concept that has to be weighed in the assessment of *culpa in causa* is the *Garantenstellung*. Special qualities of the offender, for instance due to training or profession,

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486 Nijboer and Wemes, *Rechtspraak, dogmatiek en dogmatisme: de analytische waarde van het onderscheid tussen materieel en formeel strafrecht*.

487 Van Netburg, *Eigen schuld!? 'Culpa in causa' bij wettelijke strafuitsluitingsgronden*.

488 See the more extensive explanation in section 3.1.

489 In rare cases, *culpa in causa* is discussed in the context of intent and/or negligence, such as in Supreme Court, December 9th 2008, NJ 2009, 157, annot. Schalken, ECLI:NL:HR:2008:BD2775. This is usually considered a faulty application of the doctrine, as intent is rarely constructed with the use of subjective mental states (i.e. it is constructed almost entirely objectively). Thus, prior fault is not needed to uphold the subjective elements of the definition of offence (i.e. *mens rea*). Wemes touches upon this point and argues, likewise, that *culpa in causa* theoretically applies on the level of the definition of offence as well as the defences, but that in practice, it is mostly relevant in the latter situations. Wemes, 'Strafbaarheid en zelfintoxicatie: actio libera in causa' in J. L. M. Boek (ed), *Grensoverschrijdend strafrecht: een bundel opstellen geschreven door medewerkers van de Afdeling Straf(proces)recht, Rijksuniversiteit te Leiden* (Gouda Quint: Arnhem 1990) 101.

490 Jansen, 'Drie modellen voor eigen schuld bij strafuitsluitingsgronden' (2020) 2020 Boom Strafblad 210-211.

491 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 385.

ought to influence and frame the legal judgment regarding defences as well as possible applications of *culpa in causa*.[492]

For the purpose of this research and its emphasis on addiction, I focus mainly on how this doctrine may deny the non-accountability defence and its relation to intoxication. This is also the most common practical application of the doctrine as well as the biggest area of (scholarly) discussion. Recalling the questions that the court needs to answer in order to prove non-accountability, (i.e. was there a disorder, was there a causal connection between the disorder and the offence, and should the offence therefore be accounted to the accused or not?),[493] *culpa in causa* is usually assessed in the last question.[494] Indeed, the essential mechanism for prior fault in non-accountability cases is that the defendant can be considered legally insane, yet still be held accountable due to culpably creating his mental incapacity.[495] Thus, *culpa in causa* becomes an integrated aspect of the requirements of the defence.[496]

4.2 Theoretical framework of culpa in causa

Opinions differ regarding the scope and applicability of *culpa in causa*. For instance, Pompe focuses on the time of the offence. Was the defendant careless due to intoxication? If so, then the defendant can be blamed for the carelessness at the time of the offence.[497] This seems to suggest the presence of a normative link between the time of the offence (T2) and moment prior to it (T1). Interestingly, Pompe already mentions that when the intoxication is not voluntary, for instance when the intoxication arises from a pathological disorder such as addiction, the situation ought to be assessed differently. I also believe this distinction to be important and elaborate further on this later. Another author, Vellinga, focuses on the competency of the actor and states that one should not start certain behaviour if an individual knows that he will not be able to adequately perform such actions. Vellinga's focus thereby shifts from incapacity at T2, to carelessness at T1. Accountability for the

492 Ibid 386.

493 See section 3.5.1.

494 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 354.

495 In the Dutch language, this is nicely captured in the distinction between '*(on)toerekeningsvatbaarheid*' and '*(on)toerekenbaarheid*', loosely translated as (non-)accountableness and (non-)accountability. The defendant does not have the required capacities to be held accountable (so there is no 'accountableness' on his behalf), yet the court chooses to hold him accountable due to his previously culpable behaviour, so there is accountability.

496 Dolman, 'Binnenstebuiten: hoe bepaalt anterieur verwijt de toepassing van strafuitsluitingsgronden?' (2010) 40 Delikt en Delinkwent 795-821.

497 Pompe, *Handboek van het Nederlandse strafrecht* (3rd edn, Tjeenk Willink: Zwolle, the NL 1959) 180.

offence is thus, by proxy, determined based on carelessness at T1.[498] The problem then becomes that of equivalence: under what circumstances can we consider the behaviour of T1 equivalent to what is lacking at T2?

Strijards also focuses on this element and stresses that *culpa in causa* is about anterior culpability, meaning that the culpability of the defendant is now determined at an earlier point in time.[499] He elaborates more concretely on the practical manifestation of this anterior culpability, and describes two ways. For one, the defendant should and could have foreseen that he would commit the offence, i.e. negligence prior to the act. A second option is that the defendant intentionally put himself in a state in which there would be exculpating conditions, i.e. *dolus in causa*. A case of simple substance use results in the first form of anterior culpability, as due to "*informative Garantenstellung*" everybody can and should know that using alcohol or drugs can result in unwanted consequences: such effects are generally known and can be prevented in time. This means that uncommon side effects of medication, or unexpected consequences of a substance (which deviate strongly from the general usage) cannot be foreseen and hence do not result in anterior culpability.

More recently, the element of foreseeability is equally stressed by Bijlsma.[500] He believes that the 'principle of control' is the foundation for criminal responsibility, and if consequences are not foreseeable, an individual cannot assert control over this.[501] Control, is, amongst other things, based on knowledge of the circumstances: without awareness, there is no possibility to do otherwise. For instance, non-accountability is a justifiable way to negate liability, as a psychotic defendant who acts entirely irrationally is not aware of his illegal behaviour and therefore unable to control that behaviour. Applied to *culpa in causa*, this results in a framework in which the degree of foreseeability (of the offence or of causing a similar type of harm to others) determines how much control the person had, and thus if and how much liability there was for the offence.

Two major cases illustrate these theoretical reflections. In one of the earlier landmark cases, the *culpa in causa case*,[502] the defendant experienced a paranoid psychosis due to simultaneous use of heroin and cocaine, after which he caused his grandmother's death. The initial decision, which was later confirmed by the Court of Appeal, was that he was responsible for the psychosis by voluntarily taking drugs, and hence he was responsible for the mental state at the time of the manslaughter. Accepting the psychosis as an excusing

498 Van Netburg, *Eigen schuld!? 'Culpa in causa' bij wettelijke strafuitsluitingsgronden* 7.

499 Strijards, *Hoofdstukken van materieel strafrecht* (Lemma: Utrecht, the NL 1992) 272-276.

500 Bijlsma, 'Drank, drugs en culpa. Zelfintoxicatie en culpa in causa: pleidooi voor een voorzienbaarheidseis'.

501 See for instance, Van Dijk, *Strafrechtelijke aansprakelijkheid heroverwogen. Over opzet, schuld, schulduitsluitingsgronden en straf* but also internationally the importance of control is discussed, for instance in the context of the act requirement. See: Corrado, 'Is there an act requirement in the criminal law' or Husak, 'Rethinking the act requirement'.

502 Supreme Court, June 9th 1981, NJ 1983, 412, annot. Van Veen, ECLI:NL:HR:1981:AC090.

factor was therefore not possible. According to the Court of Appeal, the concept of accountability encompasses the ability to understand and determine the full extent of one's actions, i.e. knowing the potentially dangerous effects of drugs. In the case at hand, it was argued that the offender could be held accountable for becoming psychotic for four reasons. For one, cocaine and heroin are known to be dangerous and harmful, and two, these drugs are able to affect a sense of morality. This knowledge is also expected to be inferred from the fact that the state prohibits these drugs. As a third reason, it was mentioned that the offender had already experienced psychotic symptoms in the past (i.e. hallucinations, although he never realised that he experienced unreal visions) after using cocaine and that he claimed that when high, he had violent fantasies that he never had when sober. Fourth, at the time he was already feeling agitated, but still injected an even higher dose. As such, the court concluded, he must have known the commonly accepted dangers of using drugs as well as the effects on his mind personally, and had therefore been aware of the full extent that his actions encompassed and accepted this.[503]

When addressing this in light of the theoretical explanations of the doctrine above, this style of reasoning is consistent. In this case, the foreseeability of the consequences are present and consequently render the defendant in control of his decisions and behaviour. Also, the notion of Vellinga, related to carelessness at T1, is fulfilled here. The type of drugs are prohibited unambiguously and the defendant previously experienced negative and unwanted consequences as well. By taking them, the offender was aware (and hence in control) and such behaviour can be considered careless. Another conclusion would not have been acceptable, according to Van Veen, as it would lead to a 'free pass' for anybody to take substances and later claim non-accountability.[504]

In a later case, however, the Supreme Court's decision is not quite on par with the aforementioned theoretical foundations. In the *cannabis psychosis case*[505] the defendant had used cannabis, resulting in an acute psychosis, and committed an attempted theft, destruction of property and assault. The court rejected a non-accountability plea, whereas the defence suggested that the defendant was unaware of the potential psychotic consequences that taking the drug encompasses. Arguably, a psychosis stemming from cannabis is highly unlikely, and in this case no similar symptoms had ever been experienced before by the defendant, unlike the original *culpa in causa* decision. Nonetheless, this was irrelevant according to the court, as it was argued that the defendant does not need to have specific awareness of the detrimental consequences of drugs for *culpa in causa* to apply. The court reasoned that (1) the defendant was a frequent cannabis user; (2) he knew that

503 The full verdict and transcripts of the Court of Appeal in this case are not available, but the arguments by the Court of Appeal are directly cited by the Supreme Court in their later conclusion. See: ibid.

504 Annotation by Van Veen. Ibid.

505 Supreme Court, February 12th 2008, NJ 2009, 157, ECLI:NL:HR:2008:BC3797.

cannabis affected his mental state; (3) he could have known that using cannabis was not completely safe; and (4) it is commonly known that the effects of cannabis differ per individual.[506] This is a stricter interpretation of the doctrine, especially regarding the foreseeability requirement, compared to the *culpa in causa* case. Indeed, it seems that the court merely requires that the disorder came about "culpably":[507] intent regarding the creation of a potential exculpatory mental state (e.g. a psychosis) is not required.[508] What the court means exactly with 'culpably' is not entirely clear.[509] In a later case, the court specified that conditional intent to the disorder is also not required, suggesting that negligence suffices.[510] This is also the interpretation conveyed by De Hullu.[511]

Arguably, this application is too expansive. The main difference with the previous case is that there is a much lower degree of foreseeability (and thus control) in the case of the cannabis-induced psychosis. Not only is cannabis not unambiguously prohibited, as it is considered a soft drug in the Netherlands,[512] but also, as the experts in the case testified, a psychosis is not a common consequence. Not in general, nor for the defendant, who had never before experienced psychosis-like consequences despite being a frequent user. These concerns were not considered relevant in the case. As such, it seems that the *culpa in causa* doctrine is used as a quick 'fix' to ensure that any voluntary intoxication, regardless of the exact circumstances, manifestation and consequences, cannot lead to exculpation. In doing so, the doctrine can lack conceptual clarity or consistency.

In later cases, similar arguments towards foreseeability as in the *cannabis psychosis case* can be found. In a recent case, the Supreme Court discussed the topic of *culpa in causa* in relation to a psychosis caused by amphetamine and alcohol use. The defence argued

506 Ibid.

507 Literally: "aan hem zelf te wijten is geweest". Ibid.

508 Although it is not explicitly addressed in the *culpa in causa* case whether they did require intent, the case did specify that defendant "been aware of the full extent that his actions encompassed and accepted this", which suggests that conditional intent was proven. Supreme Court, June 9th 1981, NJ 1983, 412, annot. Van Veen, ECLI:NL:HR:1981:AC090.

509 Dolman, 'Binnenstebuiten: hoe bepaalt anterieur verwijt de toepassing van strafuitsluitingsgronden?'.

510 Supreme Court, December 9th 2008, NJ 2009, 157, annot. Schalken, ECLI:NL:HR:2008:BD2775.

511 He argues that the assessment has to be holistic in the sense of incorporating all other relevant circumstances, but that the accompanying mental state requires "…at least considerable carelessness [*culpa*]". Translation of: *aanmerkelijke onvoorzichtigheid*. De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 354.

512 In brief, the legislation regulating the production, trafficking and sale of drugs is called the *Opiumwet* and distinguishes two categories of substances: unoriginally called list one and list two. List one contains substances which, according to the legislature, pose an unacceptable risk to the person and to society, and refers to these substances as hard drugs. Examples are cocaine, heroin, amphetamines or MDMA. List two contains substances that the legislature considers less risky and these are referred to as soft drugs. Cannabis, certain mushrooms and benzodiazepines are examples here. These are still illegal to traffic, but may be sold under strict governmental regulations in designated shops. This is labelled the 'tolerance policy' (*gedoogbeleid*). See also: van Ooyen-Houben and Kleemans, 'Drug policy: the "Dutch model"' (2015) 44 Crime and Justice 165-226.

that the psychosis was not reasonably foreseeable and thus, this should not be considered a case of prior fault. Yet the courts all agreed that "the defendant could have known that using intoxicating substances is not without risks, and that it is foreseeable that the use thereof – whether in conjunction with alcohol or not – could lead to risky behaviour towards third parties."[513] Moreover, the Supreme Court also emphasised that the defence's argument, i.e. that the psychosis was not *reasonably* foreseeable, is not a correct interpretation of the law. In other words, the Court here strengthens the previous conclusion and seems to accept a relatively open and broad interpretation of the term foreseeable in the assessment of *culpa in causa*. In a different case, in which the defence had also stated that the psychotic breakdown had not been foreseeable to the defendant, the Court of Appeal also rejected this argument. The Supreme Court validated this reasoning by stating (amongst others) that the defendant knew that his medication, combined with alcohol, had an "un-inhibitory effect".[514] This case is particularly interesting, as it discusses a case of prescribed medication. This following psychotic breakdown was, according to the expert, very rare and unexpected, and also not indicated on the leaflet describing the side effects. The main argument by the Court was that the use of alcohol, in addition to his medication, was a conscious, wrongful choice that can be accounted to him. Later in section 4.5, the exact meaning of foreseeability – and the potential breadth thereof as shown here – is discussed more critically.

The perspective of the doctrine being applied without much regard for and discussion of the exact circumstances is further supported by the case file analysis, which I discuss in chapter 5,[515] as well as by interviews with judges, prosecutors and defence lawyers, which I discuss in chapter 7. Several interviewees also have experienced such a uniform application of *culpa in causa* on substance-induced psychoses.[516] Although a psychosis is often an appropriate basis for non-accountability, the excuse is always denied if the psychosis was caused by substance use, in the experience of the interviewees. Moreover, in cases of 'just' an intoxication or addiction, all interviewees agreed that an appeal on non- or diminished accountability on the basis thereof will most likely never hold and is thus not even discussed

513 Original: "[…] dat verdachte kon weten dat het gebruik van dit verdovende middel niet ontbloot is van risico's en dat voorzienbaar is dat het – al dan niet met alcohol gecombineerde – gebruik van een dergelijke middel tot riskant gedrag ten aanzien van derden kan leiden." Supreme Court, June 30th 2020, ECLI:NL:HR:2020:1073.

514 Original: "ontremmende werking". Supreme Court, March 5th 2019, ECLI:NL:HR:2019:296. See also the annotation by Van der Wolf on this case.

515 In short, the full case files (verdicts, transcriptions of the hearings, pleas, behavioural reports, etc.) of 75 criminal cases in which the defendant was addicted were analysed on the nature of the discussion on addiction and the role it plays in the case at hand.

516 More methodological information on the interviews that were conducted, as well as a more detailed analysis of the findings (which goes beyond the prior fault doctrine) can be found in section 6.2 and section 6.3 of this study.

in the courtroom. When specifically asking defence lawyers, they stated that they are inclined to refrain from discussing the intoxication or the addiction in the context of diminished accountability because they expect *culpa in causa* to apply in any event. Thus, they rather use this information to provide context to the situation of the offence and the circumstances of the defendant.[517] Of course, this still has the underlying aim to induce understanding, sympathy and a more lenient sentence as a result. *Culpa in causa* is, in their perspective, applied indiscriminately in cases of substance use and is often not even discussed or mentioned anymore because of it. Indeed, the case file study in chapter 5 shows that addiction is hardly ever discussed by defence lawyers in the context of blameworthiness (23% of addiction cases) or sentencing (15% of addiction cases).[518] The notion that such an appeal is pointless because courts automatically apply the *culpa in causa* doctrine, thereby negating the defence, plays a large role in this.[519]

Thus, two main conclusions can be drawn from the aforementioned explanations. First of all, there seems to be differences in how some legal scholars approach *culpa in causa* and the indiscriminate nature of the practical application of the doctrine, as found in several cases and illustrated by the *cannabis psychosis case*. Additionally, it seems that *culpa in causa* is often implied and assumed for any intoxication- and addiction-related argument. This contradicts the normative and exceptional nature of the doctrine, which posits that it ought to reflect the characteristics of the case and defendant at hand, especially in light of the aforementioned principle of control. These two conclusions form the basis of further critical reflection on the *culpa in causa* doctrine in the remainder of this chapter. But first, it is worthwhile to briefly look at *culpa in causa* in cases other than those relating to non-accountability, intoxication and addiction.

517 See, for example, this citation of one of the interviewees: "So I try to mention it [*the defendant's addiction*] during the court hearings as an explanation. Judges like to hear the defendant admit and explain in what way they take accountability, they find that important. They want to hear: 'why? How? What are you going to do about this?' So within that context, I bring it up. But I cannot say that it then leads to a mitigation in the sentence, it actually hardly ever does." Author's translation of the original: "Dus ik probeer het eigenlijk, op de zitting benoem ik het vaak als uitleg, rechters houden heel erg van verantwoording afleggen, dat vinden ze belangrijk, ze willen graag horen waarom waarom waarom, hoezo dan? Wat gaan we daaraan doen? En in die context komt het veel aan de orde. Maar om dan ook te zeggen dat het tot strafvermindering leidt, nou bijna niet eigenlijk."

518 See table 5, section 5.2.3 and the rest of section 5.2.

519 Reality is a bit more nuanced as there are other reasons, too: for instance, there is a general fear for the TBS-measure that is associated with non-accountability or diminished accountability, which is why lawyers can also be hesitant to discuss their client's addiction at all. More on this is discussed in chapter 6.

4.3 Prior fault in defences other than non-accountability

Culpa in causa is not limited to the excuse of non-accountability and can play a role in the assessment of almost all defences. It seems that there are some differences, however, in how prior fault is assessed. A first notable difference is that for self-defence and necessity, prior fault is an element independent from the requirements of self-defence and necessity. Thus, after the formal requirements for the defence have been fulfilled, prior fault denies its exculpating nature. It does not negate the applicability of the defence itself.[520] Conversely, for non-accountability, prior fault is incorporated into the overall assessment of the accountability rather than an independent aspect afterwards. Consequently, *culpa in causa* can play a role in the fulfilment of the criteria of the excuse, potentially negating the application thereof.[521] This distinction is understandable given the nature of the non-accountability excuse, which already contains the final normative evaluation of the degree of accountability, which allows for incorporating circumstances such as a prior fault situation.

Self-defence can be denied due to prior fault in two situations: when the defendant provoked an attack because he intended to seek a confrontation, and knowingly and willingly confronted the victim and provoked a violent response.[522] Thus, the focus is very much on intentionally provoking and confronting others. Getting involved in an emergency, despite knowingly and willingly doing so, does not negate the application of self-defence.[523] For duress, the minimum requirement also seems to be intent, meaning knowingly and willingly involving oneself in a (potential) situation of duress.[524] Thus, these requirements for *culpa in causa* in both these instances are intentional to the situation of the defence. Prior fault in the non-accountability excuse is predominantly concerned with intoxication and seems to require negligence rather than intent. As explained in the previous sections, concrete foreseeability of the consequences is not required, meaning that the defendant did not need to have specific awareness to the offence. Indeed, as mere voluntary intoxication seems to be the benchmark for applying *culpa in causa* in intoxication cases, it seems that negligence towards a potential non-accountability situation is sufficient.

Non-accountability cases outside intoxication seem to be limited to medicinal non-compliance, and these cases are uncommon. To address whether the defendant acted culpably in his or her non-compliance, the criterion is foreseeability. Was the defendant aware of the negative side-effects of the medication, or of medicinal non-compliance, or

520 Dolman, 'Binnenstebuiten: hoe bepaalt anterieur verwijt de toepassing van strafuitsluitingsgronden?' s.1.5.2
521 Ibid s.1.5.2.
522 Jansen, 'Drie modellen voor eigen schuld bij strafuitsluitingsgronden' 210.
523 Supreme Court, March 22nd, 2016, NJ 2016, 316, annot. Rozemond (*Overzichtsarrest noodweer*), ECLI:NL:HR:2016:456, note 3.7.1.
524 Jansen, 'Drie modellen voor eigen schuld bij strafuitsluitingsgronden' 210.

should the defendant have been aware? Importantly, disorders that are potentially induced by prescription drugs can be considered different from disorders induced by voluntary intoxication. Hence, these types of induced disorders do not automatically lead to a prior fault situation, unless the defendant knowingly disregarded the prescribed dosage or combined the medicine with alcohol.[525] Thus, a certain level of intent or awareness seems to be required in such cases. Although these requirements may seem straightforward, applying *culpa in causa* to medicine-induced disorders is obscured by the problem of comorbidities. Additionally, the lack of a mono-causal connection between the medicine and delinquent behaviour often complicates the fulfilment of the non-accountability excuse.[526] Courts may consider other explanations for the disorder and the offence in addition to the use or non-compliance of medicine. As we saw earlier, a mono-causal connection is required for the non-accountability excuse,[527] and thus courts will often find that the excuse cannot be confirmed. Invariably there are multiple factors at play in such cases and experts cannot possibly determine the exact causal impact of the medicine on the behaviour.[528]

All in all, it is clear that *culpa in causa* is constructed differently across the defences, and even within the same defence, requires different levels of awareness of the circumstances. This begs the question of what justifies the usage of different requirements. A complicated, normative question which most likely lies at the heart of the defence at hand. For instance, self-defence or duress may have a different status compared to non-accountability due to the fundamental right of self-preservation and the premise that right should never yield to wrong.[529] Societal beliefs about justice may also play a role and may uphold that regardless of one's (negligent) prior actions, an individual should not have to succumb to an aggressor. Such sentiments may not play a role when there is no aggressor, or an emergency, such as the case with non-accountability. Moreover, societal perceptions towards the use of substances and intoxication may also be a reason why individuals are more easily seen as being culpable in creating the prior fault situation. Moreover, whether it is problematic that the defences are judged differently is difficult to assess. It is also understandable that exceptional circumstances, which all of the defences

525 Roef and Verkes, 'Medicijngebruik, agressie en strafrechtelijke verantwoordelijkheid' (2018) 88 Nederlands Juristenblad 3141-3142.

526 Ibid 3139.

527 As was discussed in section 3.5.1.

528 Which is also a more fundamental critique on demanding an empirical-like assessment on causal connections between disorders and behaviours. This is especially the case for complicated cases of medicine-induced disorder, which by definition already involves multiple disorders, namely the induced disorder and the disorder that required medication in the first place.

529 Keiler and Roef, *Comparative Concepts of Criminal Law* 210-211.

are, require exceptional and tailor-made approaches.[530] In any event, these underlying reasons for differences in *culpa in causa* are worthwhile to research further and potentially evaluate how prior fault is currently formalised in Dutch law.

4.4 Justification and rationale for culpa in causa

Before targeting some practical criticism of *culpa in causa*, let me briefly discuss the underlying rationale and justification of such a doctrine and particularly the strict application thereof. After all, criminal law aims to find liability for the offence at hand, which requires culpable actions accompanied by culpable mental states. When liability is lacking, for instance due to mental incapacity resulting in the requirements for non-accountability being fulfilled, what justifies replacing this incapacity with events that took place before the offence occurred? In other words, how can we justify replacing the lack of a culpable mental state at T2 with something that occurred at T1? And why are the requirements for the Dutch prior fault doctrine quite easily assumed and fulfilled?

An important justification for the doctrine focuses on the societal and victimological consequences when excusing offences that were committed after the use of intoxicants.[531] Partly due to the relation between substances and crime, it may be justified that substance use ought to be discouraged by not allowing the consequences to be exculpatory. Using *culpa in causa* can convey this societal message that using substances increases the odds of criminal behaviour, and that this is the individual's personal responsibility. Moreover, as already mentioned, society may find it unacceptable that intoxication would be a 'free pass' to escape liability, particularly for victims. This may feel unjust, as the intoxication is (arguably) voluntary and intentional. "Whoever uses these substances and as a consequence exposes others to his uncontrolled behaviour, has to be aware that he exposes himself to sanctioning. The liability moves forward to the moment that the offender uses substances or alcohol".[532] This line of reasoning seems to correspond with the original purpose of the legislature in 1886 when drafting the predecessor of the non-accountability excuse.[533] Bijlsma argues, however, that it is not entirely clear whether the legislature wanted to specifically exclude intoxication from the disorder requirement of non-accountability, despite some members of the parliament being in favour of this. He commented that it

530 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 386.

531 Supreme Court, June 9th 1981, NJ 1983, 412, annot. Van Veen, ECLI:NL:HR:1981:AC090.

532 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* p.355. A crucial assumption in this is that the intoxication is voluntary: an assumption that I discuss further in section 4.4.2.

533 Ibid 355

would be "too expansive to conclude that intoxication is categorically excluded as a potential disorder" leading to a non-accountability excuse.[534]

The idea that without the corrective mechanism of *culpa in causa*, substance use would become a 'free pass' to commit offences, is for the majority of the instances justifiable and uncontroversial. Hence, it is not surprising that the 'free pass' argument is frequently given as a justification for *culpa in causa*. Yet 't Hart, amongst others, advocates a little more nuance and contends that intoxication should not be an automatic exclusion from non-accountability.[535] In exceptional cases, such as severe and long-term addiction or unknown effects of substances, *culpa in causa* should not be used as a counterargument to deny non-accountability right away. Can we really use the 'free pass' argument if such exceptional cases only sporadically occur and are riddled with complexities and additional factors that play a role? If the main justification for denying an otherwise valid excuse is the societal perception and disapproval that intoxication could become a 'free pass', then this would not apply to such rare and exceptional cases as 't Hart uses as an example. Consequently, using the free pass argument as the main justification for using *culpa in causa* in cases of *sec* intoxication is perfectly clear, but may be less relevant for rare and complex cases.

Lastly, an interesting perspective is to look for a justification of prior fault in the wider context of drug policies. Why does the Netherlands have a relatively[536] lenient approach to prior fault in which, as discussed previously, *culpa in causa* is quickly accepted? One would expect this to be in line with the country's overall perception of and approach to substance use. The nature of Dutch drug policy tends to be quite pragmatic and lenient: most well-known in its 'tolerance policy' of cannabis.[537] The central aim of the policy used to be prevention and minimisation of social and personal risks associated with substance use: the key word is 'normalising'.[538] In other words, it is acknowledged and accepted that (at least soft) drug use is inevitable in society, and drug policy should aim to minimise the harm that stems from it rather than trying to repress it altogether.[539] Thus, there is a strong element of individual autonomy in Dutch drug policy. On the one hand, that would explain the high degree of responsibility that *culpa in causa* assumes: "with great power comes

534 Bijlsma, *Stoornis en strafuitsluiting: Op zoek naar een toetsingskader voor ontoerekenbaarheid* 11-12.

535 Annotation by 't Hart under Supreme Court, June 28th 1983, NJ 1984, 53, annot. A. C. 't Hart, ECLI:NL:HR:1983:AC8052.

536 In the last section of this chapter, I compare the Dutch system with the German system, showing that the Dutch requirements are easier to satisfy, and that the German approach requires a stricter normative link between the substance use and the offence.

537 Van Solinge, 'Dutch drug policy in a European context' (1999) 29 Journal of Drug Issues 511-528. See also footnote 512 for a short note on drug legislation.

538 van Ooyen-Houben and Kleemans, 'Drug policy: the "Dutch model"'.

539 Ibid.

great responsibility".[540] An alternative viewpoint is that the open drug policy rather contradicts the *culpa in causa* doctrine. By quickly accepting prior fault in cases of substance abuse, the message conveyed seems to be that substances are dangerous, so if someone uses them, that person needs to accept full responsibility for the consequences. Arguably, a paternalistic perspective, which may seem to oppose the freedom that is conveyed with a policy of tolerance. This raises the question of how not only the specific Dutch regulation of drugs but also the broad prior fault construct with its legal consequences are related to each other. In terms of justifying the *culpa in causa* doctrine, it is relevant to reflect upon the underlying rationale of the overall policy perspective towards substance use. Although I do not do so here, further discussion of the appropriateness and justifications of *culpa in causa* requires such a broader framework.

4.5 Critical remarks on the culpa in causa doctrine

The illustration above of the theoretical framework and some noteworthy cases give rise to a few interesting issues that I wish to explore further. First is the idea that intoxication leading to non-accountability would be a 'free pass', allowing this 'free pass' to be used as a justification of a potentially overly inclusive application of *culpa in causa*. Second is the framework for assessing whether the intoxication's consequences were voluntary. Awareness, foreseeability, 'knowingly and willingly': these terms are often used by scholars and courts, but what requirements with regard to volitional capacities does this result in, concretely? I suggest a framework containing a concrete foreseeability requirement, containing an explicit volitional prong. The third section contains a brief discussion of cases of *sec* addiction, i.e. without any intoxication. If addiction were to be a valid basis for diminished or non-accountability, how would prior fault be addressed, if at all? And lastly, section four addresses the problem of accurately diagnosing whether a disorder was substance-induced, in other words, the causal paths between disorder and substance use. Importantly, these four issues are not entirely distinct and may sometimes overlap or share similar assumptions and arguments. Yet for the sake of structure, I discuss them separately.

4.5.1 Intoxication: always a free pass?

According to Van Veen, it is necessary to use *culpa in causa* to prevent intoxication from becoming an acceptable ground for non-accountability. In his note under the original 1981 *culpa in causa* case, he explained: "It [the application of *culpa in causa*] is entirely in line with the accepted concept of criminal responsibility for drunken offences. Any other

540 Also known as the Peter Parker principle, named after the superhero Spider-Man.

conception would, given her consequences, not be acceptable. The use of alcohol and other mind-altering substances would become a safeguard for committing offences. Whoever uses these substances and exposes others to the harmful consequences of those, ought to know that he exposes himself to punishment."[541] Schalken and De Hullu also note that, without *culpa in causa*, intoxication would function as a 'free pass' for criminals to appeal to, i.e. the possibility of using deliberate intoxication to escape punishment. Schalken annotated the Tolbert case, discussed in section 3.3 and used in the introductory chapter, and states that "whoever seriously injures or kills another under the influence of alcohol or drugs cannot justify this towards society by pleading a lack of memory".[542]

Thus, it is considered socially unacceptable that one who engages voluntarily in drug-using behaviour, resulting in harmful consequences, would walk free. As I explained in the previous section, this generally seems to be a valid and just perspective. However, a few points of contention are able to nuance this argument. Arguably, the 'consequentialist' approach by Van Veen and others is focused too little on whether there is *de facto* accountableness[543] at all, and jumps too quickly to the consequences that voluntary drug use has, and who ought to pay for those consequences.[544] The reasoning that drug users walking free would be 'socially unacceptable' does not seem to be an appropriate basis to determine criminal liability. Dutch criminal law primarily bases responsibility on the offence and the accountability for it in the case at hand: *daadstrafrecht*, or 'act-based criminal law'. This means that the behaviour that constitutes the offence is to be assessed, and not general behaviour or circumstances, although these may play a role in other elements, such as defences or sanctioning.[545] Moreover, Bijlsma also points out that social acceptability is a rather undefined concept. Who determined what is, and what is not, socially acceptable? A requirement for accountability that is less dependent on individual and subjective preferences is, consequently, more appropriate.[546]

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541 Van Veen, annotation under Supreme Court, June 9th 1981, NJ 1983, 412, annot. Van Veen, ECLI:NL:HR:1981:AC0902. Author's translation of the original: "Het sluit geheel aan bij de gangbare opvatting over de strafrechtelijke aansprakelijkheid voor delicten in dronkenschap begaan. Een andere opvatting is, gezien haar consequenties niet aanvaardbaar. Zij zou er toe leiden, dat het gebruik van alcohol en andere de geest beinvloedende stoffen een 'vrijbrief' voor het plegen van delicten zou worden. Wie deze middelen gebruikt en daarmee anderen blootstelt aan de gevolgen van zijn ongecontroleerde gedragingen, moet weten, dat hij zich bloot stelt aan bestraffing."

542 Schalken, annotation under Supreme Court, December 9th 2008, NJ 2009, 157, annot. Schalken, ECLI:NL:HR:2008:BD2775. Author's translation of the original: "Wie iemand ernstig verwondt of doodt onder invloed van alcohol of drugs, kan zich tegenover de samenleving niet verantwoorden door zich te beroepen op een hiaat in zijn geheugen."

543 See footnote 495 for the difference between accountability and accountableness.

544 Wemes, 'Strafbaarheid en zelfintoxicatie: actio libera in causa'.

545 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 155.

546 Bijlsma, 'Drank, drugs en culpa. Zelfintoxicatie en *culpa in causa*: pleidooi voor een voorzienbaarheidseis' 663.

I agree with Bijlsma: it seems that immediately labelling all drug use as a potential way to negate liability shows a subjective moral view of drug use as wrong and criminal in itself. It disregards other potentially relevant circumstances, and lacks a careful consideration whether or not the individual in question is truly (capable of being) responsible, which ought to encompass a much more nuanced perspective on the defendant's capacities. Also, it seems to suggest that many individuals would indeed use substances *in order to* use it as a defence later on, thus having criminal intentions at the time of usage. However, this is hardly a common reason to use substances and besides, such instances would be captured accurately under the doctrine of *dolus in causa*. Finally, what is and is not socially acceptable is also subject to changes in the zeitgeist. The prevalence of the use of different types of drugs changes over time: for instance, the prevalence of consumption of alcohol and hypnotic substances has decreased in the past decades, whereas cannabis and other illicit drug consumption increased.[547] With such developments, it is only normal that the perception towards drug use changes as well. It would be very interesting to address societal perceptions of drug use and addiction, as well as related crime. I can only imagine that there are differences between certain scenarios, depending on the type and amount of drug use as well as the offender characteristics.[548] Such research would be very interesting, but also necessary, to address the concept of a 'free pass' in cases of intoxication- or addiction-induced offences.

4.5.2 Specifying a framework based on capacities

Perhaps more fundamentally, it is necessary to examine the exact requirements for *culpa in causa* more critically. When courts refer to the defendant's awareness of the harmful consequences of the intoxication, they state that it is not necessary to *be* aware: oftentimes, courts will simply state that the defendant *should* or *could have been* aware.[549] Moreover, the awareness towards potential behaviour effects is general and broad, like an abstract endangerment: the defendant does not need to be aware of any concrete risks.

This is often argued in a two-step sequence. First, the courts establish that "the defendant is aware of the effects taking alcohol and drugs, and that he, therefore, knew or should

547 Seitz and others, 'Trends in substance use and related disorders: Analysis of the epidemiological survey of substance abuse 1995 to 2018' (2019) 116 Deutsches Arzteblatt International 585-591.

548 Indeed, the German system does distinguish between alcohol and other types of drugs in its application of prior fault. See also: Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands' 69.

549 E.g. "The defendant should have known that the consequences could have been, based on incidents from the past." Own translation of the original: "Gelet op incidenten uit het verleden had verdachte moeten weten wat hiervan de consequenties konden zijn." Court of Appeal, Arnhem-Leeuwarden, June 6th 2016, ECLI:NL:GHARL:2016:4420.

have known the possibility of risky and aggressive behaviour".[550] Then, the court stated that "despite this knowledge, the defendant voluntarily and knowingly decided to take the substance".[551] Arguably, such a general awareness requirement for *culpa in causa* has great implications for addicted defendants. Regular users fulfil this condition quite automatically: the effects of a substance are well-known and common. After all, using substances repeatedly is the essence of the condition. Moreover, individuals are usually aware of the negative consequences of substance use yet continue anyway. This is a central aspect of addiction which features in the diagnostic criteria.[552] Hence, substances are consumed despite this awareness, because users have difficulty ceasing their drug use. Fundamentally, the problem is not so much *knowingly* consuming drugs, as much as *voluntarily* doing so – whilst being aware of the potential harmful effects. As was discussed in chapter 2, addiction can lead to strong urges as well as generally impaired and reduced impulse control, which can (depending on each individual case) negate this volitional aspect. For some individuals, there is a certain amount of control lost, in the sense of impulsivity. Therefore, despite never being able to say exactly how much control is lost, it is too quick to assume that all addicts are fully in control of their usage.

In short, the defendant is quite easily assumed to have sufficient volitional capacities in addition to the sufficient rational capacities, which is used as evidence for *culpa in causa*. There are other cases that do not seem to mention volitional impairments at all, but instead focus on rationality.[553] All this raises three concerns. Firstly, is being aware that one is using substances, and that substances have an effect on one's psyche (which is, more often than not, the reason to take drugs in the first place) the same as knowingly and willingly engaging in dangerous behaviour? Based on the previous discussion, it looks as if these two are used synonymously. Yet, especially when the consequences are unforeseen, or out of the ordinary, it is a bit of a stretch to say that one 'knowingly' engaged in that particular behaviour. According to the case law, this does not matter.[554] The Supreme Court explained

550 Court of Appeal, 's-Hertogenbosch, February 21st 2017, ECLI:NL:GHSHE:2017:583. Own translation of the original: "hij bekend is met het effect van alcohol en drugs op zijn psychische toestand, in het bijzonder in het geval hij stopt met zijn medicatie; hij daarom wist, althans moest weten, dat alcohol- en drugsgebruik zoals kort voorafgaand aan het bewezen verklaarde feit in zijn geval tot riskant, agressief gedrag kan leiden".

551 Ibid. Own translation of the original: "hij kort voorafgaand aan het bewezen verklaarde feit, […], vrijwillig en bewust alcohol en drugs heeft gebruikt".

552 For instance, diagnostic criteria A9: "Substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance." American Psychiatric Association, 'Substance-Related and Addictive Disorders' 491.

553 For instance: Court of First Instance, Limburg, March 12th 2019, ECLI:NL:RBLIM:2019:2219.

554 For instance: Supreme Court, January 29th 2019, ECLI:NL:HR:2019:110. "Als uitgangspunt geldt dat in geval van volledig vrijwillige zelfintoxicatie ontoerekeningsvatbaarheid niet leidt tot vrijspraak of strafuitsluiting. De omstandigheid dat verdachte de concrete gevolgen van zijn handelen – in dit geval het veroorzaken van een zeer ernstig verkeersongeval – redelijkerwijs niet had kunnen voorzien, maakt dit niet anders."

that as a starting point, non-accountability caused by voluntary intoxication cannot lead to acquittal: "[…] the condition that the defendant could not have reasonably foreseen the concrete consequences of his actions – in this case, causing a very serious traffic accident – does not negate this [*starting point*]." This places a very strong emphasis on the rational component of behaviour but does not specify the range of awareness or knowledge. This potentially leads to endless and overly broad applications of the cognitive capacity. Thus, as Bijlsma advocates, there ought to be a foreseeability requirement to remedy this.[555] The consequences of the substance use ought to be, to some degree, foreseeable. This may partly be inherent to the illegality of the substance. However, that would mean that cases of alcohol or cannabis abuse ought to be treated differently than more heavily criminalised substances – which they are not, as shown with the cannabis psychosis case.

Secondly, besides an (arguably overly) broad application of the cognitive prong, a problem relates to the volitional aspects of the doctrine, or rather a lack thereof. The emphasis on the rationality and knowledge of the defendant in *culpa in causa* cases is different from the requirements for non-accountability, as was explained earlier, which contains a cognitive as well as volitional prong.[556] Thus, theoretically, a disorder resulting in a volitional incapacity can on the one hand be the basis for allowing a non-accountability excuse, but this same incapacity can later be disregarded when applying *culpa in causa*. Moreover, the strong emphasis on the cognitive component contradicts the use of 'knowingly and willingly': why use these requirements if one of the two is to be ignored later? The following citation shows that the volitional component can be mentioned as part of the doctrine, yet disregarded by focusing exclusively on cognition: "[…] the court did not considered it likely that the use of (large quantities of) speed occurred outside the will of the defendant. The defendant knew that speed has an effect on somebody's psychological condition and the defendant can and should have known that the use of speed could lead to risky behaviour".[557]

And thirdly, this approach relates exactly to those cases in which a volitional prong is *not* mentioned. As I just argued, the volitional prong is sometimes mentioned without consistently being assessed as a concrete capacity; however, it is another matter when cases do not refer to 'willingly' at all. Thus, for clarity as well as consistency, a volitional prong ought to be incorporated into the requirements for *culpa in causa*, and if it is mentioned, should be adequately assessed.

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555 Bijlsma, 'Drank, drugs en culpa. Zelfintoxicatie en *culpa in causa*: pleidooi voor een voorzienbaarheidseis'.

556 See section 3.5.1.

557 Author's translation of the original: "De rechtbank acht niet aannemelijk geworden dat het gebruik van (grote hoeveelheden) speed buiten zijn wil om heeft plaatsgehad. Verdachte wist dat speed effect heeft op iemands psychische toestand en verdachte kan en moet ook hebben geweten dat het gebruik van speed tot riskant gedrag zou kunnen leiden." Court of First Instance, Limburg, September 12th 2017, ECLI:NL:RBLIM:2017:8796.

In short, the focus on the cognitive component contradicts the requirements that are often mentioned as part of *culpa in causa* as well as the focus of the non-accountability excuse, which contains both types of incapacity. It seems odd that a lack of volition can be the basis of the excuse, but is not taken into account in some way in the evaluation of *culpa in causa* when this excuse is blocked. What seems to be important here is that if *culpa in causa* aims to replace a lack of culpability at T2 with culpability at T1, these two types of culpability ought to correspond somehow.[558] Thus, it would be more appropriate to require a similar mental state that the excuse in question (here: non-accountability) requires.

Lastly, it is important to emphasise that this discussion regarding the capacities that are required for *culpa in causa* is particularly relevant in the context of addiction. After all, it is exactly the volitional incapacity that is central to the condition. Unclear or problematic requirements in this regard are, therefore, especially questionable in cases of addicted defendants. Hence, it would only be right if addiction-related impairments would be adequately addressed in the framework of assessment.

4.5.3 Culpa in causa *and addiction*

A distinct issue worth mentioning is *culpa in causa* in cases of addiction, without any intoxication. As mentioned in the introduction of this chapter, the discussion on prior fault is often hijacked by intoxication, which neglects a careful look at the potential role of addiction in itself. Admittedly a predominantly theoretical exercise, but let us assume that a case of very severe addiction has led to a judgment of non-accountability or diminished accountability. If the defendant was not intoxicated at the time of the office, what would be the role of prior fault? On what basis would it be decided whether the basis of the excuse (here: the addiction) was culpably caused?

Courts sometimes consider the responsibility for an addiction as synonymous with liability for the offence. This train of thought was also found in the Tolbert case.[559] The defendant had been using amphetamine, which he has done before on a regular basis, and experienced an amphetamine-induced psychosis in which he killed the two children of

558 This – again – due to the element of control that seems to be at the heart of criminal liability. If there is no correspondence between culpable conduct at T1 and T2, it is not possible to establish that the defendant was in control of his behaviour. This is the underlying idea of Bijlsma's foreseeability requirement as well, but more broadly speaking, in order to be held liable at T2, you need to have been in control of creating those conditions. Without a normative connection between T1 and T2, this seems to be difficult to guarantee. For Dutch and Anglo-US perspectives on the principle of control, see Van Dijk, *Strafrechtelijke aansprakelijkheid heroverwogen. Over opzet, schuld, schulduitsluitingsgronden en straf* as well as Corrado, 'Responsibility and control' (2005) 34 Hofstra Law Review 59-91 respectively.

559 Office of the Procurator-General at the Supreme Court, December 9th 2008, ECLI:NL:PHR:2008:BD2775.

his girlfriend. The court argued that amphetamine is known to be dangerous and the defendant, as a regular user, is aware of these dangerous effects. "Because the defendant nevertheless started using the substance and has continued to do so over the years, he bears important criminal responsibility for his actions and the associated consequences". This seems to hold addicted individuals *even more accountable* than non-addicted individuals for the sake of having used the substance so often. Clearly, it is understandable that being more lenient and allowing mitigating circumstances because of an addiction would be controversial, but to be *more* strict seems to go back to the view that addiction is a moral wrong. As De Hullu eloquently put it, we need to assess the specific blame for a certain act. A general form of blameworthiness (*Lebensführungsschuld* or character culpability[560]) is in its essence not important for criminal liability. What we are concerned with is the concrete culpability at the time of the crime (T2), or for the assessment of *culpa in causa*, regarding a prior moment before the crime (T1).[561]

In another homicide case, the court explained that "in the end, the defendant is responsible himself for the origination and continuation of his addiction behaviour. Thus, he can be considered blameworthy, although the offence can be only be partially accounted to him".[562] Aside from the general concern that the focus of criminal liability ought to lie with the offence and behaviour at hand, rather than *Lebensführungsschuld*, this also raises another, more principal issue. Is one truly responsible for becoming addicted? As chapter 2 of this study thoroughly discusses, this very much depends both on the views of addiction and on the individual. Based on the Brain Disease Model (BDM), addiction is a chronic, relapsing disease. Based on the Choice Model (CM), addiction is all about behavioural decisions and preferences. The previous citation seems to resonate with the CM. However, to state that all addicts choose to become or stay addicted is too short-sighted. After all, chapter 2 also stated that there is a small group of severely addicted individuals who do not recover from their addiction, often patients with complex comorbidities.

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560 An important concept in German law – and likely a sensitive topic due to the country's history – *Lebensführungsschuld* refers to the blameworthiness of a person's lifestyle as opposed to a specific act itself (*Tatschuld*). Many scholars strongly oppose such a general lifestyle culpability. In the Netherlands, this concept is less controversially discussed, although it is often mention that the Dutch stystem also focusses on an 'act-centred criminal law' (*daadstrafrecht*) rather than a general character or lifestyle culpability. The focus is consequently only on the specific range of human behaviour that is prohibited by the law. See Hörnle, 'Das antiquierte Schuldverständnis der traditionellen Strafzumessungsrechtsprechung und -lehre' (1999) 54 JuristenZeitung 1080-1089 and Machiels, in: *Noyon/Langemeijer/Remmelink Strafrecht*, note 1.1.

561 Own translation of the original: "het gaat steeds om de specifieke schuld aan een bepaald feit. Een soort algemene verwijtbaarheid (Lebensführungsschuld of karakterschuld) is in beginsel voor opzet of schuld dus niet van belang, het gaat om de verwijtbaarheid ten tijde van de delictsgedraging".

562 Author's translation of the original: "Hij is in laatste instantie zelf verantwoordelijk voor het ontstaan en continueren van zijn verslavingsgedrag. Er kan hem dus een schuldverwijt worden gemaakt, ook al is het delict hem in verminderde mate toerekenbaar.". Court of Appeal, 's-Hertogenbosch, February 29th 2016, ECLI:NL:GHSHE:2016:704.

Moreover, focusing solely on the cause of the disorder (and the consequent behaviour) could also be considered a psycho-legal error, and would preferably be replaced with a capacity-oriented perspective.[563] A final concern with this reasoning is that if the origins of the addiction are considered the culpable behaviour at T1, this may result in a difference of multiple years until the time of the offence. Although it is never specified whether there is any limit between T1 and T2, it seems excessive to (potentially) allow for a lifetime to pass between the two.

Although no case law was found that dealt with *sec* addiction – which corresponds with the notion that addiction hardly exists in isolation – it is important that courts recognise the differences in potential cases of addiction without intoxication, and cases of intoxication (with or without addiction). To imply that responsibility for all behaviour can be assumed as soon as it originates from an addiction, means that the individual is automatically held responsible for the state of being addicted. These two issues should not be conflated. To be clear, this does not mean that behaviour originating from addiction (such as drug use and the consequences that follow from that) are not the individual's responsibility. Such behaviour ought to be assessed with the use of the framework that the previous section discussed. In such cases, it is the behaviour that is denounced and not so much the general state of being. To determine whether the addiction in itself constitutes a prior fault, and thus whether the non-accountability or diminished accountability is appropriate, has to be determined otherwise. For starters, experts can help assess whether the defendant and his/her addiction might be a 'hard case'. Potentially with the use of neuroscientific methods, in addition to more traditional psychometrics, insights in the capacities of the defendant can prove useful. Moreover, external circumstances such as the availability of treatment and the potential difficulties with that due to special needs or other disorders, may play a role here. Although further research to create a taxonomy or otherwise be able differentiate is necessary, for now, the underlying message is simply to not equate an addiction with an automatic prior fault for the harmful conduct.

4.5.4 Causal pathways between disorder and substance use

A final critical note regarding *culpa in cause* relates to the comorbidity of intoxication, addiction and other mental disorders. The following case by the Court of Overijssel in

563 See section 2.4. To summarise briefly, I contend that it is often erroneous to assume that identifying a cause to behaviour (such as a disorder or brain impairment) eradicates the (criminal) responsibility for such behaviour. Such causes are informative, but not decisive in fulfilling the requirements of the law. More relevant in this is determining the specific capacities of the defendant, such as the capacity for rationality or control, which is ultimately what the law assesses as well (and these are, of course, affected by causes such as disorders).

2018 illustrates that substance use does not always negate the applicability of a non-accountability defence.[564] In this case, the defendant was suffering from a psychotic disorder and a cocaine dependency. The sequential order was deemed important here, as the defendant had been psychotic in the past. Despite the aggravating effects of cocaine, the psychosis was still considered crucial in negating the liability, and the defendant was found non-accountable. This case demonstrates an interesting point. What came first, the psychosis or the intoxication? Although obviously substances may exacerbate the symptoms, it is often not entirely possible to identify the causal chain. One does not just become psychotic out of the blue: there is often a psychotic vulnerability underlying this. Hence, was it truly the substances that initiated the psychosis, or was the psychotic disorder already present? Perhaps the individual was self-medicating his psychotic symptoms, or was experiencing some milder symptoms that often precede a full-blown psychosis. In fact, an individual with a predisposition for psychoses is four times more likely to abuse substances.[565] Before getting into a psychotic episode, the individual goes through what is known as the prodromal phase.[566] In this phase, the individual experiences 'non-specific changes in their thoughts, perceptions, behaviours and functioning'.[567] For instance, the individual may have difficulty sleeping, be irritable or feeling overloaded. Thus, it is understandable that there is a higher percentage of substance abuse amongst these groups.

However, this leads to a potential temporal and causal obstacle. Does it matter *why* the individual was using substances, which led to a substance-induced psychosis? According to the example at the beginning of this section, it does. But, it is also very difficult to identify, as the pre-psychotic phases do not have a clear onset and symptoms are non-specific.[568] It seems essential to identify whether there was a blameworthy use of substances (the *culpa* in the *causa*). Aside from determining whether the substance use was blameworthy, it may not even be the substances that triggered the psychotic episode: it may already be there and would have developed regardless of the substance use. Of course, it may be clear that the substance accelerated the process, but to claim that a psychotic disorder is entirely the cause of (voluntary) substance use would also not be correct.

This is also neither a black-or-white matter nor does it mean that no psychotic defendant can be blamed for using substances, and ultimately, their actions. I do propose, however, that if an individual is diagnosed with a substance-induced psychosis, not to immediately

564 Court of First Instance, Overijssel, January 4th 2018, ECLI:NL:RBOVE:2018:15.

565 Arendt et al, 'Cannabis-induced psychosis and subsequent schizophrenia-spectrum disorders: Follow-up study of 535 incident cases' (2005) 187(6) British Journal of Psychiatry 510.

566 Larson, Walker and Compton, 'Early signs, diagnosis and therapeutics of the prodromal phase of schizophrenia and related psychotic disorders' (2010) 10 Expert Review of Neurotherapeutics 1347-1359.

567 For a basic overview of signs and symptoms in the development of psychoses, see this website: https://www.earlypsychosis.ca/phases-of-psychosis/.

568 Larson, Walker and Compton, 'Early signs, diagnosis and therapeutics of the prodromal phase of schizophrenia and related psychotic disorders'.

deny a non-accountability excuse merely because the psychosis is (arguably) self-induced. There is a complex interplay of mental disorders, in which addiction may also play a role, that determine the relevancy of applying *culpa in causa*. Thus, to finish, it seems that a substance-induced psychosis may not always be substance-induced, and if it is, this may not always be done in a blameworthy manner. These arguments impose yet another barrier to the indiscriminate application of *culpa in causa*.

4.6 Differentiating fairly in cases of addiction: an assessment framework

Becoming intoxicated and thereby impairing mental capacities is more difficult to desist when severely addicted. Thus, as the earlier parts of this chapter show, *culpa in causa* may not always be justifiable, even though such cases are probably quite exceptional. Yet it seems that most addicts are able to exercise control over at least part of their lives and actions. This theoretical discussion thus gives rise to a practical problem: is it possible to say with certainty whether or not a particular person at a particular time deliberately chose to use drugs or whether he was severely compelled to do so? Arguably, whether or not the impaired mental state was *libera in causa* is not possible to assess solely based on being addicted. Hence, it seems unreasonable to say that only by virtue of addiction, *culpa in causa* should never apply because all addicts struggle with controlling their behaviour and therefore their intoxication was compelled. That would lead to unacceptable 'free passes' as discussed. The opposite, however, being the indiscriminate application of the principle, seems unreasonable as well. What is more, such an argument would also hint at the aforementioned *Lebensführungsschuld* and it is important to remain aware that prior fault ought to address the culpability of concrete previous behaviour, and not a general lifestyle. As we have seen previously, there are 'hard cases' of addiction. Certain combinations of events can lead to moments for users where it is unfair to place the same amount of responsibility for controlling drug-using behaviour on an addict as we do with healthy individuals. An indiscriminate use of the principle of *culpa in causa* is in such cases too restrictive to cover such a heterogeneous phenomenon and may hinder individualised, fair legal judgment.

However, the charm of applying *culpa in causa* indiscriminately is the ease of doing so. In an interview with a public prosecutor, the individual stated that "Of course, I can also see that it [*the doctrine*] is somewhat artificial or forced, but it is just something to hold on to as jurists. And I admit that we sometimes just try to find ways to make it practical. […] It is a construction, and not always a logically defendable one. But it works

for me."[569] Following the prior fault ruling in all cases of intoxication, regardless of the circumstances or cause of the intoxication, results in legal certainty and relatively uncomplicated legal decision-making. By approaching *culpa in causa* for addicts differently, especially when trying to distinguish between hard cases and others, this process is slower, more difficult and more varied.

One possible way to examine this is looking at diachronic control.[570] Exercising diachronic control refers to the controlling one's behaviour prior to an expected moment of diminished control. That means that either the individual minimises the chances of such an 'uncontrolled' moment happening in the first place, or that the individual directly takes action against the feelings of diminished control.[571] To use examples related to addiction, the first scenario would be to avoid places that create temptation, for instance taking a different route home in order not to pass by a bar. An example for the second would be to take medication or enrol in psychological treatment which reduces cravings for the drug in general. Both scenarios demonstrate that an individual could have lost control when using substances, but having experienced control diachronically which would have minimised their loss of control in the first place. Contrary to the urges during cravings, in these moments our executive functioning is not overwhelmed by temptation and enables the individual to think more clearly. This is also underlined by Morse, who states that addicts have "lucid, rational intervals between episodes of use", even if we would consider addicts irrational or coerced.[572] Hence, the argument that addiction negates the application of *culpa in causa* may be disputed due to such diachronic control.

It could be possible to differentiate hard cases of addiction for whom *culpa in causa* is too short-sighted versus those for whom it does apply, by addressing diachronic control.[573] There are several aspects that make it problematic for severely addicted individuals to exercise diachronic control. If those aspects are present, applying *culpa in causa* can be considered unreasonable. According to Kennett, there are internal as well as external barriers to diachronic control.[574] These may sound familiar from chapter 2. To recapitulate, individuals may experience an incapacity to foresee future consequences (myopia for the future) and foresee (and plan according to) a drug-free future. Moreover, poor physical

569 Author's translation of the original: "Ik zie ook wel dat dat natuurlijk wat geforceerd is. Maar het is een beetje het houvast wat we nodig hebben als jurist en ik geef toe dat we soms zoeken naar een manier om het gewoon wat werkbaar te maken. […] Het is een constructie en logisch verdedigbaar is het niet altijd. Maar ik kan ermee uit de voeten." For more details and findings of the interviews, see chapter 7.

570 See also chapter 2, section 2.4.

571 Kennett, Vincent and Snoek, 'Drug addiction and criminal responsibility'. See also a more elaborate discussion in section 2.4.1 and section 2.6.

572 Morse, 'Addiction and criminal responsibility' 191.

573 Using control (albeit diachronically) as a formal requirement would also be in line with the principle of control, as discussed in section 2.4 and also under footnote 558.

574 Kennett, *Agency and responsibility: A common-sense moral psychology*.

health reduces the capacity for diachronic control as well as monopolisation of attention, rendering diachronic focus almost equivalent to synchronic. Of course, these are internal barriers, but also a lack of treatment options or ineffectiveness thereof, as well as environmental factors outside the individual's control are restraints to exercising diachronic control. Looking at these aspects may help determine the possibility of the individual to exercise diachronic control. Addressing these factors may not be entirely clear-cut either, but it at least offers some more objective or quantifiable perspectives. One could assess the individual's surroundings to see how difficult or easy it is to find treatment support or perform behavioural assessments to address myopia and attention span. If the premise is correct that hard cases of addiction are those where the users are unable to exercise diachronic control, this could aid in identifying these individuals. These hard cases may become intoxicated because of their addiction, which for them is not a '*libera causa*' because they have difficulty exercising control, even diachronically.

Moreover, allowing foreseeability to become a more clearly defined requirement for *culpa in causa* as well as taking a volitional incapacity into account would be a way to decide on a more just application of the doctrine. If the conduct is either very far removed from the behaviour that was and could have been foreseen, or the defendant was aware but incapable of exercising control, this may be a counterargument to using *culpa in causa*. If foreseeability were to become a more concrete, and more formally applied condition for prior fault, there are two decisions to be made for the construction of such a requirement. First is the concreteness (or otherwise abstractness) of the foreseeability: does the defendant need to foresee a concrete risk of harm, such as the type of offence, or is the abstract notion of foreseeing *any* unwanted consequences enough? Bijlsma seems to argue for the first.[575] I would agree: if prior fault aims to replace the culpability at T2 with culpable behaviour at T1, there ought to be a sufficient normative link between the two.

The second decision relates to the evidentiary nature of determining foreseeability. Would foreseeability be approached using objective or subjective requirements? If foreseeability did become an objectively assessed condition, this would mean that the defendant would not need to foresee such harms himself, as long as it is *objectively* possible that they might occur. This can be interpreted strictly, meaning that any substance use automatically means that unwanted consequences are possible (i.e. the current situation). A strict subjective requirement, on the other hand, would require proof that this particular situation was foreseeable by this particular defendant. This may result in evidentiary problems and a potential 'free pass' when it cannot be proven. The conclusion by Bijlsma seems to be objective, but still quite broad: he suggests that for substances that are not unambiguously prohibited (alcohol, cannabis), there is no immediate danger in using

575 Bijlsma, 'Drank, drugs en culpa. Zelfintoxicatie en *culpa in causa*: pleidooi voor een voorzienbaarheidseis'.

them.[576] Thus, it is less objectively foreseeable that they would result in harm. Conversely, substances that are prohibited come with an inherent danger, otherwise they would not be prohibited, meaning that the law can expect its citizens to be aware of adverse consequences. Based on the aforementioned criticism of an overly inclusive *culpa in causa* framework, I believe this to be a workable and just solution. Prohibited drug use cannot lead to exculpation, but unforeseen consequences of other substance use is not immediately negated either. Importantly, as the foreseeability requirement does not account for the volitional impairments that are so crucial to addiction, I would advocate for a combination of such a requirement together with the aforementioned diachronic control. In chapter 8 of this study, I elaborate further on creating such requirements. This would result in a little more nuance than the current interpretation, but whether this in practice would lead to fewer cases of *culpa in causa* is yet to be seen.

4.7 Prior fault from a comparative perspective[577]

As this discussion shows, the Dutch approach is mostly characterised by being pragmatic and by solving prior fault within the context of the defence.[578] Also, there seem to be inconsistencies and uncertainty about requirements and scope. Not all of these problems are necessarily inherent to the doctrine itself: it seems that some of these problems may be specific (and limited) to the Dutch system. In the next section, I briefly address the prior fault rules in Germany and England and Wales to illustrate alternative manners of solving instances of prior fault. Whether different approaches necessarily result in more conceptual clarity is yet to be seen, but it does show that some of the criticism of the Dutch system is less pronounced when a different structure is applied. First, I outline the structure of prior fault in Germany, focusing on the two-way mechanism of *actio libera in causa* (*a.l.i.c.*) and the *Vollrausch* offence of § 323a GCC, which is a separate intoxication offence. Second, I explain the English rules on prior fault and intoxication. Importantly, a more thorough comparative analysis was conducted elsewhere[579] and the current section rather serves as an illustration. In addition, to remain focused on the purpose of this study, the comparative discussion is limited to matters relevant to intoxication and/or addiction.

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576 Ibid. This is quite a black-and-white perspective as well, as there are clearly also health dangers to the use of other substances, especially in large amounts or the use of multiple substances simultaneously. These dangers are also commonly advertised in campaigns or documentaries. Thus, to say that harm is unforeseeable for non-prohibited drugs is also a bit ambiguous.

577 The legal comparison with Germany and England and Wales has largely been published elsewhere as part of a co-authored work regarding comparative perspectives on prior fault. See: Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands'.

578 Jansen, 'Drie modellen voor eigen schuld bij strafuitsluitingsgronden'.

579 Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands'.

4.7.1 Prior fault and intoxication in Germany

Similar to the Netherlands, prior fault in Germany is mostly addressed in the context of defences and negates the potential application of defences. As such, severe intoxication or associated disorders are first addressed as a potential ground for the non- or diminished accountability equivalence (*Schuldunfähigkeit*, § 20 and 21 GCC).[580] As in chapter 3, I refer to this defence as the incapacity of guilt defence and diminished capacity, respectively. This means that only when these requirements are fulfilled, and the defendant can be considered to have diminished capacity or incapacity of guilt, prior fault may be used to prevent exculpation to meet policy demands that prevent intoxication from becoming a 'free pass'. Thus, this is a similar application to deal with cases of intoxication as in the Netherlands. A fundamental structural difference, however, is that Germany employs a two-fold mechanism to address voluntary intoxication.[581] On the one hand, *a.l.i.c.* can be used to prevent exculpation if the defendant intended or foresaw the offence. On the other hand, when no such culpable link is present, the defendant is excused for the primary offence based on § 20, but is then prosecuted for a separate intoxication offence (§ 323a GCC).[582] With this intoxication offence, Germany achieves doctrinal consistency in acknowledging that a (severely) intoxicated individual does not have the required mental capacity to be held liable for his harmful conduct, whilst at the same time accommodating societal disapproval for letting voluntary substance use become a method of exculpation.

In practice, this two-fold mechanism functions as follows. First, the degree of blameworthiness must be decided to differentiate between full, diminished or incapacity of guilt. For alcohol, this decision has an empirical basis by using a Blood Alcohol Content (BAC) between 0.2-0.3 per cent as an indication for a diminished capacity defence (§ 21 GCC). According to this provision, an individual is still liable for the offence at hand, but can receive mitigated punishment in accordance with § 49 GCC. Having a BAC above 0.3 per cent, the defendant can be considered incapacitated to such an extent that that person can appeal to the incapacity of guilt defence (§ 20 GCC) and thus excused for the offence.[583] This criterion seems objective and clear, but is riddled with difficulties as it is only relevant for alcohol intoxication and even then requires immediate testing and thus cannot be established afterwards. Moreover, BAC may be expressed differently per individual depending on tolerance levels and physical characteristics. As such, determining the extent of the (in)capacity defence remains largely a normative and legal assessment based on the available information, circumstances and behaviour, rather than an empirical assessment.

580 See also the brief comparative remarks on this defence in section 3.5.3.
581 Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands'.
582 Ibid.
583 Ibid.

After establishing diminished capacity or the incapacity of guilt defence, prior fault is addressed. As mentioned before, the amount of foreseeability is crucial in determining the next step. Classic 'Dutch courage' cases, in which the defendant intentionally intoxicated himself in order to facilitate an offence, are clear-cut instances of *a.l.i.c.* and result in a negation of the mitigated punishment (in case of diminished capacity) or a negation of the defence altogether (in case of the incapacity of guilt defence). As a result, the defendant is liable for the offence committed. Yet also conditional intent (foreseeing a risk of committing the offence while becoming intoxicated, and accepting this risk) is a valid ground for *a.l.i.c.* Negligent *a.l.i.c.* is also accepted for cases in which the defendant became intoxicated and could and should have foreseen that this would lead to the offence.[584] The foreseeability of the offence has to relate to at least the type of offence, rendering this type of foreseeability more concrete than the abstract foreseeability that the Dutch *culpa in causa* requires.

If there was no culpable, normative link between the intoxication and the offence at hand (i.e. there was no foreseeability), there is no *a.l.i.c.* and the defendant has to be excused for the offence at hand (provided he fulfils the requirements of § 20 GCC, of course). In those circumstances, the defendant is charged with the separate offence of 'dangerous intoxication' (the *Vollrausch* offence, (§ 323a GCC). The offence reads as follows:

> "(1) He who intentionally or negligently puts himself into a state of intoxication by consuming alcoholic beverages or by other intoxicating means is punished with imprisonment of no more than five years if he commits an unlawful act while in this state and may not be punished for it because he was not legally responsible due to the intoxication or because this cannot be excluded.
> (2) The penalty must not be more severe than the penalty prescribed for the offence committed while in a state of intoxication."[585]

Consequently, the mental state required for this offence is intentionally or negligently becoming intoxicated which results in harmful consequences to others. Importantly, it is not the intoxication itself that is criminalised, but the consequences of the intoxication. By providing this separate intoxication offence in addition to the *a.l.i.c.* rules, the German system assures a clear normative distinction between situations with and without prior fault, whilst still being able to punish intoxicated harmful behaviour either way. This is in stark contrast with the Dutch system, which favours pragmatism, leading to inconsistency across situations and does not always do justice to the complexity of the case at hand. The

584 Ibid.

585 Translation from the German provision copied from Hardt and Kornet, *The Maastricht Collection, Volume II: Comparative Public Law* (6th edn, Europa Law Publishing: Amsterdam, NL 2019) 245.

German system is not without criticism either, of course.[586] Moreover, although the road may be entirely different, the outcome for the defendant in terms of sentencing may be largely similar under the Dutch doctrine, when employing either the *a.l.i.c.* or the intoxication offence. Nonetheless, a case for doctrinal clarity and consistency can be made in favour of the German system which more accurately reflects what the defendant is being blamed for exactly.

To end this section with a note on the role of addiction, it is important to mention that the German system clearly stipulates that addiction in itself cannot be the basis for *a.l.i.c.* This approach may be routed in a firm rejection of *Lebensführungsschuld*. A strong emphasis remains on culpable behaviour at T1, and if such behaviour has been prompted by a mental disorder, courts must carefully evaluate the culpability for these circumstances. This perspective is especially clear in concrete cases of medical non-compliance leading to incapacity at the time of the offence, where the non-compliance is a symptom of an underlying disorder. In such cases, courts cannot accept this as an aggravating circumstance.[587] For addiction, this does not mean that prior fault never applies to cases of addiction-induced intoxication: it is still assessed in light of all circumstances, beyond simply being intoxicated. This in practice means that culpability can be found, for instance, in engaging in violent or dangerous behaviour, whilst knowing that intoxication would impair the defendant's inhibition.[588] Yet it goes to show that the importance of the normative link between T1 and T2 is carefully addressed, also for cases of addiction, and that addiction in itself cannot be an immediate reason for prior fault.

4.7.2 Prior fault and intoxication in England and Wales

Prior fault and intoxication is something else entirely in the English system, which is unsurprising given the larger structural difference between common and civil law. The first major difference, not only relevant for intoxication and addiction, lies with the possibility of prior fault to not only block defences, but also construct an offence.[589] Constructing an offence means that the defendant lacks the prerequisite *mens rea* (intent, recklessness) at the time of the offence (T2), but has acted blameworthy at a moment in time prior to the offence (T1). The culpable mental state at T1, thus, is used to replace the lack of a *mens rea* at T2. In other words, prior fault fulfils the required elements of the

586 For a more thorough discussion on this, please refer to section III.B in Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands'.

587 See Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands' 76 and *Bundesgerichtshof* (German Supreme Court), July 22nd 2020, NStZ-RR 2020, 303.

588 Ibid 77 and *Bundesgerichtshof* (German Supreme Court), August 17th, 2004, 5 StR 93/04.

589 Child, 'Prior fault: Blocking defences or constructing crimes' in Alan Reed and Michael Bohlander (eds), *General Defences: Domestic and Comparative Perspectives* (Routledge: New York 2016).

offence, i.e. constructs an offence. The fact that the Dutch (and the German, for that matter) system does not recognise this distinction between constructing and blocking applications of prior fault, is largely explainable given the objective nature of the intent and the voluntary act requirement. As these are hardly negated by mental states, there is no need to use prior fault doctrines to construct these elements.

Specifically relating to intoxication, English law effectively allows the state of intoxication to become a proxy for prior fault. In doing so, there are no clearly constructed requirements, such as concrete foreseeability or intention to commit the offence. In other words, the presence of an intoxication is simply sufficient for prior fault to apply, and thus, negate any potential defence. As an example, the controversial case of *Taj* illustrates the focus on intoxication as synonymous to prior fault.[590] The defendant had, in a psychotic episode, attacked a victim in situation of mistaken self-defence, based on the defendant's delusional thoughts. As the defendant was a long-term and heavy drug user, prior fault was considered to apply and the self-defence situation was negated. The tricky part, however, was that Taj did not seem to be intoxicated at the time of the offence itself. But rather than addressing whether the psychosis was culpably caused, i.e. finding a normative link between T1 and T2, the courts were discussing whether they could 'extend' the intoxication rules by still applying prior fault due to prior intoxication rather than current intoxication. Put differently, rather than assessing the culpability of the psychosis, the courts were focussed on finding ways to include previous intoxication in this proxy.[591]

Thus, this system seems to focus on a 'quick fix' that ensures that intoxicated offenders do not get off easily, which is in a sense equally pragmatic as the Dutch *culpa in causa*. Yet in contrast with the small amount of Dutch scholarly discussion, English scholars are much more occupied with the problems that result from this 'equivalence thesis', i.e. that voluntary intoxication is equivalent to more specified requirements such as foreseeability, and can be viewed as a replacement of *mens rea* at T2.[592] The advantage of considering intoxication as a proxy for prior fault is the simplicity in practice. Moreover, there is often an intuitive correspondence between perceptions of using substances (for which awareness of the dangerousness or consequences of drug use should be known) and perceptions of what prior fault entails.[593] Thus, implicitly, a requirement of awareness is captured within the use of substances itself in many cases. Without addressing such requirements explicitly, however, intoxication is simply used as synonymous to prior fault, leading to over-inclusiveness as was demonstrated in *Taj*.[594] Moreover, two highlighted problems

590 [2018] EWCA Crim 1743.

591 See also the discussion in Child and others, 'Defending the delusional, the irrational, and the dangerous' as well as in Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands'.

592 Ibid.

593 Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands'.

594 [2018] EWCA Crim 1743.

with the focus on intoxication as a proxy for prior fault are that, first of all, it disregards other situations which may give rise to prior fault circumstances (such as voluntary sleep deprivation or negligent medication misuse). Second, as was noted for the Dutch system as well, it neglects situations in which the consequences of drug use were out of the ordinary and no normative link can be established between the intoxication and the offence that followed.[595] Although such cases (for instance, the cannabis psychosis case[596]) are exceptional, they do illustrate that simply substituting intoxication for concrete prior fault requirements can result in doctrinally incorrect and potentially unjust outcomes.

A last comparative point is that the English system does not have a bespoke offence, such as the German *Vollrausch* offence. Unlike the Netherlands, however, this is a topic that is more often discussed, and there is a group of scholars who seem to be in favour of creating such an offence.[597] It is seen as a potential solution to the problems caused by the 'equivalence thesis', although the current suggestions for reform are still criticised.[598]

4.8 Concluding remarks

This chapter provided a framework for assessing prior fault in the use of substances and the nuances as they relate to addiction. It is a contentious problem, as it relates to the heart of criminal liability: trying to replace the lack of culpability at T2 with culpable behaviour at T1 requires a careful substitution. I believe that the current approach does not focus enough on this normative link between the two points in time, and that voluntary intoxication at T1 is used as synonymous for what is missing at T2. With a rather abstract foreseeability as the main requirement for *culpa in causa*, voluntary intoxication has become a proxy for prior fault, neglecting a more solid and nuanced construction of blameworthy behaviour. Importantly, this is merely relevant for a small number of cases. The majority of *culpa in causa* cases are solved adequately and revolve around cases of *sec* intoxication. Yet in those extraordinary circumstances, in which volitional capacity was limited (i.e. a severe addiction) *as well as* unforeseen consequences (i.e. a psychosis), I argue that the use of *culpa in causa* is not always justified. In such rare instances, we can use Germany as an example, which requires a stronger normative link between intoxication and prior fault. Using foreseeability and diachronic control can be used as evidence to determine whether the defendant was culpable in creating the conditions of his or her defence, and whether the defendant should be denied that defence's exculpating circumstances. In practice, this

595 Ibid.

596 The cannabis psychosis case (Supreme Court, February 12th 2008, NJ 2009, 157, annot. Keijzer, ECLI:NL:HR:2008:BC3797) is further discussed in section 4.2.

597 Smith and Williams, Criminal Law Revision Committee, *Offences Against the Person* (Cmnd 7844, 1980).

598 Child, 'Prior fault: Blocking defences or constructing crimes'.

might not lead to considerable differences, but theoretically, such an approach would be more correct. Finally, this chapter argued for a clear distinction between responsibility for the state of intoxication, and responsibility for being addicted. It is very much possible to find criminal liability for behaviour due to previously culpable conduct, e.g. voluntary substance use leading to a psychosis, without the need to hold the individual accountable for becoming or remaining addicted. The latter, hinting towards a *Lebensführungsschuld*, is unnecessary for questions of criminal liability and only adds a sense of moral condemnation.

With this, I end the more theoretical reflections on addiction in criminal law, and proceed to address the practical manifestation of addiction in criminal law. Topics of premeditation, (diminished) accountability, sanctioning, and prior fault have all been shown to have theoretical relevance for addicted defendants, and some case law has been discussed to illustrate this. To move beyond illustrative purposes, however, it is necessary to delve into a selection of cases to see in which legal questions addiction is commonly discussed, and how. The next chapter, chapter 5, aims to address this next step in understanding addiction in criminal law.

5 Contextualising Addiction in Dutch Legal Practice

This chapter concerns the results and discussion of a systematic analysis of addiction in Dutch criminal cases. During a period of four months, several courts were visited to study the role of addiction in criminal cases in full detail. Whereas the analysis of addiction and criminal law in the previous chapters concerned a primarily doctrinal and theoretical perspective, this chapter extends the discussion into the law in action by studying criminal cases involving addicted offenders. As discussed, there are in principle several doctrinal possibilities in which addiction may play a role. However, the question remains as to the extent to which these possibilities are employed in practice. To gain more insight into the practical approach of addiction in criminal law, a thorough case law analysis is necessary.

Yet a traditional approach to case law analysis was considered insufficient for this purpose. Merely assessing the final judgment, which is often just a succinct summary of the entire case, is insufficient to fully grasp the role and influence of addiction on all legal aspects. Hence, I chose to use full case files rather than only the published judgments in order to include as much relevant information as possible. Especially the differences in the explanation of addiction and the distribution of the debate across the different legal actors (judges, public prosecutors, defence lawyers, behavioural experts) are relevant to address, which is impossible to deduce from only the judgments. Additionally, the amount of detail in the court decisions varies greatly and does not always provide an insight into the discussion and considerations that preceded these decisions. Hence, addressing the (published) court judgments only was deemed insufficient.

All documents from the case files, which often included closing arguments, records of the court hearings, prosecutor's pleas, behavioural reports and more, were studied together, with the aim of identifying when, how and by which legal actor the addiction of the defendant was discussed. Moreover, there was a specific focus on the potential role of neuroscience in the proceedings, as the prevalence of a brain disease model type explanation of addiction is of particular interest. As was discussed thoroughly in the previous chapters, the conceptualisation of addiction potentially has different consequences, in particular for the assessment of accountability or sentencing. Especially some proponents of the brain disease model seem to suggest that liability should be diminished (or even negated) in cases of addiction.[599] Nonetheless, such a discussion has remained mostly theoretical in nature, independent of the practical role of the neuroscientifically informed brain disease

599 See chapter 2.

model and its associated decisions in courts. This chapter fills that lacuna in our knowledge by providing an overview of the role and nature of addiction in criminal cases. Hence, the goal of this study is to investigate in which tier of the criminal liability structure,[600] and by which legal actor, the addiction of the defendant is discussed, and whether neuroscientific information is used in that regard, and if so, in what way. In order to achieve this goal, the following research questions are employed.

1. Which tier of the criminal liability structure addresses the addiction of the defendant?
2. Which legal actors discuss the addiction of the defendant and what terms do they use?
3. How do the behavioural experts conceptualise addiction and is this different from the other legal actors?
4. If experts refer to addiction as a relevant factor, does this contain neuroscientific information?
5. Does the addiction feature in the final recommendation[601] regarding accountability, as drafted in the behavioural expert's report, and if so, does it include neuroscientific information?
6. Is there a discussion of prior fault, and if so, which tier of the criminal liability structure does it relate to?

Before elaborating on these questions, it is important to emphasise that this study was never designed to generalise the findings of all criminal cases with addicted defendants: the diversity and particulars of addiction in case law are too great to do so. Moreover, the number of cases in this study is too limited to make generalised statements. Instead, the aim is to discover general trends and observe possible interactions of addiction with the law. This chapter does so by first explaining the methodology of the study, before continuing to a presentation of the quantitative results, followed by the qualitative findings. Having outlined the data, this chapter continues with an attempt to explain these results and its implications in a thorough discussion, also in light of the preceding theoretical chapters. Importantly, throughout this study, neuroscientific information is defined as all evidence relating to brain structure or functioning or the use of any neuroscientific or neuropsychological assessment tool.

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600 For a full explanation, see section 3.1.1. Briefly stated, Dutch criminal law employs a standard structure, codified in article 350 Dutch Code of Criminal Procedure to assess the liability of a defendant, which largely mirrors the tripartite structure of a crime. First, the evidence is considered in order to identify whether the offence description, as written in the Dutch Criminal Code is fulfilled. After establishing that the act can indeed be qualified as an offence, the courts continue assessing the wrongfulness of the act by addressing potential justifications. The third phase considers the blameworthiness of the accused by addressing potential excuses. Lastly, the appropriate type and degree of sanction is decided.

601 Although the behavioural experts draft a recommendation regarding the defendant's accountability, the decision ultimately is decided by the judges. See also section 3.5.1.

5.1 Methods

In order to investigate the above questions, cases with addicted defendants were systematically selected through the main Dutch case law database and the entire corresponding case files of these cases were requested at the courts. Using these full case files, a thorough analysis was performed on the behavioural expert reports, the transcripts of the courts hearings and the pleas of the public prosecutor and the defence attorney. In the following sections, I outline the sampling, coding and procedure in more detail. The full code book, described later, and raw data are publicly available on DataverseNL.[602]

5.1.1 Case selection

The primary source for this study was the Dutch legal database *rechtspraak.nl*: a source of open data, managed by the Dutch legal authorities, which contains court judgments in all fields of law.[603] Importantly, this database does not include all court cases but a selection. This means that any case law selection based on this database is not representative of all cases. Nonetheless, this study purposefully contained mostly cases with a large amount of information in order to observe as many details as possible, rather than focusing on a fully randomised and representative sample. This naturally resulted in relatively severe and high-impact offences. As major judgments and serious offences (homicides or other offences resulting in high sentences or a TBS order) are always published, this means that the body of cases that I wanted to select from is quite exhaustive. Moreover, as the aim of this study is not to generate generalisable conclusions but rather observe trends, the potential limits on these cases being representative is not a major issue.

A "search string" was developed which contained several addiction-related keywords, since the potential ways in which addiction can be described is vast.[604] This search string resulted in a large number of hits – indicating once more the correlation of criminal law and substance use – which led to the decision to narrow down the search to judgments from just two years. The years 2015 and 2016 were chosen in order to avoid cases that were

602 doi:10.34894/SRSB8I.

603 The organisation has formulated transparent selection criteria to decide which cases to publish. In brief, the following cases are in principle always published: cases that appear before a three-judge criminal court; cases of the Supreme Court; cases that were covered by the media; criminal cases for which the unconditional prison sentence was higher than 3 years or which resulted in a TBS order; and homicide cases. The full criteria can be found on: https://www.rechtspraak.nl/Uitspraken/Paginas/Selectiecriteria.aspx.

604 The exact search string was ~*verslaving* ~*afhankelijkheid ~middelena* ~"stoornis middelen"~8, which translates to a selection of addiction-related terms, such as addiction, dependence, substance dependence and substance disorder. The additional symbols such as the asterisk ensured that not only those words would result in hits, but also derivatives of those words (e.g. *alcohol*afhankelijkheid, meaning alcohol dependence).

still under consideration in appeal, and to maximise the potential of including a neuroscientific debate on the nature of addiction, since this discussion is a relatively recent development. Moreover, I chose not to include the words 'alcohol' or 'drugs' as separate nouns in the search string, as this yielded an incredible number of hits, of which almost all hits were cases of drug production, drug trafficking or drunk driving that did not include an addicted defendant.

Thus, by setting boundaries between 2015 and 2016, and by limiting the search to criminal cases only, the final search string generated 1,052 hits. These cases were assessed manually, primarily to identify whether or not it was a case concerning an addicted defendant. For instance, the search string also detected cases in which the victim was addicted, or cases where the defendant was directed to a drugs-specialised probation service without necessarily being addicted. Such cases were excluded given the focus of the research question. Besides this primary criterion of an addicted defendant, several other inclusion and exclusion criteria were developed. In terms of inclusion criteria, only cases with a behavioural report were included to ensure that the opinion and explanations of the behavioural expert could be observed. Moreover, the presence of a behavioural report also meant that there would be at least some discussion regarding the accountability of the defendant, which is one of the themes this study aims to explore. With regard to exclusion criteria, cases with behavioural addictions (such as gambling or sex) were excluded, due to the controversy on whether these types of addiction can be conceptualised in the same way as substance addictions as well as the specific substance-related focus of this study. Furthermore, cases from the Dutch Antilles were also removed.[605] Moreover, cases from the Supreme Court were excluded, as these contain discussions and clarifications on a particular legal rule or doctrine: thus, they do not necessarily discuss the criminal liability of the addicted defendant on the level that the research question requires. Due to similar reasons, this study also excluded court decisions on the prolongation or cessation of parole and mandated psychiatric treatment orders, despite an addicted offender being the subject of the case.

Based on these criteria, the 1,052 hits were manually assessed to determine whether they would be included in this study. A 93 per cent interrater agreement was achieved with a second, independent researcher, and those cases that were not initially agreed upon were discussed together in order to reach an agreement. This eventually led to 316 cases that were considered appropriate for this research. Consequently, the length of the courts' commentary on the judgments of these 316 cases was estimated, to make an educated guess as to which cases would have the most information about the role of addiction. The 75 cases with the longest commentaries were eventually selected and the case files belonging

605 As the cases needed to be assessed on location, this was not an option due to practical and budgetary reasons, even though the researchers were more than willing to go the extra mile.

to these cases were requested in full at their respective courts.[606] Although cases were not selected on the type of offence, in practice these sampling decisions led to mostly severe and high-impact crimes. By focusing on lengthy discussions and cases that included a behavioural report, the current method inherently dismisses most petty crimes. To guarantee anonymity of the persons involved in the case files, the list of selected cases is not made available.

5.1.2 Variables and coding

In order to answer the research question, which is comprised of several elements, a total of 101 variables were created in SPSS. This chapter does not explain these individually, but rather groups them in seven variable categories for the purpose of clarity, each addressed in turn. First, there are some general and demographic variables such as the (encrypted) case file number, age of the defendant at the time of the judgment, the court that issued the judgment and the type of offence. The second category is details about the defendant's addiction(s) (i.e. the type of substance addiction or the number of addictions) and also contained variables addressing the prior fault doctrine. Third, there is a group of variables concerning the first tier of criminal liability, that is, the fulfilment of the offence definition, and the presence of addiction-related arguments in that stage. As a fourth category, the addiction-related arguments in the assessment of the blameworthiness of the actor are considered.[607] Fifth, there is a group of variables addressing the role of addiction in the assessment and discussion of the risk of recidivism. In the sixth category of variables, the final stage of the criminal proceedings is discussed by addressing the role of addiction in terms of sanctioning. Lastly, in the seventh category, there were several variables dedicated to the behavioural report, and the way addiction was featured in those, for instance in the types of tests that were performed and the role addiction played in the assessment of accountability. It is important to note that any references or discussions regarding diminished accountability is allocated to the blameworthiness category. Theoretically, only non-accountability is an excuse that can negate blameworthiness, and the diminished degrees of blameworthiness are an aspect of sanctioning. Yet for practical purposes, as

606 The decision to select 75 cases for the ultimate analysis is based on two complementary reasons. First, getting approval for conducting this research took place before the cases were selected. Hence, an estimate had to be made about how many cases would yield enough information to study, whilst still being doable in the given timeframe. Consequently, in the application form for approval, 75 cases were requested. Hence, a second related reason is that once the research was approved, it was approved for those 75 cases only. In the final selection, therefore, the 75 lengthiest cases were included.

607 As in chapter 3, there is no discussion and analysis of the unlawfulness of the offence. Although this is formally a tier in the tripartite structure as well, chapter 3 explains how the assessment of unlawfulness is based on offence-related circumstances. Thus, psychological aspects and impaired capacities (such as addiction) are irrelevant to the assessment of this particular tier of the tripartite structure.

well as consistency and clarity, I decided to group all discussions of accountability (the excuse as well as its diminished counterparts) under the same heading.[608]

These variables are a mixture of qualitative and quantitative variables. Most of the variables are categorical, either containing multiple categories such as the type of punishment or type of addiction, or categorical variables which have dichotomous categories, such as yes/no questions. In addition to these categorical variables, there are several variables that are classified as open text, to provide a contextual explanation of that particular variable. For those variables, the researchers copied the exact sentences pertaining to the variable from the file. To give an example, first a dichotomous variable asks whether addiction was mentioned by the attorney in the discussion of risk of recidivism (i.e. a yes/no question), and if the answer is yes, the subsequent textual variable allows for writing down exactly what the attorney said. In the event that such sentences contained personal information such as names, the text was anonymised. Lastly, there are a few continuous variables, for instance length of prison sentence and age.

Grouping and coding the variables in such a structured way created a comprehensive and thorough overview, which allowed for a systematic analysis of all the elements in the case files. However, an important limitation is the ambiguity of creating groups and categories of variables. Almost all variables are related to if, how, and by whom addiction is addressed in the respective case. The file of variables contained clear distinctions, based on theoretical doctrines and legal structures. Yet practice can be more unruly and it turned out to be difficult to determine what information should be grouped under which variable. For instance, consider a court which states that based on the expert report, it considers the risk of recidivism to be high. Technically, the court has not mentioned addiction in its statement. But what if this expert report was mainly about the addiction of the defendant? In practice, then, the court *meant* that the addiction (as explained in the report) is one of the reasons it considers the risk of recidivism to be high. Since these variables were scored based on written case files, without any explanation about the sentences written in the files provided, it can be inherently ambiguous to rate these variables.

In order to overcome this, two corrective measures were put in place. First, an elaborate code book and protocol contain elements describing ambiguous circumstances such as the example above, and provide direction on how to deal with those. Despite being ambiguous, at least the variable can be consistently interpreted by the researcher. And second, it was ensured that there would always be a second researcher who, independently of the first, assessed the same case file and scored the variables. On several instances, the two researchers would compare their work and their scores to see where they differed or had rated variables differently. Those scenarios would then be discussed in order to find an agreement and give the same rating to that variable. If necessary, the protocol and code

608 The same applies to the explanation and discussion of (non-)accountability in chapter 3. See section 3.5.

book were also updated to improve clarity on that variable. Hence, by ensuring a second observer and coder, it was possible to create a high degree of reliability in the dataset. Ultimately, most of the discrepancies in the ratings where not about the content, but the type of variable that the information was designated to. For instance, the same, relevant statement by the court would be detected by both researchers, but one of them would categorise it under the variable of 'recidivism risk' whereas the second would rather situate it under the 'sanctioning' variables. This mainly happened due to a difference between risk of recidivism and sanctioning in theory (which was the basis for creating distinct variable categories to begin with), but a merger between the two in practice: several professionals discuss the two together.

5.1.3 Procedure

Permission to execute the research was granted (reference number UIT 10935 STRA/ks/eb, May 3rd 2018) at the *Raad voor de Rechtspraak*.[609] All researchers involved had to sign an additional confidentiality statement. Moreover, a separate approval was granted by the Public Prosecution Service (reference number PaG/BJZ/51995, May 16th 2018)). Ultimately, the full case files of the 75 selected cases were requested at their respective courts. The case files had to remain in the building and photocopying was not allowed, meaning the research was solely conducted on location. Two independent researchers – one of the two research assistants and I – assessed and coded each case. These two assessments were later compared for interrater reliability, as mentioned.

Although the entire case file was examined for relevant materials, most information was obtained from the following documents. First and foremost, the behavioural report contained a lot of valuable information. In most instances, there were several reports present, either because the court had ordered two experts to draft a report, e.g. a psychologist and psychiatrist, or because the court had ordered a second or third opinion in case the initial experts provided contradictory or incomplete testimonies. In rare cases, the report was absent from the case file, despite the case summary clearly stating that one should have been drafted. In most of those instances, copies of the report were found in an online database.[610] A second common source of data was the closing arguments by both the public prosecutors and the defence attorneys. Many of them had provided the court with

609 This is the overarching judicial centre that connects the ministry with the individual courts, and ensures that the courts operate smoothly. This organisation also manages (via approval and coordination) researchers studying the law.

610 In the online database 'JD-online' (https://www.justid.nl/organisatie/JDS/JDOnline.aspx), managed by the Ministry of Justice and Safety, relevant files on a defendant are kept, such as criminal records, parole reports and behavioural expert testimonies. Via an employee at the Ministry, the researchers were allowed to download the missing reports from this database in order to include these in the research.

near-verbatim copies of their pleas in order to attach these to the court proceeding files and save the clerk the time of typing along. Unfortunately, these were missing in around 20 per cent of the cases. When these pleas were included, they often contained interesting arguments about addiction. A third source, although not always present in the case file, were the reports of the court proceedings, in which the prosecution or the defence often made additional statements or elaborated on their pleas. In some cases, if the briefs of their pleas were missing, these citations of their pleas in the written statements were the only thing that could be used. Lastly, the (published) court judgments contained a large amount of information, such as the final verdict, sometimes accompanied by some explanations or remarks. However, as stated before, any substantive insight into the courts' decision-making was lacking due to their confidentiality boundaries.

Aside from the case and corresponding case file at hand, many of these trials contained an appeal. Either the selected case was a case from a court of second instance, meaning there was a first instance judgment as well, or the original case was a first instance case that had been appealed, meaning there were files on that follow-up process somewhere. In both scenarios, I attempted to get access to the first instance or second instance respectively, in order to find as much information about the case as possible. It was generally possible to retrieve all behavioural reports from the case file or via the online depository, but in many cases the pleadings were unfortunately missing in cases of an additional first or second instance hearing.

5.1.4 Analytical tools

A database containing all the information was created using IBM SPSS software. All quantitative analysis was also conducted in that program. All the open questions, in which exact phrases were copied from the files into the dataset, were analysed using the software Atlas.ti. The research questions, outlined at the start of this chapter, all require a different analytical approach. Most of the questions either involve simple frequency tables, generated by SPSS, or require qualitative analyses. Whenever quotation marks are used in the results, this means that the text is a direct and literal translation from the Dutch sentence(s) in the original file, which is added in the corresponding footnote. If no quotation marks are used, but the original text is still provided in the footnote, it means that the sentence or words were paraphrased.

5.2 Results

This section outlines the results from the study. Importantly, it does not discuss the possible implications of the results immediately, but does provide an overview of the outcomes.

The next section (5.3) contains an in-depth discussion on these results. The results are outlined per research question below, but before that, an overview of the data is provided.

5.2.1 Data description

Ultimately, 70 individual cases and their case files were examined. This is five fewer cases than the requested amount, which is due to the following reasons. One case was selected twice, once as a case of a first instance court, and once as a case of a court of appeal. The information about both cases is incorporated into the final analysis, but the cases are considered as one case in the count. Additionally, two cases were currently being reviewed in appeal, and hence their case files were unavailable. Finally, two cases were only accessible from an online database, to which the researcher was not allowed access.

The average age of the defendants, at the time of the trial, was 36 years old (*SD* = 10.2), with the youngest defendant being 15 years of age and the oldest 58. One date of birth was unknown. Most cases involved male defendants (64 individuals) versus 6 women. Most cases were obtained from the Court of The Hague, which handled 12 of the cases. In the table below, an overview is provided of the locations and courts from which case files were obtained.

Table 2: Courts from which the case files were obtained

	Number	%
Court of Amsterdam	1	1.35
Court of The Hague	12	17.1
Court of Gelderland	3	4.3
Court of Limburg	8	11.4
Court of Northern Netherlands	9	12.9
Court of Middle Netherlands	1	1.35
Court of North Holland	7	10
Court of East Brabant	3	4.3
Court of Overijssel	6	8.6
Court of Rotterdam	2	2.9
Court of Appeal of the district of Amsterdam	4	5.7
Court of Appeal of the district of Arnhem/Leeuwarden	9	12.9
Court of Appeal of the district of The Hague	2	2.9
Court of Appeal of the district of 's-Hertogenbosch	3	4.3
Total	**70**	**100**

In Table 3, the types of offences are outlined per category. The categorisation as used in this study directly mirrors the corresponding sections in the DCC.[611] The table, therefore, demonstrates the type of offences that were common in this case selection, and included all offences that the defendant was convicted of by the court. This is because an offender can be charged with multiple counts of an offence, or multiple different offences together. For instance, in one case the offender killed three individuals and hence was charged and convicted of a triple homicide. Importantly, the table also includes attempted offences of that particular category.

The main result is that the majority of cases in this sample were crimes against life (i.e. homicide) offences: 55 in total. The second most common type of offences were sex crimes. Surprisingly, there were only a few assault convictions in the sample. Most of the theft or extortion cases were violent in nature and included elements of assault, but are classified as (for example) aggravated versions of extortion. Additionally, the large number of homicide cases is not necessarily surprising, as one of the criteria in the case selection was the amount of discussion in the judgments, and this is always elaborate in cases of such severe crimes.

Table 3: Overview of types of offences per charge

	First charge	Second charge	Third charge	Fourth charge	*Total*
Sex crimes	8	11	3	2	*24*
Crimes against personal freedom	4	9	3	1	*17*
Crimes against life	42	7	4	2	*55*
Assault	1	3	4	3	*11*
Theft	5	7	4	3	*19*
Destruction of property	0	1	1	1	*3*
Extortion and threat	6	4	4	5	*19*
Arson	2	3	2	2	*9*
Other[612]	2	4	7	5	*18*
N/a	0	21	38	46	
Total	**70**	**70**	**70**	**70**	

611 For instance, sex crimes is a specific section in the DCC (Book II, Title XIV, "*misdrijven tegen de zeden*"), including rape (art. 242 DCC), sexual assault (art. 246 DCC), acquiring or spreading child pornography (art. 240b DCC) and so forth.

612 This category includes several crimes that only occasionally occurred in the case files, including possession and/or trafficking of drugs, poaching, illegal possession of weapons, handling stolen goods, crimes against the public order and traffic offences.

The selection criterion specified that all cases had to involve an addicted defendant, however, the type of addiction differed from case to case, as did the number of addictions. In fact, several defendants suffered from multiple dependencies. Alcohol, cannabis and cocaine were by far the most common drugs of abuse in this sample. Naturally, as the main selection criterion concerned the presence of an addiction, all subjects suffered from a primary addiction. Still, in addition to that, 41 individuals had a second addiction, and 26 individuals were even addicted to three or more different types of drugs. The table below provides an overview of the number of individuals suffering from a particular substance, either as a primary, secondary or tertiary addiction. The column on the far right indicates the sum of how many of the individuals suffered from a dependency on that particular substance.

Table 4: Overview of dependencies per substance

	Primary addiction	Secondary addiction	Tertiary addiction	*Total*
Alcohol	25	9	5	*39*
Cannabis	27	13	3	*43*
Amphetamines	1	4	2	*7*
Cocaine	14	9	6	*29*
Heroin	0	4	2	*6*
Psychedelics	0	0	2	*2*
GHB	0	0	1	*1*
Prescription drugs	2	2	3	*7*
Unspecified[613]	1	0	2	*3*
N/A	0	29	44	
Total	**70**	**70**	**70**	

5.2.2 Mentioning addiction

This section outlines the results associated with sub-question one and two. To recapitulate, these questions aim to identify which tier and element of the criminal liability structure addresses the addiction of the defendant (question 1) and by which legal actors (question 2). The purpose of these questions is to create an overview of the presence of addiction in

613 In cases of an unspecified addiction, the defendant is referred to as being addicted without specifying the exact substance. E.g. "the defendant suffers from a cannabis as well as alcohol addiction, in addition to a dependency on various other substances".

the entire liability assessment.[614] Moreover, it is relevant to see if this trend is similar across the four legal actors, or that different actors consider the addiction to be relevant for different legal questions. Importantly, these results focus only on the mentioning of addiction and do not include the actual content or amount of detail that this reference was paired with.

As expected, there were only a few references to addiction during the evidence phase, discussing the first tier of criminal liability (i.e. whether the offence description is fulfilled). These were mainly related to the presence or absence of premeditation as well as intent. Much more frequent was the role of addiction in the assessment of blameworthiness (accountability), risk-assessment and sentencing.

The main findings can be summarised as follows. During the evidence phase, only a minority of cases discussed the addiction (around 7 per cent). In such cases, addiction was mostly mentioned in a dissenting manner, i.e. it was stated or emphasised that the presence of addiction did not negate the intent or the premeditation. Interestingly, in one instance the addiction was used as proof of irrational and impulsive behaviour, which was used to evidence a lack of premeditation. In these instances, addiction was also largely discussed in the context of prior fault, a topic which will also return in section 5.2.6.

The addiction evidently played a much larger role in the assessment of blameworthiness: over half of the cases contained such information. This percentage is skewed upwards by the behavioural experts, who naturally reported on the addiction in almost 90 per cent of the cases. Interesting to see is that only 23 per cent of the defence attorneys mention addiction in relation to excusatory defences, such as diminished or non-accountability. In terms of risk assessment, addiction is again mentioned by the large majority of the behavioural experts, which is only sensible given their role to report on recidivism risk as well as the influence addiction theoretically has on that. Here, a large group of judges (30 per cent) relate addiction to the risks of recidivism, which is much more than the attorneys and prosecutors do. Lastly, only a minority of the prosecutors and attorneys discuss addiction in their proposals for sanctions. All findings can be found in the tables below.

These following tables each represent one of the tiers of the criminal liability assessment. These tables show the number of cases that mentioned addiction, specified per legal actor. When instances are unknown, this means that the documents that could include such information (for instance the attorney's closing arguments) was missing from the case files. Hence, in those instances it was impossible to know whether or not addiction was mentioned.

614 As also explained in the theoretical overview of chapter 3, unlawfulness/wrongfulness does not have any implications for addiction, as it is an evaluation of the act and not of the actor (and their potential mental impairments). Thus, as in the previous chapters, I do not further discuss the relevance for this particular legal aspect, although it is evidently part of the actual legal framework.

Table 5: Mention of addiction during the evidence phase (first tier), blameworthiness phase (third tier), risk assessment and sentencing, by each of the relevant legal actors

		Yes	*(%)*	No	*(%)*	Unknown	*(%)*
Evidence phase (first tier)	Public prosecutor	6	*(8.6)*	60	*(85.7)*	4	*(5.7)*
	Defence attorney	4	*(5.7)*	62	*(88.6)*	4	*(5.7)*
	Judge	7	*(10.0)*	63	*(90.0)*	0	*(0.0)*
	Behavioural expert	2	*(2.9)*	64	*(91.4)*	4	*(5.7)*
	Total	**19**	***(6.8)***	**249**	***(88.9)***	**12**	***(4.2)***
Blameworthiness phase (third tier)	Public prosecutor	37	*(52.9)*	30	*(42.9)*	3	*(4.3)*
	Defence attorney	16	*(22.9)*	49	*(70.0)*	5	*(7.1)*
	Judge	44	*(61.4)*	26	*(38.6)*	0	*(0.0)*
	Behavioural expert	62	*(88.6)*	8	*(11.4)*	0	*(0.0)*
	Total	**159**	***(56.8)***	**113**	***(40.3)***	**8**	***(2.9)***
Risk assessment	Public prosecutor	5	*(7.1)*	62	*(88.6)*	3	*(4.3)*
	Defence attorney	1	*(1.4)*	65	*(92.9)*	4	*(5.7)*
	Judge	21	*(30.0)*	49	*(70.0)*	0	*(0.0)*
	Behavioural expert	57	*(81.4)*	12	*(17.1)*	1	*(1.4)*
	Total	**84**	***(30.0)***	**188**	***(67.1)***	**8**	***(2.9)***

Sentencing[615]	Public prosecutor	13	*(18.6)*	54	*(77.1)*	3	*(4.3)*
	Defence attorney	11	*(15.7)*	56	*(80.0)*	3	*(4.3)*
	Total	**24**	***(17.1)***	**110**	***(78.6)***	**6**	***(4.3)***

5.2.3 Terms used to describe addiction

In the previous overviews, the mere mention of addiction is specified. However, this can include various terms and descriptions. Addiction itself, or being addicted, is often referred to as substance use disorder, drug abuse, dependency, alcoholism and so forth. Any differences in (conceptual) approach to addiction starts with potential preferences for terminology, and thus it is interesting to assess whether there is a difference between the legal actors in the terms that they use. Hence, the research question is which terms are used to explain and describe addiction, and whether the behavioural experts use the same description of addiction as the other legal professionals. The original Dutch words and phrases are included in the footnotes. The following paragraphs describe the terms used by the behavioural experts, judges, defence attorneys and public prosecutors in turn.

The behavioural experts use a wide range of terms to refer to addiction. Understandably, they often use the medicalised term for addiction, as well as the terms used in the legal provision for the non-accountability defence (which terms, as explained, are also relevant for diminished accountability).[616] Most commonly, the behavioural experts formulate the following standard sentence or slight variations thereof: "there is a pathological disorder (of his mental capacities) in the sense of substance dependency".[617] Substance dependency (or substance-specific versions thereof, such as alcohol dependency and cannabis

615 Perhaps unexpectedly, there is no row containing the counts of the judges' references to addiction in the sentencing conclusion. This is due to the following two reasons. First, for the judges, there were no additional materials in the case files providing background information on the reasoning or decisions behind the sentence, beyond the available verdicts. This is in contrast to the prosecutors and the attorneys, for whom there were additional files available (such as the copies of their plea). Of course, this is also understandable given the judges' 'secrecy of deliberations' (*raadkamergeheim*). Hence, the only available source of information was the verdict, which was usually very concise and often did not specify the decision-making process, or when it did, it did so integrally, rendering it difficulty to entangle the specific effects of addiction. Second, and more fundamentally, the judges often did discuss sentencing elaborately in the context of diminished accountability. Yet as explained in the method section (specifically 5.1.2), any information on diminished accountability is discussed as part of the blameworthiness phase.

616 To recapitulate, article 39 DCC reads: "an individual will not be considered criminally liable if he commits an act for which he cannot be held accountable due to a mental disorder, psychogeriatric condition or intellectual disability" (author's translation of the original).

617 Original: "Er is sprake van een ziekelijke stoornis van de geestvermogens in de vorm van middelenafhankelijkheid."

dependency) is by far the most commonly used term. The term "addiction"[618] is also widely used, most commonly in conjunction with the particular substance, for instance "cocaine addiction".[619] Another common term is "addiction issues"[620] or "substance issues"[621] often used to indicate that the defendant is dealing with a long-term addiction and the various problems that have occurred because of it. Slightly less used are the terms "substance use" and "substance abuse".[622] This makes sense due to the selection criteria, which only included cases of addiction, and not cases of mere use or abuse. Nonetheless, many experts seemed to use those concepts interchangeably. In addition, the more old-fashioned term for "alcohol abuse"[623] was very occasionally mentioned and lastly, the term "addiction disease"[624] was mentioned twice.

As for the courts, in many instances, judges copy the exact words and phrases from the behavioural experts. Again, standard sentences are used, such as "the court adopts the findings by the experts, who all articulate a presence of cocaine abuse or dependence".[625] As such, there is very little difference between the phrases used by the courts compared to the terms used by the experts. In one interesting instance, the court copied the exact words from the behavioural expert but omitted the parts about the addiction despite the report prominently featuring this. The expert had included addiction in the formal diagnosis, amongst other pathologies: the court merely repeated those other pathologies without the addiction.

In comparison, the defence attorneys discuss addiction much less frequently than the other legal actors as was also shown in the tables in section 5.2.2, but when they do, there is also a difference in wording. In some instances, the words addiction and dependence[626] are used, but more often the addiction is featured in a descriptive manner. For instance, it is stated that the defendant "has always tried many drugs"[627] or that "the defendant suffers from drug-related problems"[628] rather than explicitly stating that the defendant is addicted. In some instances, the attorney refers literally to the behavioural expert. An attorney also stated that the addiction is, arguably, a consequence of other (co-morbid) factors on a few

618 Original: "verslaving".
619 Original: "cocaïneverslaving".
620 Original: "verslavingsproblematiek".
621 Original: "middelenproblematiek".
622 Original: "middelengebruik" *and* "middelenmisbruik".
623 Original: "alcoholabusus".
624 Original: "verslavingsziekte".
625 Original: "Het Hof neemt de bevindingen van de deskundigen over, die allemaal spreken van cocaïnemisbruik dan wel afhankelijkheid."
626 Original: "verslaving" and "afhankelijkheid".
627 Original: "Hij probeerde altijd veel drugs."
628 Original: "Hij heeft last van drugsgerelateerde problematiek."

occasions (e.g. "the excessive use of alcohol is a consequence of his psychiatric conditions").[629]

Lastly, the public prosecutors mostly repeated the conclusions from the behavioural experts, e.g. stating "the psychiatrist has concluded that the defendant is suffering from a pathological disorder (of his mental capacities) in the sense of cannabis dependence".[630] In many instances, and not surprisingly, the public prosecutors associated the statements regarding the addiction to the concept of prior fault, which is discussed further in section 5.2.6. Because of this, the public prosecutors mostly combined the dependency with a higher risk of recidivism or a stricter punishment into one statement. For instance, after the experts had recommended a conditional TBS measure,[631] the public prosecutor stated that he did not agree: "if the defendant were to start using substances again, he could easily reoffend and society ought to be protected against that".[632] Hence, the terms used to describe the addiction were often neutral but the implications were mostly negative.

5.2.4 Addiction in the behavioural expert reports

The question 'how do the behavioural experts conceptualise addiction and is this different from the other legal actors' is of interest here in light of the addiction debate that was explored in chapter 2. If there were much neuroscientific information in the descriptions and reports of the experts, this would be an indication that the brain disease model of addiction is perceived to be more relevant, if not accepted and incorporated into their practices. The entire report is designed to gather as much information about the personality and behaviour of the individual to be used in answering these questions. Based on tests and anamneses, the expert reaches a Diagnostic and Statistical Manual of Mental Disorders (DSM)-based diagnostic conclusion first, and then proceeds to discuss a standard set of questions provided by the court.[633] The diagnosis and the court-ordered questions are then

629 Original: "Overmatig alcoholgebruik is een gevolg van zijn psychische problematiek."

630 Original: "De psychiater concludeert dat verdacht lijdt aan een ziekelijke stoornis van zijn geestesvermogens in de zin van cannabisafhankelijkheid."

631 See section 3.6.2 for an explanation of the different measures, including the TBS measure.

632 Original: "Het OM is het daar niet mee eens. Indien verdachte opnieuw terugvalt in het gebruik van verdovende middelen zal een nieuw strafbaar feit als onderhavige op de loer liggen en daar dient de maatschappij maximaal tegen beschermd te worden."

633 The central part of the report revolves around a threefold question, although the first question is often separated into two distinct matters in the behavioural report. First, the experts explain whether the defendant is suffering from arrested development or a pathological disorder of his mental capacities, as well as how this is described diagnostically. The second question (or second part of the first question) is whether these conditions were present at the time of the offence. The third question is whether these conditions influenced the behavioural choices during the time of the offence, and the fourth question expands on that by asking in what manner and to what extent this occurred, and what the consequences are in terms

used to form a recommendation on the defendant's accountability for the offence(s). In most instances (N=67), the experts discuss the addiction in the diagnosis, these court-ordered questions, or both. In addition to diagnosing addiction as a disorder, the behavioural experts mention the addiction more descriptively in the developmental anamnesis, the description of the test results, and/or the differential diagnosis.

In a handful of cases, neuroscientific information was included in the description of the defendant's addiction. Some of these cases refer to neuroscientific tests that were employed, and the lack of significant findings that emerged from those. For instance, two cases state that, based on neurological examination, "there is no evidence that years of substance/alcohol use has influenced the defendant's cognitive functions" or has led to "objectifiable brain damage".[634] In another case, the expert did not use neuroscience to address the specific capacities of the defendant, but rather made a general remark that "scientific literature has shown that a cocaine intoxication has a range of acute damaging effects, such as neuropsychiatric and cardiovascular symptoms".[635] This particular expert also provided references to this literature, which was quite rare amongst all the cases examined. One case made note of a genetic predisposition to alcohol addiction, in addition to environmental factors, based on the family anamneses.[636]

The other instances of neuroscientific information are all related to the effects that substance had on the capacities of the particular defendant under examination. The following citations illustrate how experts use neuroscience descriptively to explain the mental states of the defendants.

> "The neuropsychologist could not preclude the possibility that prior brain damage affected the cognitive capacities of the defendant. However, it is more likely that the current neuropsychological symptoms are a consequence of the defendant's alcohol addiction. Such aforementioned minor defects are not uncommon for people with an alcohol dependency."[637]

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of accountability. These questions are based on, but not identical to, the aforementioned question that the court needs to answer in order to prove non-accountability (as discussed in section 3.5.1).

634 Original: "Uit screenend neurologisch onderzoek komen geen aanwijzingen naar voren dat betrokkenes jarenlange middelengebruik van invloed is op zijn cognitief functioneren." *And*: "Uit bevindingen van diverse onderzoekselementen (MRI, testpsychologisch onderzoek, observaties) komen geen aanwijzingen dat eerdere ongelukken of zijn alcoholgebruik hebben geleid tot objectiveerbaar hersenletsel."

635 Original: "Uit de wetenschappelijke literatuur is bekend dat cocaïne-intoxicatie diverse acute schadelijke effecten kan hebben, zoals neuropsychiatrische en cardiovasculaire symptomen."

636 Original: "Gezien de familieanamnese speelt bij betrokkene waarschijnlijk ook een genetische predispositie voor verslaving aan alcohol in dezen mee; naast omgevingsinvloeden."

637 Original: "De neuropsycholoog kan niet uitsluiten dat eerder hersenletsel invloed heeft gehad op het cognitieve vermogen van betrokkene. Maar het is waarschijnlijker dat het huidige neuropsychologisch beeld voortkomt uit de alcoholverslaving van betrokkene. Bovengenoemde lichte beperkingen zijn niet ongewoon bij mensen met een alcoholafhankelijkheid."

> "This [*the absence of organic brain disorders]* is not to say that the consequences of the low scores on the subtests of the IQ examination cannot be attributed to the traumatic brain injuries and the long-term, excessive use of addictive substances."[638]

> "Concerning the organic brain impairments: these problems are a consequence of the alcohol use and the CVA [*cardiovascular accident*]. It is possible that problems resulting from a CVA improve over the course of time, contrary to the damage as a result of alcohol use. Since the defendant did not use any sedative medication during the offence, although he did suffer, probably to a greater extent, from the effects of the CVA and the alcohol-induced brain damage, it can be concluded that the defendant experienced problems in his executive functions and memory-related problems at the time of the offence."[639]

> "Additionally, there is a probability that other pathologies have played a role, which the experts could not investigate due to the limited research. For instance, this could be brain damage due to excessive substance use or a paraphilia."[640]

In addition to the descriptive use of neuroscientific perspectives, some experts also employed neuroscientific tools such as brain scans or neuropsychological testing in their examination of the defendant. Importantly, experts did not necessarily use these to examine addiction. Often these tools belonged to a standard battery of tests. Nevertheless, in one instance, the expert explicitly stated that he/she wished to have performed (but was unable to do) an imaging test in order to detect whether there was damage to the brain due to excessive substance abuse. Out of the 70 cases overall, 22 cases contained some kind of neuropsychological or neuroscientific tests in the reports. Most common was the use of various neuropsychological tests. In total, the experts used over 20 different types of such tests, primarily to examine executive functions such as attention, planning, memory and inhibition. Most commonly used was the ATKG (the Amsterdam short-term memory

638 Original: "Dit [het gebrek aan hersenorganische stoornissen – AEG] wil niet zeggen dat de gevolgen van de lage scores op de functiegebieden van de gebruikte tests niet toegeschreven kunnen worden aan de doorgemaakte hersentrauma's en het langdurige en excessief gebruik van verslavende middelen."

639 Original: "Aangaande de organische hersenproblematiek: deze problematiek komt voort uit het alcoholgebruik en het CVA. Problematiek vanuit het CVA zou in de loop van de tijd nog kunnen verbeteren, dit in tegenstelling tot de schade door alcohol. Aangezien betrokkene nauwelijks sederende medicatie gebruikte ten tijde van het ten laste gelegde, maar wel, waarschijnlijk in ernstiger mate, last had van de effecten van het CVA en schade door alcohol, kan geconcludeerd worden dat er sprake is geweest van problemen in de executieve functies en geheugenproblemen ten tijde van het ten laste gelegde."

640 Original: "Daarnaast bestaat er de mogelijkheid dat andere pathologieën, waar de onderzoekers door het beperkte onderzoek geen zicht op hebben gekregen, een rol heeft gespeeld. Hierbij valt te denken aan hersenschade door excessief middelengebruik of een seksuele stoornis."

test), applied in 11 instances. Other popular tests were the 15-word test (10 instances), the trail-making test (9 instances), various drawing exercises (faces, clocks or bikes, in 7 instances) and the Stroop and the D2 test, both used in 6 instances. In addition to neuropsychological tests, some experts included brain scans in their examinations. In 11 cases, an MRI scan was used, and a CT and EEG scan were both used once. Finally, 6 experts mention that a 'neurological examination' was conducted, but did not specify which tools were used exactly. An overview is provided below.

Table 6: Overview of the neuroscientific tests employed

Tests	Counts
Neuropsychological tests	
Stroop test	6
Trail-making test	9
15-word test	10
AKTG	11
D2 test	6
Clock/bike drawing	7
VAT	5
Other[641]	23
Imaging tools	
MRI scan	11
CT scan	1
EEG scan	1
Unspecified	6

5.2.5 Addiction in the accountability recommendation

After the expert finishes all testing and anamneses, he or she is required to comment on a set of questions provided by the court, as mentioned. In some cases, these questions were not answered entirely or with full certainty: for instance, the defendant could have refused to cooperate or evidence may have been lacking or contradictory. However, in the vast majority of the cases, the defendant was fully cooperative or at least cooperative enough

641 This contains all tests that were performed fewer than five times, and includes Bourdon-Wiersma (3), Figure of Rey (4), (M)MSE (3), Faux-pas (3), digit span (1), facial recognition test (1), K-snap (4), SNS-R (1), TOMM (1), MoCa (1), and FAB (1).

to provide sufficient information for a recommendation. This information is used to answer the sub-question that this section is concerned with, namely whether the defendant's addiction features in the expert's final recommendation regarding accountability, and if so, whether it includes neuroscientific information. In order to answer this question, all four court-ordered questions need to be studied, as they are used together, like building blocks, to formulate the recommendation.

The first observation is that almost all experts mention the addiction in the second question, where the expert is asked to describe the presence of a pathology from a diagnostic perspective. Generally, a standard medical sentence was used, indicating for instance that "there is a pathological disorder (of his mental capacities) in the sense of cocaine dependence".[642] However, one expert explicitly stated that in this case "the defendant did not suffer from a psychiatric disorder, and that next to that, there is a dependency on cannabis and abuse cocaine and amphetamines".[643] This could mean that the classification (as a disorder or other) of addiction can be ambiguous, or at least variable, amongst experts.

A second interesting observation shows that the experts differentiate between the capacities that are impaired due to the addiction, and the capacities that are impaired due to intoxication. The latter is often more straightforward, and is generally mentioned in the context of eliciting or aggravating violence and impulsivity. For instance, an expert stated that "the defendant's anger and impulsivity is possible enhanced by excessive alcohol and cocaine use".[644] In another case, the expert claimed that cocaine use impaired the defendant's capacity of considering the current affairs calmly and conscientiously.[645] Overall, the impaired capacities due to intoxication are mostly related to volitional impairments: often, the report describes the substance as having an "un-inhibitory effect".[646] Additionally, the concept of a hampered moral sense or conscience as a consequence of intoxication is mentioned a few times, such as in the penultimate example.

In contrast to intoxication-impaired capacities are those that are a direct consequence of the defendant's addiction. For instance, an expert stated that the cocaine addiction diminished the capacity to adequately weigh the decision.[647] A different report stated that the defendant "did not adequately consider the consequences of his acts on the victims

642 Original: "Er is sprake van een ziekelijke stoornis van de geestvermogens in de zin van cocaïne-afhankelijkheid."

643 Original: "Er is geen psychiatrische stoornis in engere zin. Daarnaast kan bij betrokkene gesproken worden van afhankelijkheid van cannabis en misbruik van cocaïne en misbruik van amfetamine."

644 Original: "De boosheid en impulsiviteit van betrokkene is mogelijk versterkt door overmatig alcoholgebruik in combinatie met cocaïne."

645 Original: "Daarnaast verminderde het gebruik van cocaïne vermoedelijk de mogelijkheid om het haar voorliggende probleem rustig en gewetensvol te overwegen."

646 Original: e.g. "Alcohol heeft een ontremmende functie op zijn gedrag."

647 Original: "Een gewogen beslissing kwam minder goed tot stand".

and rather chose for the immediate satisfaction of his needs than other alternatives".[648] These examples indicate that addiction resulted in a cognitive incapacity in these cases. Still, many experts also found volition to be impaired due to addiction: for instance, an expert explained that "despite his awareness of the dangerousness of substance for himself or to others, the defendant showed to be unable to control his behaviour".[649] In that specific case, addiction was considered the cause of the impaired control, because addiction can be characterised as a psychiatric disease.[650] Taking this sentence literally, it implies that the impaired control is not due to the nature and symptomology of addiction, but merely because it has been labelled as a disease, although that might be a stretch from the intended meaning. A more sensible explanation is that the expert merely wanted to stress the gravity of the addiction and wanted to ensure that the court viewed it as a serious impairment. Lastly, some instances explicitly link this lack of capacities to the craving for the substance. Due to the urge of the craving, defendants were sometimes unable to adequately review and resolve a situation, or defendants were restless and as a result, experienced high levels of stress, which reduced their ability to control their impulses and behaviour.[651]

A third observation in the expert's questions relates to the two-fold incidence of mentioning 'free will'. Interestingly, these two references to free will are of an opposite nature. The first expert stated that due to the awareness of the defendant that his substance use had negative effects, one could presume at least some free will with regard to the defendant's actions.[652] The other expert rather stated that "due to the addiction (and to a lesser extent due to an intellectual disability and dysthymic disorder) the defendant had a limited ability to determine her will freely".[653] In other words, it seems that these experts suggest that substance abuse can decrease free will, but neither say that free will was entirely absent. Although we cannot know what these experts mean with 'free will', it probably does not refer to the metaphysical meaning of ultimate causal control as discussed in chapter 2.

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648 Original: "Hij stond onvoldoende stil bij de impact voor de slachtoffers en koos voor de directe behoeftebevrediging in plaats van alternatieven."

649 Original: "Ondanks de wetenschap dat hij door gebruik van alcohol en drugs zichzelf en anderen in gevaar kan brengen is hij niet in staat gebleken zichzelf hierin te controleren".

650 Original: "Dit komt doordat de verslaving en zijn verdere geestelijke gesteldheid als psychische ziektes gekenmerkt kunnen worden."

651 Original: "Het is vanwege zijn verslaving dat hij op dat moment niet rustig zijn probleem kon overzien en oplossen, immers hij moest scoren."*And*: "Hierdoor zou hij zich toenemend onrustig kunnen hebben gevoeld waardoor hij meer stress ervaarde en minder in staat was om zijn impulsen en gedragingen onder controle te houden."

652 Original: "Betrokkene was evenwel goed op de hoogte van het ongunstige effect van zijn middelengebruik op zijn schizofrenie. Er kan enige vrije wil verondersteld worden ten aanzien van zijn handelen in aanloop naar het tenlastegelegde."

653 Original: "Echter is zij door het bestaan van de verslavingsproblematiek en in mindere mate door de licht verstandelijke beperking en de dysthyme stoornis in beperkte mate in staat geweest om haar wil conform dat inzicht in vrijheid te bepalen."

Fourth, some experts do not mention impaired capacities related to addiction, but they do focus on the inability to stop using substances. This can also be considered symptomatic of addiction itself, and indicative of a volitional incapacity. In some cases, this argument was used in an exculpatory manner to explain why the defendant had used substances despite knowing the adverse consequences of using. Hence, this reasoning supplements a prior fault reasoning and nuances the applicability of a prior fault argument. Prior fault is discussed more explicitly in the next section. In the context of this chapter, however, it is interesting that experts claim that, because of the dependency, the defendant was not capable of breaking the vicious cycle or unable to independently cease the use of substances which resulted in the intoxication and its associated impairments.[654] This implies that the impairments of the defendant requires a double causation: the addiction causes the intoxication (due to an inability to stop using substances) and the intoxication causes the impairments.

Lastly, two independent observations stand out. First, throughout all the reports, there were very few neuroscientific explanations of the addiction, the impaired capacities, or the consequences of substance use. The examples in the previous sections contain the most direct references to impairments or damage caused by substance use. However, an explanation of addiction such as the one by the Brain Disease Model, was not found. A second interesting observation relates to the concept of diachronic control. Explained in more detail in section 2.4.1, diachronic control is an individual's capacity to act rationally and volitionally when in lucid periods between phases of substance intoxication and cravings. The expert in this particular instance stated that addiction resulted in an impairment of free choice in the use of substances. However, because the defendant did not use substances on a daily basis at the time of the offence, the defendant did maintain a sense of free choice in the use of substances.[655] This type of reasoning is also often used in the context of *culpa in causa*, which the following section elaborates upon.

5.2.6 Prior fault

As discussed, the prior fault doctrine (*culpa in causa*) is in its basis a purely legal concept and is generally used to negate defences based on culpable prior conduct. The previous chapter elaborates on the possible applications of prior fault. *Culpa in causa* is often used

654 Original: "Hij is vanwege de afhankelijkheid niet in staat geweest om deze vicieuze cirkel te doorbreken." *And:* "Maar vanwege zijn verslaving kon hij het gebruik niet meer zelfstandig stoppen."

655 Original: "Dit past ook bij zijn verslaving aan deze middelen, waardoor de keuzevrijheid voor het gebruik hiervan op dat moment beperkt was. Aangezien betrokkene rondom de periode van het ten laste gelegde niet dagelijks deze middelen, met name alcohol en cocaïne, gebruikte, bleef er wel enige keuzevrijheid in het gebruik hiervan aanwezig."

in cases of intoxication and/or addiction to negate non-accountability (or diminished degrees thereof) caused by the addiction because of lack of capacities. What this case file research found is that in practice, *culpa in causa* is also used more implicitly. Prior fault arguments were found throughout the court proceedings to emphasise the role of awareness and choice in the defendant's substance-using behaviour in a more colloquial manner. In doing so, the actors did not specifically state how prior behaviour negated the otherwise excusatory conditions, but rather mentioned such behaviour as circumstances to the offence. Nonetheless, it is fair to assume that such remarks reflect a deeper connotation, and thus have an influence on legal judgments.

The following paragraphs are structured along the two tiers that contained such remarks, namely the evidence phase and the blameworthiness assessment. In addition, I distinguished between specific prior fault arguments and indirect (more colloquial) prior fault arguments. Neither type of argument necessarily contained an explicit mention of *culpa in causa* as a term. The specific arguments relate to explanations that negate or diminish liability: the formal purpose of *culpa in causa*. Contrarily, the colloquial arguments do not do so but rather hint at culpable behaviour as the cause of incapacity, without mentioning concrete consequences. Yet such arguments can, of course, still result in a negative connotation (and thus judgment) towards the addiction. Please note that this is not a formal or mutually exclusive division. The difference between specific and colloquial argumentation is primarily employed to provide an overview and structure to this section. The following table shows the different themes that are discussed in turn.

Table 7: Overview of themes in prior fault reasoning found in this sample

Evidence phase	
Specific prior fault arguments:	Whether premeditation/intent can be negated
Colloquial prior fault arguments:	Blaming substances for causing aggressive behaviour
Blameworthiness	
Specific prior fault arguments:	Mitigation in sentence was not allowed
	Non-accountability reduced to diminished accountability
	Due to addiction, prior fault could not be applied
	Foreseeability requirement
	Increased accountability due to repeated treatment
Colloquial prior fault arguments:	Anterior responsibility for being addicted
	Impaired capacities

During the evidence phase, there was one remark regarding prior fault and premeditation; there were three instances of prior fault (related) arguments in the context of proving or

negating intent; and one instance of using a prior fault-related argument in an attempt to explain and illustrate the events surrounding the offence. Only one of these used the actual term *culpa in causa*. For premeditation, the public prosecutor stated that "insofar the large amount of alcohol and cocaine play a role [*for premeditation*], this is, legally speaking, of course entirely at the expense of the defendant himself: who knew too well what the consequences of beer and coke were for him, prior to these fateful events."[656]

With regard to proving or denying intent, the public prosecutor argued that substance use cannot deny the intent of the suspect, by stating that the defendant decided to use drugs by himself.[657] Conversely, in a different case, the defence lawyer attempted to convince the court that it was not possible to prove conditional intent in that particular case. Importantly, this was an instance of psychosis, of which the lawyer argued that it could not be proven that the cocaine had caused the psychosis, because it was possible that the defendant first became psychotic and only then used drugs. Hence, the attorney stated, the defendant could not be blamed for his psychotic breakdown.[658] The judge disagreed in this particular instance and argued that the defendant did use substances prior to the offence, and that in the past three years, cocaine had led to psychotic symptoms for the defendant. Because of these incidents in the past, he should have known the consequences of his using drugs.[659] This foreseeability argument clearly embodies a *culpa in causa* reasoning. Lastly, one of the judges blamed the defendant for continuing to use violence even though there were moments where the defendant could have reconsidered his behaviour (i.e. a clear diachronic control-based prior fault argument). This was stated after the defendant explained that alcohol and drugs caused him to be aggressive.[660]

Understandably, there were many more prior fault arguments in the third phase of the process, where the blameworthiness, more specifically the accountability, of the defendant is assessed. In 16 cases prior fault was used as an argument, in the majority of those to emphasise the choice and culpability of the defendant in bringing about his impaired capacities. In nine of these 16 cases, the term '*culpa in causa*' was used literally whilst in

656 Original: "En voor zover de vele drank en de cocaïne daarbij een rol speelden, is dat ook in juridische zin uiteraard geheel voor rekening van verdachte zelf: die bovendien reeds vóór deze noodlottige gebeurtenissen maar al te goed wist wat bier en coke met hem deden."

657 Original: "Het drugsgebruik van de verdachte doet niets af aan de opzet van de verdachte. […] De verdachte is nog altijd zelf degene geweest die de drugs heeft gebruikt".

658 Original: "Van *culpa in causa* is geen sprake nu het heel goed mogelijk is dat verdachte eerst is afgegleden in een psychose en toen pas cocaïne is gaan gebruiken."

659 Original: "[…] hij wist dat het gebruik van cocaïne al dan niet in combinatie met alcohol de afgelopen drie jaar regelmatig tot psychische klachten bij hem heeft geleid. Verdachte heeft het aldus aan zichzelf te wijten dat hij in een psychose is geraakt. Gelet op incidenten uit het verleden had verdachte moeten weten wat hiervan de consequenties konden zijn."

660 Original: "U vraagt mij hoe het dan zo ver heeft kunnen komen. Het komt door de drank en de cocaïne.[…] U houdt mij voor dat de rechtbank mij verwijt dat er momenten waren dat ik mij had kunnen bezinnen op mijn gedrag maar desondanks ben doorgegaan met het geweld."

the other seven cases, the legal actors mentioned a prior fault-like reasoning more implicitly. Only two cases explained the meaning of prior fault thoroughly: for instance, one public prosecutor explained the historical justification of the doctrine as well as discussed the applicability of prior fault in the case at hand. The other, a particularly interesting case, involved an extensive plea on behalf of the defence, which was by far the most detailed and critical reflection on prior fault. This case even cited two pieces of literature on the prior fault doctrine to substantiate his plea, that the defendant's impaired capacities rendered it inappropriate to apply prior fault, and that there should he cannot be considered to have 'anterior culpability'. Some cases were in contrast with that, by merely stating that substance use cannot be exculpating due to prior fault, without further ado.[661] This was expected given the theoretical reflections of the previous chapter.

The doctrine was used in most cases in the context of a denied mitigation plea and in some cases a reduction from a full non-accountability excuse to diminished accountability. In three instances, the court stated explicitly what the effect of prior fault is on the judgment; for instance, the judge argued that the defendant knew the consequences of his excessive alcohol and cocaine use, meaning that "the conclusions of the experts regarding the defendant's diminished accountability did not have a mitigating effect on the length of the prison sentence."[662] Or in a more succinct case, the judge stated that the defendant put himself in a psychotic state again by taking drugs, and consequently it was impossible to consider him fully non-accountable.[663] Only in one instance, did the expert argue not to apply prior fault. It was argued that the use of substances fulfilled the function of diminishing the defendant's low self-esteem and that the resulting dependence played a role in the (in)ability to stop using. Hence, the expert stated, although using cocaine did play a role in the offence, prior fault is from a behavioural perspective not applicable.[664]

The penultimate theme as part of the explicit arguments is that of foreseeability. As discussed before, some authors suggest using a (concrete) foreseeability requirement as

661 E.g. original: "[…] waarbij zijn alcoholmisbruik niet is geaccepteerd als factor die tot verminderde juridische toerekeningsvatbaarheid leidt. Dat lijkt mij volkomen terecht: hier is in hoge mate sprake van *culpa in causa*."

662 Original: "[de verdachte heeft] overmatig alcohol en cocaïne gebruikt, terwijl hij, gezien zijn strafrechtelijke verleden, wist wat daar de gevolgen van zouden kunnen zijn. Dat betekent dat de conclusies van de gedragsdeskundigen omtrent de toerekeningsvatbaarheid van verdachte geen matigende werking hebben ten aanzien van de hoogte van de op te leggen straf."

663 Original: Verdachte heeft zichzelf nu wederom in die positie [*van een cocaine-geïnduceerde psychose*] gebracht. Niet gezegd kan daarom worden dat hij geheel ontoerekeningsvatbaar is.

664 Original: "Betrokkene is in de loop der tijd afhankelijk geworden van dit middel omdat het effect ervan zijn lage zelfbeeld – tijdelijk – wegnam. Deze afhankelijkheid heeft tevens een rol gespeeld in het niet (kunnen) stoppen met gebruik. Hoewel cocaïnegebruik op de dag van het ten laste gelegde de laatste remming heeft weggenomen, lijkt gezien het vorengaande de term "*culpa in causa*" vanuit gedragskundig perspectief niet passend."

the basis of prior fault, as I have also done in the previous chapter.[665] Although this is not a formally recognised requirement for *culpa in causa*, it features in some statements by judges, experts and prosecutors, both explicitly related to excusatory or mitigating conditions and also somewhat more implicitly. Twice, the ability to foresee the consequences is mentioned literally. A public prosecutor expressed that the acts of the defendant could only be accounted to her to a diminished degree. Because even though she knew that her evaluative and regulative capacities would become severely compromised due to her alcohol abuse, i.e. prior fault, she could not reasonably foresee the extent of this particularly fatal loss of impulse control.[666] The prosecutor followed the recommendation of the behavioural expert in this matter, who had stated in the report that "the defendant could not reasonably have foreseen the loss of impulse control as a consequence of excessive alcohol consumption. This had, according to the defendant, never happened to her before".[667] A bit more implicit is the following statement by the court. Although full non-accountability was recommended by the experts, the court decided on diminished accountability. "After all, the suspect was familiar with the notion that substance use can have an inhibitory and psychosis-inducing effect. His behaviour prior to the offence, […], shows that the defendant recognised and acknowledged that he was not doing very well."[668] Lastly, in a different case, there was a more colloquial reference to foreseeability. The court reasoned that the defendant was intoxicated with alcohol at the time of the offence, even though he knew the negative effects this had on his behaviour.[669] As such, it seems to suggest that the defendant should have foreseen such behaviour occurring, which would allow for a prior fault decision later during the case.

The final theme, increased responsibility due to frequent treatment, relates to the nature of addiction as a persistent and recurring problem. In two instances, there is a reference to the treatment history of the defendant in relation to prior fault. The public prosecutor in one case approved of the previously mentioned judgment of the court, stating that the defendant was held fully accountable, despite his alcohol addiction, because he could and

665 Bijlsma, 'Drank, drugs en culpa. Zelfintoxicatie en *culpa in causa*: pleidooi voor een voorzienbaarheidseis'. See also section 4.5.

666 Original: "Dat dit haar wel in bepaalde mate kan worden toegerekend; betrokkene wist vooraf dat haar oordelend en zelfregulerend vermogen ernstig ingeperkt werden door haar overmatige consumptie van alcohol (*culpa in causa*) maar ze heeft redelijkerwijs niet kunnen voorzien dat het in dit geval tot een dergelijk fataal impuls-verlies zou leiden."

667 Original: "Dat aannemende heeft ze een dergelijke fataal verlies van zelfcontrole door haar overvloedige alcoholconsumptie op dat moment redelijkerwijs niet (kunnen) voorzien. Zoiets was haar naar eigen zeggen nog nooit eerder overkomen."

668 Original: "Verdachte was er immers mee bekend dat middelengebruik op hem een ontremmende en psychose-inducerende invloed kan hebben. Uit zijn gedrag in de dagen voorafgaande aan het delict, zoals beschreven door de huisarts, blijkt dat verdachte zelf onderkende dat het niet goed met hem ging."

669 Original: "Verdachte verkeerde tijdens het plegen van de feiten onder invloed van alcohol, waarvan hij de negatieve werking op zijn gedrag kende."

should have made different behavioural choices. The prosecutor in this case stated that there was a high degree of prior fault, especially because the defendant had received much help with his addiction in the past.[670] In a different case, the psychiatrist stated first that the defendant's schizophrenia and addiction were both serious conditions that continuously influence the behavioural choices. However, because the defendant had had so much treatment already, he knew that buying a knife to cut cocaine was a sign of a risky situation. The expert therefore advised to consider the defendant as strongly diminished accountable as opposed to completely non-accountable.[671] It is interesting to observe that in these instances, the focus is put on the cognitive capacity (i.e. awareness and/or knowledge of the effects of substance use) of the defendant. By emphasising that he/she could know the effects, or in fact, has had such treatment that he/she definitely knew the effects of intoxication, they can be blamed for using them nonetheless. However, an awareness of negative effects is almost never the problem in addicts, but quitting is. Especially to those who have had much treatment. As such, particularly those defendants who have struggled with their addiction for years, by definition have much more volitional than cognitive incapacities. This point was also discussed from a normative, theoretical perspective in the previous chapter, but shows to be highly relevant in light of case law.

The paragraphs above examined overt *culpa in causa* arguments that resulted in discussions about non-accountability or diminished accountability. As explained, there were also more colloquial references to prior fault. Again, the difference is that these references reflect arguments in which prior fault was related to circumstances without directly negating arguments about (reduced) liability. In those instances, a prior fault-like reasoning did not necessarily deny a defence explicitly, as the legal doctrine is formally designated to do, but it nonetheless shows a relevant perspective on addiction centred on the idea of (preliminary) choice and (diachronic) control.[672] Such instances of informal or implicit prior fault references were found in roughly two remaining topics of interest as described in Table 7.

First is a statement by the court, showing a clear choice-centred perspective on addiction, by stating that the defendant is "ultimately responsible himself for the origins and the

670 Original: "Dat lijkt mij volkomen terecht: hier is in hoge mate sprake van *culpa in causa*, zéker als wordt bedacht hoeveel er in het verleden al door middel van straf, voorwaarden, toezicht en behandeling aan deze problematiek is gedaan."

671 Original: "Betrokkenes schizofrenie en zijn verslaving zijn beide ernstige stoornissen, die de persoonlijkheidsontwikkeling van de betrokkene en zijn actuele gedragskeuzes doorlopend beïnvloeden, maar betrokkene heeft inmiddels zoveel behandeling gehad, dat hij weet d at het aanschaffen van een mes om cocaïne te kunnen versnijden een risicosignaal is. […] Ondergetekende adviseert daarom betrokkene sterk verminderd ontoerekeningsvatbaar te achten in plaatst van volledig ontoerekeningsvatbaar.

672 See also section 2.4.1.

continuation of his addiction-related behaviour".[673] Secondly, a behavioural expert did acknowledge the difficulty of ending substance use due to an addiction, but that his addiction has also lead him into trouble with the police. Nonetheless, "the defendant didn't seek help, despite knowing that alcohol caused problems for himself as well as those around him".[674] Lastly, an expert explained that resorting to excessive substance use is partly the defendant's own choice, but was also the consequence of a general inability to respond to the situation more adequately.[675] These statements show that there are differences in perception on the individual's responsibility to be addicted and continue to do so. Of course, these differences can also be influenced by case-specific characteristics.

With regard to capacities, the following observations mostly relate to volitional impairments. Two statements are relatively nuanced and consider some volitional impairment, despite the prior fault in acquiring this impairment. For instance, an expert stated during additional questioning in court that "the relapse into substance use was the defendant's own choice. However, an addiction is in fact also a psychiatric disorder. It is, therefore, not entirely his own choice, although he could have also decided not to do it."[676] Another expert claimed that, despite the defendant's addiction, he retained some freedom of choice in the use of substances and awareness of the relation between such usage and violence.[677] A less lenient expert focused on the harmful consequences of the abuse of alcohol, both rationally ('ability to evaluate') and volitionally ('self-control'): "the defendant knowingly and willingly accepted the chance of the loss of impulse control".[678] The final observation regarding capacities is highly interesting, as it suggests that the court did not consider addiction to be a disorder that is capable of reducing or eliminating cognitive or volitional capacities. In this instance, the court stated that it was able to follow the conclusions of the experts, but still concluded that "there is no serious mental disability

673 Original: "Hij is in laatste instantie zelf verantwoordelijk voor het ontstaan en continueren van zijn verslavingsgedrag."

674 Original: "Hij is vanwege de afhankelijkheid niet in staat geweest om deze vicieuze cirkel te doorbreken. Daarentegen is hij vaker door alcoholgebruik in contact gekomen met Justitie en tot agressief gedrag, waaronder huiselijk geweld, gekomen. Hij heeft hier geen hulp bij gezocht, ondanks dat hij geweten kan hebben dat alcohol (mede) problemen veroorzaakt in zijn leven, met gevolgen voor anderen."

675 Original: "Hij nam (naar zeggen) zijn toevlucht tot overmatig middelengebruik. Dit laatste is deels zijn eigen keuze geweest, maar vloeide m.i. ook voort uit zijn onvermogen om meer adequaat op de toenmalige omstandigheden te reageren."

676 Original: "De terugval in middelengebruik, de aanschaf van het mesje et cetera waren eigen keuzes. Een verslaving is in feite ook een psychische stoornis. Het was daarom ook weer niet volledig zijn eigen keuze, maar hij had het ook niet kunnen doen."

677 Original: "De deskundigen zeggen dat bij verdachte, ondanks zijn verslaving, nog wel enige keuzevrijheid bestond bij het gebruiken van verdovende middelen. Ook zij wijzen op de wetenschap van verdachte met betrekking tot de combinatie verdovende middelen en geweldescalaties."

678 Original: "Betrokkene was zich echter al wel veel langer bewust van de schadelijke effecten van overmatig gebruik van alcohol op haar oordelend vermogen en op haar zelfcontrole. Betrokkene heeft in dezen dus willens en wetens de kans op impuls-controle-verlies genomen."

or psychiatric disorder which would have resulted in either an inability to appreciate the wrongfulness of his behaviour and the severity of the consequences [*a cognitive capacity*], or in an lack of alternative options than the choices the defendant chose to make [*a volitional capacity]*".[679]

5.3 Discussion

The above section shows many interesting results that allow for more in-depth discussion of its implications. In order to do so, the same structure and headings are used as in the section on results.

5.3.1 Mentioning addiction

It was largely expected that the behavioural experts would, by far, discuss addiction the most. Still, it is interesting that eight experts did not discuss addiction in their assessment of the accountability of the defendant. It is peculiar that a condition that affects behaviour to such a large degree would not feature in this assessment. This could partly be explained by the variability of severity of the addiction, meaning that those eight cases might be cases of less severely addicted individuals compared to the other cases. At the start of this study, severity of addiction was included as a variable to study and compare. Yet throughout the data collection, it proved impossible to objectively determine this from the case files only. This variable was, therefore, excluded and thus this hypothesis cannot be tested. Moreover, some of the defendants did not fully cooperate, resulting in partial or incomplete reports. It was, in a few instances, difficult to find out the exact role of addiction in the defendant's life, which may be the reason that the addiction was not featured in their assessment. Nonetheless, as 67 out of 70 cases do mention addiction in the DSM diagnosis, there seems to be enough information to diagnose this and therefore it remains interesting that it is not necessarily referred to in the blameworthiness assessment. It could also be that the experts simply did not consider addiction to be relevant.

Moreover, it was unexpected to find such low number of references to addiction during the risk assessment. Only around a third of the judges (30 per cent) but especially the public prosecutors (a mere 7 per cent) refer to addiction in relation to their risk of

679 Original: "Hoewel de rechtbank de bevindingen en conclusies van de gedragsdeskundigen kan volgen, stelt zij wel vast dat er bij verdachte geen sprake is van een ernstige geestelijke beperking of een psychiatrische stoornis die maakt dat hij het foute van zijn gedrag of de ernst van de gevolgen daarvan niet zou kunnen overzien, of die ervoor zorgt dat hij geen andere keuzes had kunnen maken dan hij heeft gedaan."

recidivism, even though it is clear that substance use is a major risk factor for re-offending. Meta-analyses showed that substance abuse is a significant predictor for re-offending, together with factors such as age, criminal history, gender and family factors.[680] More specifically, when looking at the different types and forms of addiction, a meta-analysis showed that a combined alcohol/drug dependency has the highest predictive power.[681] As this sample of the current study contained many individuals with multiple addictions, including a combined drug/alcohol addiction, it is interesting that the number of addiction-related arguments considering recidivism is so low. It is understandable that the defence attorneys would not specify this risk out of the best interest of their clients: however, it would be expected that the prosecutor and court have other interests in mind. The majority of experts do discuss substance use as a risk factor, so such information would be readily available, if not already known in general. The reason why it is not included all that often thus remains unknown.

One potential explanation could be that it was difficult to determine from the case files whether addiction was part of the conclusion about the risk of recidivism. Oftentimes, the court or the prosecutor would simply state that 'due to high risk of recidivism' a certain sentence would be proposed. What also happened frequently was that the courts or the prosecutors stated that the risk of recidivism was high due to 'psychiatric disorders' or 'mental problems'. It can be expected that they also meant this to include addiction. Yet, as it was impossible to dissect the different elements from such an integral statement, such cases were coded as not containing references to addiction. Thus, the findings may not be representative of the frequency with which courts or prosecutors consider addiction in the assessment of the risk of recidivism. In the interviews, discussed in chapter 7, I also address this observation with the interviewees. They were also surprised by this finding and stated that oftentimes, addiction played a role in their perception of recidivism, which in turn influenced judgments. Thus, it seems fair to suggest that addiction likely plays a larger role in the assessment of recidivism than suggested by the data of this case file analysis.

The most striking finding is that the defence attorneys rarely used the addiction of their clients as a possible defence. Only 23 per cent of this sample of attorneys discussed addiction related to non-accountability or diminished accountability and only 16 per cent did so when proposing a sentence. As all the cases were selected based on the premise that the defendant was addicted, and in the majority of instances there were multiple addictions from which they suffered, it is hardly a detail to be overlooked. In many pleas by the

680 Gendreau, Little and Goggin, 'A meta-analysis of the predictors of adult offender recidivism: What works!' (1996) 34 Criminology 575-608.

681 Dowden and Brown, 'The role of substance abuse factors in predicting recidivism: A meta-analysis' (2002) 8 Psychology, Crime and Law 243-264.

attorneys, there was a specific section regarding the characteristics of the defendant (*'persoon van de verdachte'*) in which they explained the type of personality, the strengths and weaknesses of the defendant, and the connection between these and the offence. It is striking that the cases in which addiction played such a fundamental role in the defendant's life, and in the manifestation of the offence, the attorneys did not mention it as a factor. This raises the question of why attorneys do not discuss their clients' addiction. There are a couple of potential explanations for this. Perhaps the defence attorneys from this sample are concerned that the general perception of addiction by the prosecutors and courts is negative, or that addiction may even result in more severe or strict sanctioning. It would be an interesting observation if this were the case, as it suggests that addiction in itself is already coloured negatively, rather than a neutral aspect that could have negative effects depending on the circumstances.

An *a priori* biased attitude towards addiction would be problematic in light of a fair trial. As being addicted is, of course, not a crime, it would strongly hint towards *Lebensführungsschuld* if addiction would nonetheless have indiscriminately negative consequences. Whether or not addicted defendants ought to be blamed for addiction-related criminal behaviour is clearly a complex topic, as the various aspects of this study illustrate, but this is a fundamentally different question from being blamed in general for being addicted. In criminal law, behaviour determines liability. Hence, it is wrong to attribute blame to a general state of being, which is the meaning of *Lebensführungschuld*.[682] It would be worthwhile to study whether defence attorneys indeed have the perception of addiction having a negative connotation (and whether this is the reason why they do not mention their client's addiction), but also whether this is an accurate perception. If this were an ungrounded fear, because courts or prosecutors do not have such negative connotations, it would mean that defence attorneys could discuss their clients' addiction more confidently. This is for a large part studied and discussed in chapters 6 and 7: in the experimental study as well as the interviews.

Another explanation could be that the defence attorneys' clients themselves did not want to discuss addiction: because they did not consider it a problem perhaps, or because they were worried that they would be submitted to mandatory treatment or would receive special conditions with their sentence. The role of the defence attorney is, naturally, different from the other legal actors, and the defence attorney is primarily concerned with defending the client's interests. Thus, the presence or lack of addiction in the defence attorney's pleadings could simply be the decision of the defendant rather than a conscious choice by the defendant's legal representative. Additionally, defence attorneys may think it is not in their client's best interest to bring up addiction because doing so could result in different

682 The term literally translates to 'blame for a way of life'. See also: De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 209.

measures and conditions, such as mandatory treatment or mandatory urine controls. If their client is not susceptible to interventions, such conditions could complicate or aggravate the situation. For instance, imagine that a conditional prison sentence is proposed under the special conditions of engaging in behavioural interventions or providing clean urine controls (i.e. no substance use), and the defence attorney already knows that the defendant cannot or will not fulfil these conditions. In such cases it may be better to argue immediately for an unconditional sentence that is at least unambiguous in length, rather than being exposed to measures that end up being lengthier than a bare sentence. A last – and potentially most straight-forward – explanation could be that there were other disorders that the defence attorneys could emphasise that had a less negative connotation and are not as likely to be negated by prior fault. Thus, there are many reasons why it is not in the best interest of the defendant or his attorney to bring up addiction in an argument. In the interviews with the defence attorneys, these suggested reasons are discussed as well.[683]

Even though all these reasons are very valid and understandable given the interests of the client and thus the possible defence strategy of the attorney, it seems incomplete to leave out such a major aspect of the client's background. After all, the aim of criminal law and the purpose of punishment is retributive as well as utilitarian.[684] From a retributive perspective, it is important that punishment is proportional to the crime and to the blameworthiness, meaning it is essential to take potential mental impairments into account. From a utilitarian perspective, the focus could be on reducing recidivism, for instance via deterrence or rehabilitation. Also here, it is relevant to include addiction, as it helps determine the most effective treatment or other type of intervention to reduce the risk of recidivism. A history of unsuccessful (addiction-related) interventions may also be a valid reason to opt for incapacitation. Consequently, for both purposes it is relevant to include addiction in the assessment of the most appropriate outcome. Moreover, as the court is likely to bring it up in any event (61 per cent in the current study), the defence attorney may as well take the initiative to at least ensure that the addiction is introduced as positively as possible.

5.3.2 Terms to describe addiction

What stands out is the wide variety of terms used to describe addiction by the experts. Although this may seem like a minor element in an entire report, it is still very relevant. First of all, it is clear that both the prosecutors as well as the courts often follow the terminology literally. The choice of words can influence them by suggesting different

683 See chapter 7.
684 Keiler and Roef, *Comparative Concepts of Criminal Law* 19.

connotations towards the severity of the addiction but also amount of impairment that it results in. The terms 'addiction disease' or 'pathological disorder' suggest more serious impairments as compared to 'addiction problems'. Moreover, as discussed before, explicitly labelling a condition as a disease or disorder is often directly associated with feelings of exculpation.[685] In the next chapter I also address the concrete consequences of labelling addiction in different ways, showing that terminology plays an important role in framing addiction and the addicted defendant. But terminology does not only influence the perception towards the addicted defendant in the case at hand, but also the nature of addiction in general. Different terms used could result in confusion as to the nature of addiction: in the interviews, further discussed in chapter 7, some interviewees asked if I knew whether or not addiction is a disorder in the DSM-5. Thus, using a wide variety of terms gives the impression that addiction is not necessarily a disorder to take into account. Although there are clearly differences in severity and impact of addiction between cases, ambiguous terminology may not always do justice to the severity of the condition and the fact that it can have a large influence on an individual's mind and behaviour.

Interesting to note is that when defence attorneys discuss addiction (which they often do not, as discussed) they use different terms than the other legal actors. Especially formal diagnoses or terms including 'disease' or 'disorder' did not occur frequently. This is potentially related to the fear of measures and special conditions being imposed, as opposed to bare prison sentences. The focus on diagnoses and disorders is often associated with mandatory treatment, and thus many defence attorneys (or their clients) would prefer to not acquire a diagnostic label.[686] It seems likely that defence attorneys mention addiction more descriptively in order to provide some context and explanation as to what happened (potentially inducing sympathy) without suggesting that it is a disease for which specific measures are required. As such, the difference in terminology is interesting, but can also be explained.

5.3.3 Addiction in the behavioural expert reports

Interestingly, there is relatively little neuroscientific information in the expert reports. The reason for this is interesting, namely that out of all the legal actors, the disease model of addiction is favoured most by psychologists and psychiatrists. Due to their background, their perception of addiction is, naturally, a more medical one than that of the legal actors. Yet the amount of neuroscience in the reports is either non-existent, or limited to a generic statement about damage to the brain. There, it does seem to suggest that the experts

685 See also section 2.4.

686 This was often remarked by the defence attorneys in the interviews: see section 7.2.2.

consider brain damage a natural consequence of addiction, but the incidence of such statements is so low that it is hardly representative. This is contrary to the expectation that experts would explain addiction more from a (brain) disease perspective. As a consequence, there is less discussion about the medical model of addiction in criminal cases than anticipated. This is also interesting, however, as it suggests that the legal relevancy of the addiction debate, central to chapter 2 of this study, is mainly theoretical, and does not seem to inform legal decision-making very much, at least until now.

What is also relevant is that in those sporadic cases that did mention neuroscience, this was related to the specific capacities of the defendant. Consequently, neuroscience was employed on a micro level rather than on a meso level. Although that seems obvious at first, as the purpose of a behavioural expert report is to address the specific impairments and consequences of the defendant at hand, there is a potential relevancy in addressing addiction more generally. Using neuroscientific evidence on a general level could, for instance, be the suggestion that that addiction often results in brain damage or impairment, and/or provide an outline of the common behavioural problems associated with addiction. Specific neuroscientific information can help explain why addicts often experience problems with long-term planning, attention, impulsivity, and so on. Using neuroscientific evidence in a generalised manner is nothing new: it is much like the general remark that adolescents do not have fully developed prefrontal cortices.[687] Adolescent defendants are generally considered to have developing brains and consequently, their immaturity render them somewhat less responsible for a criminal offence than adults.[688] This form of evidence, stemming from generalised neuroscientific research, is now common practice in reports on adolescent defendants and it has even led to the development of a sub-category of adolescent criminal law in the Netherlands. This shows how such findings are not only relevant, but may also result in policy or even statutory changes. Thus, there is definitely an added benefit in discussing addiction, and addiction-related research findings, on a more general level. An additional advantage of generalised remarks is that these types of statements do not require specific neuropsychological testing or neurological imaging on the defendant, but can rely on general research findings. Despite not focusing on the defendant in the case at hand, such information is still relevant in understanding the behaviour of the defendant. Of course, and this is equally necessary and important for adolescent offenders, an individualised assessment still needs to be provided. For addicts and adolescents alike, the impairment in relation to the case at hand and the consequent

687 Barendregt and van der Laan, 'Neuroscientific insights and the Dutch adolescent criminal law: A brief report'.

688 Spear, 'The adolescent brain and age-related behavioral manifestations'Steinberg, 'The influence of neuroscience on US Supreme Court decisions about adolescents' criminal culpability'.

amount of liability is still very much variable from case to case and ought to be addressed as such.

Aside from neuroscientific evidence specifically focused on addiction, it also stands out that general neuroscientific tools have not found their way into legal practice, as least not yet. As was noted by researchers before, there are several practical explanations (such as costs, time and difficulty) why legal practitioners do not use neuroscientific methods in their assessments.[689] As shown in Table 6, the only exception is the use of neuropsychological tests, which were used often enough. Yet still in these instances, there was often not an explicit connection between the brain impairments associated with the results of these tests and the potential legal relevance of these results. There is much to gain from the addition of neuroscientific tools – although one has to bear in mind the potential difficulties, as discussed in chapter 1 – and especially the addiction-related capacities of cognition and volition could benefit from specific testing.

5.3.4 Addiction in the accountability recommendation

Capacities were mostly discussed in relation to the intoxication. Sometimes, addiction-related impairments were discussed as well, but often less directly than the effects of intoxication. This is interesting, as defendants may not only be intoxicated (if at all) while committing the offence but may also experience difficulties due to an addiction. For example, the defendant could experience cravings with a range of associated problems (impulsivity, irritability, executive functioning) or after years of use, may have other neuropsychological problems such as difficulties in long-term planning or reward insensitivity.[690] These impairments are equally relevant in explaining the choices and behaviour of the defendant in criminal cases as the direct consequences of being intoxicated. Moreover, intoxication is very often negated by *culpa in causa* arguments, whereas this is less apparent for addiction-related impairments as thoroughly discussed in chapter 4. What is relevant is that addiction is highly unlikely to result in non-accountability by itself.[691] In that sense, it is not surprising that addiction does not feature prominently in the expert's accountability recommendation, especially because the defendants in this sample often had multiple comorbidity disorders. These comorbidity disorders were more often considered as a potential basis of non-accountability than the addiction.[692] This ties

689 Cornet, 'How to introduce neuroscientific measures in judicial practice? A perspective paper' (2019) 65 Journal of Criminal Justice 101534.

690 Goldstein and Volkow, 'Dysfunction of the prefrontal cortex in addiction: neuroimaging findings and clinical implications'.

691 See the discussion in section 3.5.1.

692 This observation is corroborated by the interviewees, as discussed in section 7.2.1.

in with my previous remark about the prosecutors: the presence of (more uncontroversial excusing) comorbidity disorders may indeed be a valid explanation why addiction was not discussed by the defence attorneys. Nonetheless, for diminished accountability, addiction can play an important role, and thus it seems that relevant information is lacking.

A second observation from these results is that impairments in capacities, specifically volitional, are mostly just mentioned but hardly elaborated on. Hence, there is no discussion of the amount of control that the defendant may have lost and whether this would be enough to be legally relevant. In the literature, this is a major discussion: what was the extent of the loss of control and how can this be proved? Previously referred to as the line between twilight and dusk, it is necessary (but difficult) to differentiate between an irresistible impulse and an impulse not resisted. Moreover, as discussed in chapter 4, the amount of control from a diachronic perspective can also be very relevant in discussing prior fault. The lack of elaboration on this topic suggests this is mainly a theoretical concern. Yet for the law, it is a relevant question and in fact, a question on two different levels. On the one hand, it is interesting to address how much control the addict had in the use of substances. If the defendant was intoxicated while committing the offence, such knowledge is relevant in light of a *culpa in causa* discussion, which presumes voluntariness of intoxication. On the other hand, the amount of control in general (i.e. not substance use related) is relevant to appreciate the behaviour at the time of the crime. To answer questions regarding non-accountability, it is necessary to know the amount of control in the offence at hand. Many experts did mention that the addict had trouble not using substances or recovering from his or her addiction, but did not explicitly address whether the addict had control over his or her behaviour in general. It is relevant to make this distinction when addressing volitional impairments, to allow courts to adequately assess these two related, but distinct, legal questions.

Lastly, it is important to note that many courts followed the experts' recommendations. In many of the judgments, sentences from the reports were used verbatim by the courts and the judges often copy the recommendations in full. This seems to be a general conclusion and not just a trend in this particular sample.[693] Thus, if experts do believe that the addiction played a major role, for instance by instigating substance use which was relevant at the time of the offence, or because of addiction-related impairments in general, it is highly relevant to mention these. It is possible that experts are sometimes hesitant to elaborate on addiction in the accountability assessment, perhaps because they do think

693 Although I did not find an empirical study on regular expert witness reports, research on behavioural reports for juvenile delinquents shows that courts follow the recommendation in the majority of the cases. See: Duits and others, 'De relatie tussen het advies uit de rapportage pro Justitia van jongeren en het vonnis van de rechtbank' (2003) 7 Tijdschrift voor Familie- en Jeugdrecht 157-163. Moreover, in the interviews, many interviewees also confirmed that judges are very much inclined to follow the conclusions of the experts.

the impact is relatively minor due to the high standards for non-accountability and the prior fault doctrine. Nonetheless, I believe there to be an important role for experts to discuss and frame the addiction in terms of capacities and impairments to induce a discussion amongst judges regarding a defendant's liability. Moreover, a thorough discussion of addiction related to accountability is also necessary to emphasise the heterogeneity of addiction and its consequences on behaviour, to ensure that each case is addressed individually. Consequently, addiction or intoxication would not immediately be cancelled out by *culpa in causa*.

5.3.5 *Prior fault*

The most striking findings of this study relate to the assumed relation between cognitive and volitional capacities and the presence of prior fault. The definition of *culpa in causa* explains that the defendant culpably contributed to the conditions of their own defence.[694] 'Knowingly and willingly' using substances and creating these conditions is an expression that was found in judgments, also in our current sample. However, accepting prior fault in all these instances consists of stating that the defendant was aware of his cravings and made the deliberate decision to use drugs. In other words, this reasoning heavily relies on the (supposedly intact) cognitive capacity of the defendant. This is striking, as the volitional capacity is what is impaired most severely in many addicts. In some citations the individuals even claim that the defendant had trouble ceasing drug use, suggesting that the volitional capacity was diminished. The fact that this is not sufficiently taken into account when applying the prior fault doctrine, therefore, can become problematic. This finding provides practical corroboration as to what was detected as a theoretical problem in chapter 4.[695] To link this back to the principle of control, it begs the question whether it is really appropriate to exclude a volitional prong in assessing fault.[696] If there was no control possible for the defendant (practicalities regarding such an assessment aside), is the essence of criminal liability adequately reflected? As I also conclude in the previous chapter 4, I advocate for a more explicit inclusion of a volitional prong in the framework of assessment for prior fault, particularly in cases of addiction, to overcome this issue. Practically, as is also shown by the sample in the current case file study, this is very much limited to a small sub-sample who experience severe impairments, usually in combination with comorbidities that exacerbate these symptoms, which definitely does not apply to all addicted defendants.

694 Jansen, 'Drie modellen voor eigen schuld bij strafuitsluitingsgronden'.

695 See section 4.5.

696 See section 4.2, based on Van Dijk, *Strafrechtelijke aansprakelijkheid heroverwogen. Over opzet, schuld, schulduitsluitingsgronden en straf* as well as Corrado, 'Responsibility and control'.

Nonetheless, in the current sample, almost all defendants had additional diagnoses, so this remark may have been relevant in some of these cases.

Moreover, there is a more fundamental issue with this observation that was also mentioned before. Prior fault is used to negate a successful non-accountability plea (or an attempt to use such a plea). However, accountability requires both a volitional as well as a cognitive capacity. This leads to the following observation: first, the theoretical framework of the previous two chapters suggests that prior fault in practice does not require a volitional capacity, which is corroborated by the current findings. If this is indeed the case, then the requirements for prior fault seems for at least some addicted defendants to be far removed from, if not *lower* than those of being held accountable at the time of the offence. After all, theoretically, a complete volitional incapacity could lead to negating accountability, but this incapacity leading to the exculpatory condition would then not be reflected when assessing prior fault? Bearing in mind the specific focus on severely addicted defendants here, as the requirements for prior fault seem to be reasonable for most intoxication cases. Thus, in addition to the argument in the previous paragraph, this is rather a criticism of equivalence between the exculpatory condition and the requirements for negating this. This remark also extends to diminished accountability and sentencing decisions involving prior fault. Especially for addiction, this seems relevant in those instances where the lack of control that the defendant may have experienced is discussed in the context of an excuse but not thoroughly explored because it was deemed irrelevant due to prior fault. If prior fault then disregards such volitional elements, one could argue that this leads to a lacuna in the application of it. This does require that the same or similar volitional impairment present during the offence (at T2) was also present during the moments preceding the offence (T1). If at T1 there is no such impairment, then culpability in creating these exculpatory conditions at T2 can be established. Thus, also here, it remains a complex assessment of different capacities at different times in the process. Taking into account that it is often difficult if not impossible to assess capacities in retrospect, this remains a delicate issue.

Another difficult question is whether the volitional incapacity is indicative of an inability to exercise control or an unwillingness to do so.[697] The first is, arguably, related to involuntariness and thus less deserving of punishment. The latter, however, is the opposite and indicative of a greater intent (i.e. purposefully not exercising will power and control) and thus ought to deserve more strictness.[698] Consequently, this is a very valuable reflection. A difficult one as well, to be sure, as it is challenging to determine based on behaviour

697 Related to one of the fundamental problems that Morse addresses when discussing control. See for instance: Morse, 'Excusing the crazy: The insanity defense reconsidered' 817.

698 Blakey and Kremsmayer, 'Unable or unwilling to exercise self-control? The impact of neuroscience on perceptions of impulsive offenders' (2018) 8 Frontiers in Psychology 2.

alone whether there was a purposeful or innate inability to control behaviour. As a suggestion, it is relevant to look at other areas of life to see if the defendant *normally* exercised self-control. A well-known example is the following transcript of *Powell v. Texas* in which the defendant had claimed to be unable to resist the urge to drink.[699]

> "Q. You took that one at eight o'clock because you wanted to drink?
> A. Yes, sir.
> Q. And you knew that if you drank it, you could keep on drinking and get drunk?
> A. Well, I was supposed to be here on trial, and I didn't take but that one drink.
> Q. You knew you had to be here this afternoon, but this morning you took one drink and then you knew that you couldn't afford to drink anymore and come to court; is that right?
> A. Yes, sir, that's right.
> Q. So you exercised your will power and kept from drinking anything today except that one drink?
> A. Yes, sir, that's right.
> Q. Because you knew what you would do if you kept drinking, that you would finally pass out or be picked up?
> A. Yes, sir.
> Q. And you didn't want that to happen to you today?
> A. No, sir.
> Q. Not today?
> A. No, sir
> Q. So you only had one drink today?
> A. Yes, sir."[700]

This conversation clearly portrays the sentiment that many have when it comes to addicts and self-control: how can they claim impaired control during the offence if they are able to exercise self-control during other situations? Is this not indicative of an *unwillingness* to exercise control rather than an *incapacity* to do so?[701] Hence, a relevant element in reporting about control is also the general capacity, in other situations, by the defendant to exercise control. This can provide important insights into relevant legal capacities, which in turn affect the perceptions about accountability and prior fault. Importantly, such

699 Powell v. Texas, 392 U.S. 514 (1968).

700 Ibid p.519-520. For a further discussion on the case and its implications, see Jones, Schall and Shen, *Law and Neuroscience* (Aspen Coursebook Series, 2nd edn, Wolters Kluwer: New York 2021) 459-463.

701 Interestingly, this seems to implicitly resonate with the choice model, suggesting that this may be a prevailing perspective in legal thinking.

insights are more nuanced than the example above suggests, as each situation is, of course, different. Control may not be a consistent character trait but rather a varying resource that can also be depleted.[702] Thus, an ability to exercise control in the past is no guarantee for the future, but may be a starting point in assessing the most appropriate legal approach.

A different observation related to prior fault is that many legal actors who discuss prior fault do not do so by using the proper legal definition of *culpa in causa* and often do not explicitly mention it at all. Even though this is not problematic per se, as it is often more of a passing remark rather than a specific application of the doctrine, it may shed light on a more general perception of addiction. It is important to note that there is a noticeable shift between arguments in which the defendant being held responsible for (addiction-related) behaviour, and being held responsible for the addiction itself. The latter is problematic, as it suggests – again – a *Lebensführungsschuld*. Legal professionals ought to be aware of this crucial distinction and address these matters as separate issues. Addressing responsibility for addiction itself can still be relevant or necessary. In the assessment of impaired capacities and prior fault, it is definitely important to what extent the defendant can be considered responsible for causing these impairments. Nonetheless, in such case, addressing responsibility for the addiction is clearly *in order to* address the behaviour at hand, and it is not a basis for liability in itself. This is a subtle, but important distinction. Moreover, the colloquial use of *culpa in causa* suggests a (perhaps implicit) preference for the choice of this model amongst the legal actors. Consequently, it does beg the question whether this impacts the assessment of the defendant. Oftentimes it is suggested that a lack of control over behaviour is associated with reduced liability for such behaviour.[703] Thus, are legal actors more inclined to judge strictly when they believe the defendant is ultimately capable of changing his impaired behaviour or not? Intuitively, this seems sensible. An experimental study was designed to test this, and chapter 6 elaborates on this.

5.4 Limitations and recommendations

Before concluding this chapter, some limitations to the current study and recommendations to future research are worth mentioning. First and potentially most relevant is inherent to the selection that was made. This study selected cases with very severe offences for which a behavioural report was drafted, in order to maximise information about addiction and to ensure that a discussion regarding the role of mental disorders was to be had. Yet this

702 Inzlicht and Schmeichel, 'What is ego depletion? Toward a mechanistic revision of the resource model of self-control' (2012) 7 Perspectives on Psychological Science 450-463.

703 Blakey and Kremsmayer, 'Unable or unwilling to exercise self-control? The impact of neuroscience on perceptions of impulsive offenders'.

selection naturally also brings about limitations by not exploring addiction in more minor offences. As a result, this sample did not address the role of the repeat-offender measure (*ISD-maatregel*) even though this measure specifically caters to addicted defendants. In doing so, the current sample is not representative to make conclusions regarding the general population. Even though this was also never the purpose of this study (rather it is aimed at gaining an insight into the various conceptualisations of addiction), it is important to bear in mind the larger relevance of addiction in criminal law.

Another limitation in the scope of this research is the focus on the four legal actors. During the data collection, I often encountered behavioural reports by parole officers (*reclasseringsrapport*). Based on their interaction with the defendant, they were often asked to draft reports.[704] These are different from the psychologist and psychiatrist reports, which are focused on the diagnostic conclusion as well as the recommendations to the court regarding accountability. Instead, the parole reports often contained more information about the defendant's motivation for treatment, interaction, occupational status and generally more focused on prosocial and antisocial factors for recidivism and treatment. Especially cases in which the defendant had a (long) criminal record, several parole reports were sometimes available, nicely reflecting the trajectory that the defendant had already experienced. These reports were not consistently present in the current selection, nor were they specifically informative about the elements that I was interested in (which were more substantive legal matters), but for future research this may be a valuable source of information to incorporate.

Moreover, the currently selected cases did not contain addiction as a singular disorder. The vast majority of the offenders had comorbidities, which was often emphasised and likely also had been a reason for requesting a behavioural examination in the first place. Although this was – again – a conscious decision, as cases without a behavioural report would not yield enough qualitative information, it does narrow down the scope somewhat. Cases of *sec* addiction would be interesting to focus purely on the role that this plays for legal professionals: in the current sample, the mental state of the defendant was mostly addressed integrally. For future research, I would recommend also including such cases. However, as these may be difficult to analyse based on the case files alone, due to the often minor attention paid to addiction, it may be relevant to adapt the research design. Attending court hearings would, for instance, be interesting to examine whether addiction is brought up at all and the nature of the remarks regarding addiction. As was discussed in the current sample, *culpa in causa* often had a more implicit role, and perhaps such implicit notions are also present during cases in which accountability is not explicitly discussed.

704 For an introduction, see: https://www.reclassering.nl/ik-moet-naar-de-reclassering/advies-van-de-reclassering last accessed 18 June 2021.

A relevant aspect which this study did not cover, but which is worthwhile exploring further, is the underlying moral perspective towards addiction. As chapter 4 already addressed, and this chapter further shows, sometimes the responsibility for (anterior) behaviour is put on equal footing with responsibility for (the state of) being addicted. This is a problematic assumption,[705] but it does show, and potentially explains, the perception of addiction in criminal law. If there is an underlying moral disapproval of being addicted, this is relevant to examine and discuss, as it may (potentially erroneously) lead to direct prior fault like arguments. This would overlook the potential personal circumstances that may render a prior fault argument invalid. Thus, future research covering implicit or explicit moral perspectives towards addiction is relevant for fully understanding the role of addiction in criminal law, particularly prior fault. What is more, this suggests that perhaps a choice-centred perspective towards addiction is prevalent in legal thinking. Chapter 2 concluded with the notion that the addiction models are a predominantly theoretical discourse, and that its practical relevance for the law is limited. However, if there are underlying or implicit notions of the Choice Model in certain legal arguments, perhaps the practical relevance is bigger than anticipated.

5.5 Concluding remarks

This chapter provided a detailed overview of 70 cases and their associated case files in an attempt to address the layered question 'in which tier of the criminal liability structure, and by whom, is the addiction of the defendant discussed, and whether neuroscientific information is used in that regard, and if so, in what way'. As expected, addiction was most often discussed by the experts and related to elements of accountability. Some of the most remarkable findings show that defence attorneys discussed their clients' addiction the least out of the four legal actors. Although there are several reasons which could explain this, it does stand out. I argue that it seems to be in the best interest of the client, and of criminal law in general, to discuss the addiction. In terms of terminology, there were some differences between the legal actors. Judges seem to copy the phrases of the experts, and defence attorneys seem to prefer a more descriptive rather than a diagnostic explanation. In the majority of the cases, neuroscientific evidence, explanations or statements were absent. This shows that the discussion of the neuroscientific perspectives on addiction is predominantly theoretical.

Finally, this chapter extensively discussed the capacities and impairments of addicted defendants, both in the context of accountability as well as prior fault. The analyses of the cases show that especially volitional capacity is often discussed by experts and jurists alike.

705 See, for instance, the discussion of *Lebensführungsschuld* in section 4.5.

Nonetheless, much can be improved in that regard. First, a distinction between the (potential) impairments in capacity caused by intoxication and those caused by addiction should be clear. I contend that it can be useful to employ neuroscientific methods to discuss the capacities of the defendant, but also to discuss the consequences of addiction in a more generalised manner. These two levels ought to be distinct but each has its own specific relevancy. Moreover, when discussing the capacity for control, it is relevant to focus both on the amount of control at T1 as well as at T2, to be able to also assess *culpa in causa*. In doing so, it can be helpful to focus on general capacities for control and not just at the time of the offence.

These findings provide a first bridge between the law in the books and the law in practice. Suggestions to increase discussions of the nature and consequences of addiction may result in more nuanced and individualised assessments of defendants. Based on this, behavioural experts could discuss capacities more concretely connected to the legally relevant questions, such as the different types of control and the purpose in accountability and prior fault. Additionally, judges would be better able to understand the way that experts discuss addiction and the impact it can have on questions of liability. Defence attorneys could become aware of their approaches to addiction and feel assured about the relevancy in discussing it with their clients as a potential strategy. In the next chapter, I further elaborate on the effects of the conceptualisation of addiction on perceptions of liability.

6 The Effects of Different Explanations of Addiction on Criminal Liability Perceptions

The previous chapters focused on the various perceptions of addiction, including the neuroscientific aspects of addiction, and its alleged role in the assessment of criminal liability. A follow-up matter concerns the important question of how these different perceptions of addiction exactly influence the assessment of the criminal liability of an addicted offender. This chapter elaborates on this matter by using vignettes to study the impact of a neuroscientific versus choice perception of addiction. The central research question is: what are the effects of the two types of explanations of addiction on jurists' perception assessment of the defendant's accountability in violent and property offences?

The experiment central to this chapter is a vignette study, which allowed direct comparison between two different explanations of addiction. These two explanations either contained neuroscientific information about the defendant's addiction, or emphasised the defendant's choice. To some extent, these two versions mirror the debate between the Brain Disease Model (BDM) and the Choice Model (CM) of addiction.[706] In essence, the study tested four versions of a hypothetical criminal case, after which the participants had to rate several aspects related to criminal liability (i.e. the degree of accountability, the severity of the sentence and an estimate of the risk of recidivism). Moreover, the participants' beliefs about the defendant were addressed, namely the severity of the defendant's addiction, the behavioural consequences of the addiction and the defendant's culpability regarding those consequences. The main analysis and hypothesis, however, focus on the accountability judgment.[707] The other elements are addressed exploratively to serve as hypothesis-building for future studies.

Two populations were assessed, being master's in criminal law students as well as public prosecutors, both located in the Netherlands. The main findings of this study are that

706 These concepts or models are, of course, not necessarily mutually exclusive, as I discuss in section 2.4.2, nor are they the only explanation of addiction. Yet based on the findings of previous research, the theory is that individuals tend to view neuroscientific findings about the cause of behaviour as exculpatory, as it suggests a lack of free choice. Therefore, showing neuroscientific perspectives of addiction arguably leads to the perception that the defendant had less choice in his behaviour, thereby opposing a CM perspective which emphasises the presence of choice. This assumption is one of the premises on which the design is built (i.e. that the two models can indeed be juxtaposed).

707 Please refer to sections 3.5.1 and 3.5.2 for a thorough explanation of the non-accountability excuse and the diminished accountability circumstances, respectively.

perceptions of accountability are lower when participants are presented with the neuroscientific version of the vignette, as opposed to the choice version. In the exploratory analysis, no differences in sentencing preferences were found, but a difference between the two populations shows that the prosecutors are generally stricter than the students in assessing the defendant's liability. The beliefs about the defendant and the addiction did not seem to be affected by the two explanations of addiction or offence type, nor did this serve as a mediator in the relationship between accountability and the neuroscientific evidence. This is interesting, as it raises the question why these versions did affect accountability judgments if the beliefs about the defendant were likely unaffected. At the end of this chapter, I discuss the findings and attempt to answer this question as well.

This chapter is structured as follows. First, I provide an overview of previous studies that used a similar experimental structure to address the effects of neuroscientific evidence in criminal law. This body of previous studies is also the foundation of the current study's hypothesis. Second, I explain the methodology of the experiment, including the sampling and characteristics of the participants, the design, materials and the procedure. Third, section 6.3 outlines the results and fourth, section 6.4 thoroughly discusses these findings, whilst noting any limitations and future recommendations. Please note that both the Ethical Review Committee Psychology and Neuroscience (ERCPN) and the Ethical Review Committee Inner City Faculties (ERCIC) approved the experiments.

6.1 Introduction to previous and current research

When looking at previous research addressing the effects of neuroscience on the law, oftentimes these studies use vignettes in their methodological set-up. Indeed, using vignettes is a very popular method in many empirical legal disciplines and in the field of neurolaw, vignette studies are often conducted to assess the effects of neuroscientific information on a large number of legal questions and processes. Whereas a variety of studies has explored the prevalence and type of neuroscientific information in the courtroom,[708] experimental designs (such as this present one) are necessary to assess the effects of the use of neuroscientific information. In order to examine the exact and unique effects of neuroscience on criminal cases, all other factors need to remain equal. In other words: in

708 Such as the studies conducted simultaneously in North America and Europe: see Farahany, 'Neuroscience and behavioral genetics in US criminal law: an empirical analysis'. And Chandler, 'The use of neuroscientific evidence in Canadian criminal proceedings'. For the UK, see Catley and Claydon, 'The use of neuroscientific evidence in the courtroom by those accused of criminal offenses in England and Wales'; and for the Netherlands, see de Kogel and Westgeest, 'Neuroscientific and behavioral genetic information in criminal cases in the Netherlands'. But also the well-known study of Denno provides a detailed overview of neuroscience in the law: Denno, 'The myth of the double-edged sword: An empirical study of neuroscience evidence in criminal cases' (2015) 56 Boston College Law Review 493.

order to compare cases with and without neuroscience, the offender and offence-specific circumstances cannot differ, allowing for a direct comparison without potential confounding factors. Vignette studies are very suitable for this purpose, as such studies attempt to mirror real-life cases but allow for full control of the other variables. Other, non-experimental methodologies are relevant to explore the trends and content of neuroscientific information in real-life cases in ways that vignette studies cannot. Thus, the current methodological structure is relevant and appropriate for isolating the effects of neuroscience, but cannot replace studies that examine criminal cases in real life. Combined, they can and do provide insight into the role and scope of neuroscience in criminal cases. In the next paragraphs, I provide a brief overview of previous studies using similar designs to introduce the *status quo* of this field of research.

6.1.1 Effects of neuroscience on legal decision-making

Although comparing the effects of a neuroscientific versus a choice perspective of addiction on liability assessments is new, other studies have tested the effects of neuroscientific explanations of behaviour and disorders on criminal liability before. In fact, initially it was widely hypothesised that neuroscientific information would have a mitigating effect on assessments of (legal) liability,[709] and with the increase in neuroscientific evidence in courtrooms,[710] many researchers have been interested in testing this. Such studies have revealed that the exact effects of neuroscientific evidence are not always exculpatory and also lead to a higher perceived level of dangerousness of the defendant,[711] possibly due to the perception that biology and brains are 'fixed' or unchangeable. This is referred to as the 'double-edged sword'.[712] By pointing out physiological and/or neurological causes of behaviour, it was speculated that people are more inclined to externalise behaviour beyond the agency and free choices of the individual: the behaviour would be perceived as outside

709 E.g Bennett, 'Neuroscience and criminal law: Have we been getting it wrong for centuries and where do we go from here?' (2016) 85 Fordham Law Review 448-449: "Where neuroscience is being used in the courtroom, at least in the United States, is at the sentencing stage and, so far, exclusively to mitigate sentences. […] Clearly, brain scans may be used in sentencing proceedings to identify and support claims of lesser culpability due to circumstances beyond the control of the offender that could have a mitigating effect on the sentence".

710 Catley and Claydon, 'The use of neuroscientific evidence in the courtroom by those accused of criminal offenses in England and Wales'de Kogel and Westgeest, 'Neuroscientific and behavioral genetic information in criminal cases in the Netherlands'Farahany, 'Neuroscience and behavioral genetics in US criminal law: an empirical analysis'.

711 Barth, 'A double-edged sword: The role of neuroimaging in federal capital sentencing'.

712 Aspinwall, Brown and Tabery, 'The double-edged sword: Does biomechanism increase or decrease judges' sentencing of psychopaths?' (2012) 337 Science 846-849.

the scope of their responsibility.[713] However, according to some scholars, this type of reasoning, in which a physical cause of behaviour in itself is considered exculpatory, is a mistake in reasoning referred to as the *psycholegal error*[714] and should arguably not be used.[715] To recapitulate from chapter 2, the concept of a *psycholegal error* suggests that merely pointing out the cause of behaviour does not explain how and why the offence occurred, and is evidentiary but not conclusive regarding the amount and type of capacities the defendant has. Nonetheless, emphasising the causes of behaviour, regardless of whether it is an erroneous argument, likely affects individuals in their perceptions regarding liability.

Therefore, many studies addressing the effects of neuroscience on liability have attempted to explain, confirm or falsify the concept of the alleged 'double-edged sword'.[716] As such, the role and effects of neuroscience are likely more nuanced than merely reducing blame and perceived liability. The following well-known studies illustrate these differences in findings. With the use of vignettes, Gurley and Marcus addressed the likelihood of an acquittal based on a successful insanity defence. Using a large sample of students (N = 396), they created vignettes using either psychosis or psychopathy as a diagnosis and varied it with the presence of an MRI scan in the testimonies.[717] For the insanity standards, the researchers gave the participants (introductory psychology students without a legal background) the instructions to the jury belonging to the definition of the Model Penal Code, which include a volitional incapacity as a potential basis for a 'not guilty by reason of insanity' (NGRI) verdict.[718] Moreover, the vignette contained a statement by a court-ordered behavioural expert about the capacities of the defendant, and focused on a volitional incapacity in both the psychotic and psychopathic vignette. As hypothesised, they found that a psychotic defendant was more likely to receive an NGRI verdict than did the psychopathic defendant.[719] Moreover, the presence of neuroimages also had a significant effect, with the odds of jurors finding a defendant's NGRI increasing by 1.34 if an MRI showing a brain lesion was present.[720] It also suggests that regardless of case-specific

713 Allen and others, 'Reconciling the opposing effects of neurobiological evidence on criminal sentencing judgments' (2019) 14 PloS one.

714 Morse, 'Determinism and the death of folk psychology: Two challenges to responsibility from neuroscience'

715 See also the discussion in section 2.5 on the psycholegal error.

716 See Aspinwall, Brown and Tabery, 'The double-edged sword: Does biomechanism increase or decrease judges' sentencing of psychopaths?' but also Denno, 'The myth of the double-edged sword: An empirical study of neuroscience evidence in criminal cases'.

717 Gurley and Marcus, 'The effects of neuroimaging and brain injury on insanity defenses'.

718 As opposed to the M'Nagthen Rules, which are also commonly used in the US, and which contain only a cognitive prong.

719 Although psychopathy is usually not considered to be a sufficient basis for a NGRI verdict, the researchers considered this to be a valid experiment by using non-legal participants and the Model Penal Code definition of the insanity defence. It has to be considered as a limitation, however, that personality disorders and psychopathy are not commonly considered a valid basis of the defence.

720 Gurley and Marcus, 'The effects of neuroimaging and brain injury on insanity defenses' 91.

facts, such as the type of crime and circumstances, the underlying disorder plays a large role. Arguably, the perception of the public towards the type of disorder influences potential differences in judgments. This finding is relevant with regard to addiction. The addiction debate results in various opinions and perceptions on the exact nature of addiction, which also affects the general public, and thus these varying perspectives could influence subsequent judgments.

In a different experiment, the focus was put on capital punishment and potential reductions in capital punishment based on brains scans.[721] A total of 259 psychology students read the vignettes, which were varied concerning level of dangerousness (low versus high) and diagnostic evidence (only a diagnosis, diagnosis plus neuropsychological test results, or diagnosis, neuropsychological test results and neuro-imaging evidence). The participants were told that the defendant was found guilty and were asked to determine an appropriate sentence, which in this case was a two-option sentence: death or life imprisonment without the possibility of parole.[722] The experiment's results showed that both the neuropsychological tests as well as the images mitigated the sentence by reducing the likelihood that the participants imposed a death sentence. However, this was only found for the offenders at high risk of future dangerousness.[723]

Most of these studies were conducted in the US, which poses difficulties comparatively due to differences in legal structure and social context. Hence, interesting is a study that took place in Germany using a similar design. The authors used vignettes with a psychopathic offender, either explained from a neurologic, a genetic, or no biological perspective. The participants, 317 law students, were consequently asked to address the moral and legal responsibility of the defendant.[724] The vignettes containing neurological or genetic information lead to a lower assessment of responsibility compared to no biological explanation, although no other effects (such as on sentencing) were found.

These studies are just a small part of the research using vignettes to address the effects of neuroscience in this particular context. Other studies that used such designs resulted in lower sentences[725] and longer involuntary hospitalisation,[726] and impacted the estimates

721 Greene and Cahill, 'Effects of neuroimaging evidence on mock juror decision making' (2012) 30 Behavioral Sciences & the Law 280-296.

722 A "death qualification exclusion" took place to ensure that strong advocates or opposites of the death penalty were not part of the subject group.

723 Greene and Cahill, 'Effects of neuroimaging evidence on mock juror decision making' 292-293.

724 Guillen Gonzalez and others, 'Neuroscientific and genetic evidence in criminal cases: A double-edged sword in Germany but not in the United States?' (2019) 10 Frontiers in Psychology.

725 Aspinwall, Brown and Tabery, 'The double-edged sword: Does biomechanism increase or decrease judges' sentencing of psychopaths?' and Allen and others, 'Reconciling the opposing effects of neurobiological evidence on criminal sentencing judgments'.

726 Allen and others, 'Reconciling the opposing effects of neurobiological evidence on criminal sentencing judgments'.

of legal responsibility.[727] An excellent overview of different studies and effects has been provided by Aono, Yaffe and Kober.[728] Importantly, most studies conceptualise 'neuroscientific evidence' as either brain images, textual brain information or in some instances also genetic information. Although the results and suggested effects are mixed, the general tendency for mitigating effects of neuroscientific information is also used as a hypothesis in this study. It is expected that the neuroscientific versions of the vignette result in a lower perception of accountability for the offence. In the exploratory analysis, I examine if this hypothesised trend is also visible in the sentencing phase. Moreover, the perceived risk of recidivism is explored to understand if the trend of the 'double-edged sword' may also be apparent in a Dutch context as well as for addicted defendants.

6.1.2 Defendant, disorder & offence-specific factors

In addition to the effects of neuroscience on aspects of liability, this study particularly focuses on the role of the disorder in relation to the neuroscientific evidence, or lack of evidence. In all instances, the impaired capacities resulting from addiction, most notably impaired control, were emphasised. This was done in order to avoid making a psycholegal error by relying only on the presence of a diagnosis and/or neuroscientific evidence, but linking this to legally relevant capacities. In addition to explicating the role of addiction, the current structure also differentiates between types of offences. The purpose of two different offences is to address the (potential) underlying mechanism of the neuroscientific effects. It would make sense that mitigating, or even aggravating, effects of neuroscience are more prominent in certain offences. A property offence is, in cases of addiction, more instrumental, whereas a violent offence is more reactive. None of the previous vignette studies explored potential interaction effect caused by different types of offences.

The link between the disorder and the type of offence is particularly interesting in cases of addiction, as addiction and drug use have a complex relationship with delinquency. In general, crime is very much related to drug use and there is a wide variety of hypotheses that describe this relationship.[729] Nonetheless, different types of offences are related to

727 Fuss, Dressing and Briken, 'Neurogenetic evidence in the courtroom: a randomised controlled trial with German judges' (2015) 52 Journal of Medical Genetics 730-737.

728 Aono, Yaffe and Kober, 'Neuroscientific evidence in the courtroom: a review' (2019) 4 Cognitive Research: Principles and Implications 40.

729 There are several basic explanations for this relationship, such as forward (drug causes crimes) and backward (crime causes drug use) causation; and a confounding/spurious relationship, meaning that there is no direct causal connection but that both phenomena share a common set of causes, such as high impulsivity. Reality is likely to be more nuanced and complicated than this, but these explanations are often used as a starting point to understand the connection between drug use and criminality. See also: Pierce and others, 'Insights into the link between drug use and criminality: Lifetime offending of criminally-active opiate users' (2017) 179 Drug and alcohol dependence 309-316.

addiction in different ways. In brief, property offences are often instrumentally related to drug addiction, because drug use tends to be expensive and induces craving and withdrawal symptoms, thereby an offender resorting to criminal activity to earn money or obtain drugs to sustain a drug habit.[730] Convicted offenders often confirm this instrumental relationship by stating that they committed a crime to obtain drugs.[731] For example, the motive to obtain money for drugs was mentioned by 21 per cent of inmates as a reason for their delinquency, according to the study of Bronson and colleagues.[732] Of course, this economic relationship between drugs and crimes is most relevant for those substances that are relatively expensive. Aside from property offences, many violent offences are also committed under the influence of alcohol and/or drugs, often with an underlying addiction.[733] The relationship between violent offences and addiction is often more reactive than with property offences. This relationship can, for instance, be explained from some negative effects of craving (irritability) which created an aggressive response from the offender after a non-violent encounter with the victim. But not only as a result of cravings: potential damage to the prefrontal cortex as a consequence of prolonged substance use may cause problems with inhibition and thus aggressive outbursts.[734] Moreover, known effects of long-term substance use also include executive functioning impairments, such as the weighing of interests and the valuation of long-term consequences and short-term rewards.[735] All effects related to substance use are relevant in understanding addiction-related crime, especially in cases where an instrumental link is less apparent.

Hence, because both types of crimes are related to addiction,[736] albeit in different ways, and the vignette clearly explicates this relationship in both instances, it is interesting to investigate whether the type of crime impacts the perceived criminal liability. It is hypothesised that the vignettes with the property offence would result in a lower degree of accountability compared to the violent offence, for the reason that the utility and purpose of a property offence are more understandable and easier to sympathise with, given the

730 Hoaken and Stewart, 'Drugs of abuse and the elicitation of human aggressive behavior' (2003) 28 Addictive Behaviors 1533-1554.

731 Brochu and others, 'Drugs, alcohol, and criminal behaviour: A profile of inmates in Canadian federal institutions' (2001) 13 Forum on Corrections Research 20-24; Hunt, 'Drugs and consensual crimes: Drug dealing and prostitution' (1990) 13 Crime and Justice 159-202; Lo and Stephens, 'The role of drugs in crime: Insights from a group of incoming prisoners' (2002) 37 Substance Use & Misuse 121-131.

732 Bronson and others, *Drug use, dependence, and abuse among state prisoners and jail inmates, 2007–2009*, 2017 .

733 Duke and others, 'Alcohol, drugs, and violence: A meta-meta-analysis' (2018) 8 Psychology of Violence 238.

734 Volkow, Koob and McLellan, 'Neurobiologic advances from the brain disease model of addiction'.

735 Volkow, Fowler and Wang, 'The addicted human brain: insights from imaging studies'.

736 Bronson and others, *Drug use, dependence, and abuse among state prisoners and jail inmates, 2007–2009*; Goldstein, 'The drugs/violence nexus: A tripartite conceptual framework' (1985) 15 Journal of Drug Issues 493-506.

presence of an addiction. In other words: the instrumental relationship between the addiction and the offence may be easier to comprehend.[737] Moreover, it is expected that the neuroscientific version of the vignette has stronger excusatory effects in the violent offence: as it is hypothesised that the property offence is already judged more leniently in any event, the exculpatory effects of neuroscience may be more pronounced in the violent offence. In the exploratory analyses, these trends are also examined in light of sentencing and estimates of recidivism.

The exact mechanism underlying the effects of neuroscience is not entirely clear. Previous studies found that neuroscientific evidence or information, regardless of whether it was relevant or accurate, is generally perceived as more satisfying and sensible than information without brain-related elements.[738] This phenomenon is often referred to as the 'seductive allure' of neuroscience.[739] In addition to the previously mentioned objectives, this study also addresses this hypothesis further by asking the participants about their beliefs about the defendant. Perhaps a trend can be suggested in which the defendant's addiction is judged as more severe when presented with neuroscientific evidence. Moreover, the beliefs about the defendant and his addiction, such as the loss of control as a consequence of addiction, might be more strongly experienced when presented with neuroscientific evidence. A previous meta-analysis found that neuroscientific information is generally related to lower perceptions of control.[740] Although it is not often tested, one previous study found that mitigating effects of neuroscience were mediated by the perception of the amount of control the defendant had over his actions.[741] Thus, it was interesting to question the participants about this, asking them to assess the level of impaired control of the defendant. Not only the potential direct effects of neuroscience on this perception are relevant, but also if the perception on control can explain the hypothesised mitigating effects of neuroscience. In other words, can the reduced accountability, if this is found, resulting from being confronted with neuroscientific evidence be explained by a heightened perception of impaired control? An exploratory mediation analysis aims to

737 This is an intuitive hypothesis but also one that is in practice employed in German law. The German Supreme Court has clarified that only property offences, directly related to the irresistible impulse caused by the withdrawal symptoms, are an acceptable reason to impose partial or complete non-accountability (provisions 20 and 21 of the German Criminal Code, GCC). Hence, what is already explicit in German law may reflect an implicit tendency which this study aims to test. See also: Goldberg and Roef, 'Addiction, capacities and criminal responsibility – a comparative analysis'.

738 E.g. Michael and others, 'On the (non) persuasive power of a brain image' (2013) 20 Psychonomic Bulletin & Review 720-725; Weisberg and others, 'The seductive allure of neuroscience explanations' (2008) 20 Journal of Cognitive Neuroscience 470-477.

739 Aono, Yaffe and Kober, 'Neuroscientific evidence in the courtroom: a review' 4.

740 Schweitzer and others, 'Neuroimages as evidence in a mens rea defense: No impact' (2011) 17 Psychology, Public Policy, and Law 357.

741 Schweitzer and Saks, 'Neuroimage evidence and the insanity defense' (2011) 29 Behavioral Sciences & the Law 592-607.

address whether more impaired control is a mediating factor in the hypothesised mitigating effects of neuroscience.

One important addiction-specific aspect in the assessment of criminal liability is the concept of prior fault. This experiment addressed the notion of prior fault by asking the participants whether they perceived the defendant to be culpable regarding his control being impaired. As thoroughly discussed in the previous chapters, prior fault has a large influence on denying exculpation (regarding accountability) or denying mitigating (regarding punishment).[742] Addressing implicit feelings of culpability towards the defendant is thus relevant in explaining and appreciating the outcomes. In previous experimental research on addiction and liability, perceived choice was found to negate the mitigating effects of addiction on sentencing.[743] Whether neuroscientific evidence leads to a less blameworthy perception of the choice impairments, in other words, whether prior fault is less pronounced when the participants are exposed to neuroscientific information, is addressed exploratively. Moreover, it is examined whether perceived blameworthiness in impaired choice, i.e. prior fault, can be a mediating factor in the hypothesised relationship between neuroscientific evidence and reduced accountability.

To conclude this brief review, this study is innovative, not only by adding data about the effects of addiction-specific elements and types of offences to the body of neurolaw vignette literature, but also by combining two separate participant groups. Often, (law) students are the main respondents in experimental research,[744] although previous research in the Netherlands has combined two participant groups as well, such as judges and laypersons in a study on the perception of sentencing among the public.[745] This study uses both a student population as well as a group of practising public prosecutors. These groups are interesting as a stand-alone study, by examining their responses to a vignette containing an addicted defendant, but also in comparison with one another. The application of doctrines by the students is interesting, as it symbolises how the law may be interpreted from theory, and it may reflect a more literal interpretation of law books. The assessment by the public prosecutors, on the other hand, could be more pragmatic and may reflect more accurately how certain standards are dealt with in practice. Practitioners may realise better that reality is complex and many circumstances may interact, resulting in a more

742 See chapter 4.

743 Sinclair-House, Child and Crombag, 'Addiction is a brain disease, and it doesn't matter: Prior choice in drug use blocks leniency in criminal punishment' (2019) Psychology, Public Policy, and Law.

744 For instance the vignette study addressing the impact of victim statements on legal decision-making: Kampen, de Keijser and Schoep, 'Het effect van de slachtofferverklaring op straftoemeting: een experimenteel onderzoek onder rechtenstudenten' (2013) 55 Tijdschrift voor Criminologie 24-43.

745 de Keijser, van Koppen and Elffers, 'Op de stoel van de rechter: Oordeelt het publiek net zo als de strafrechter? ' (2006) 2 Research Memoranda (Raad voor de Rechtspraak) 1-78. See also de Keijser, van Koppen and Elffers, 'Bridging the gap between judges and the public? A multi-method study' (2007) 3 Journal of Experimental Criminology 131-161.

nuanced application of the law. As such, it is interesting to explore differences in assessment of liability and beliefs about the defendants. Moreover, if the two groups differ substantially in their perspectives, this is also valuable information for interpreting future studies using mainly student participants.

6.2 Methods

This section firstly explains the details of the research design, and secondly addresses the selection and characteristics of the two participant groups. Afterwards, in section 3.2.3, all independent and dependent variables are explained. Any remaining elements in the vignettes are addressed and justified in the section on materials. Lastly, I provide an overview of the procedure of this experiment. The full code book and raw data are publicly available on DataverseNL.[746]

6.2.1 Design

The basis of the experiment is a vignette, i.e. a fictional criminal case, revolving around André, an addicted offender. The vignette first contains details about the offence and the offender and subsequently contains an excerpt from a behavioural report by a psychologist. The vignette is constructed in a 2x2 design in which there are two independent variables, being the type of offence (*offence type*), and the way that addiction is explained in the behavioural report (*addiction explanation*). Hence, there were four versions of the vignette as illustrated below.

Table 8: Overview of the 2x2 factorial design

		Addiction explanation
Offence type	Neuroscientific + Violent	Choice + Violent
	Neuroscientific + Property	Choice + Property

Although the information provided in the vignettes is fully fictional, the characteristics of the story such as the type of offence and the offender's characteristics mirror offences that are common in the Netherlands. Particularly the excerpt of the behavioural report is drafted

746 doi:10.34894/NNRX8P.

in a similar fashion so as to resemble actual reports in such cases. After reviewing over 50 of such behavioural reports, certain generic and common phrases were used to create these different scenarios. Also, several experts involved in criminal cases like these verified how realistic the vignettes are and changes were made accordingly. This indicates that the storyline is an adequate and realistic reflection of the type of case as well as the type of expert reports that legal professionals have to assess.

6.2.2 Participants

Two groups of participants took part in the experiment. The first body of participants consisted of students pursuing their master's degree in (criminal) law from the University of Groningen (N = 34), University of Utrecht (N = 34), University of Nijmegen (N = 35) and University of Leiden (N = 68).[747] As such, a total number of 171 students participated in the vignette study. This is referred to as the student sample. These students were at the time of this study in their final year of pursuing an LLM and will most likely be legal professionals in the Netherlands in future. Hence, they represent a legally knowledgeable cohort who have recently studied the relevant law in theory.

As the second group of participants, the study included currently practising jurists (N = 106) from the public prosecution service, referred to as the prosecutor sample. Public prosecutors were chosen primarily because they can be open and transparent about their decisions (as opposed to judges, who are bound by secrecy of deliberations and may not wish to disclose their arguments fully)[748] but also have to assess the defendant, and formulate and propose appropriate sentences (as opposed to attorneys).[749] These practitioners were sampled from seven (out of ten) different districts in the Netherlands.

Both samples included a higher number of women (71.3 per cent of the student sample and 58.7 per cent of the prosecutor sample).[750] In the prosecutor sample, there were a few occupational differences. Twenty-four individuals (22 per cent) were assistant prosecutors.[751]

747 There were minor changes made to the materials and procedure throughout the testing procedure. None of the elements that are ultimately used in the analysis are different between these four student bodies.

748 The concept '*raadkamergeheim*' (here loosely translated as secrecy of deliberations) is embedded in article 7 sub 3 of the law of judicial organisation (*Wet op rechterlijke organisatie)* in the Dutch Civil Code.

749 As I discuss in the limitations section of this chapter (6.5), a cohort of judges would be very valuable as well. Unfortunately, no permission was granted to sample judges.

750 A minority (N = 8) identified as 'other' or preferred not to disclose their gender.

751 The major differences is that the assistant prosecutor can be (independently) in charge of relatively minor offences only, referred to as 'police judge' (*politierechter*) cases, which carry a proposed sentence of maximum of 12 months' imprisonment, e.g. simple assaults or thefts. He or she additionally participates and assists in the larger cases containing higher sentences, called *meerkamerzittingen*, over which a 'full' public prosecutor is formally in charge. Hence, both of these professions have experience with prosecuting cases and drafting sentences, although the assistant prosecutor will not independently preside over more serious cases.

Additionally, six respondents (5.7 per cent) fulfil the function of senior prosecutor clerk.[752] In terms of years of service, around one-quarter of the participants (23.9 per cent) have worked for the public prosecution office for less than 5 years. A similar number of participants has worked there for between 5-10 years (22.9 per cent). 32.1 per cent of participants have worked at the prosecutor's office for 10-20 years and 19.3 per cent for over 20 years. Two participants preferred not to say this. There were no further demographics collected to guarantee anonymity for the participants. All participants were asked how much prior (neuro)psychological knowledge they had, to test if this could be a possible confounding factor. Analyses revealed that this was not the case.

The student participants were allocated manually to the four conditions. As the student population initially started as a pilot, the first group of students only received the violent offence vignette (either with a neuroscientific explanation or choice explanation). This was done to assess whether the structure of the experiment worked well before extending the study to include the other two vignettes based on a property offence as well. Afterwards, all student participants were assigned to the remaining conditions in order to create equal numbers of respondents for each condition. As no fundamental changes were made in the vignette itself and because the student population is comparable across the sample, I have pooled all student groups in the analysis to create the student sample as it is now. For the prosecutor sample, the software used assigned the participants at random to one of the four conditions and automatically ensured an equal distribution of the conditions.

6.2.3 Measures

Independent variable: offence type. The independent variable *offence type* has two variations, meaning that in half of the vignettes, André committed a violent offence whereas in the other cases, the offence was a property crime. These two types of offences are used in this study because, as explained, both relate to drug addiction.[753] More specifically, the violent crime vignette contains aggravated assault according to article 302 Dutch Criminal Code (DCC) in which the offender stabs a victim with a knife after the victim bumped into him. In the version of the property crime, the offender commits armed robbery, classified under article 317 DCC, by using a knife to force a food delivery employee to

752 The public prosecutor's clerk (*parketsecretaris*) is a jurist who plays a major role during a criminal case and provides the prosecutor with all the essentials by collecting and researching all the relevant information of the case. In essence, they make sure there are no mistakes or missing elements in the files, draft the writs of summons, and arrange most of the communication with, for instance, the police. The public prosecutor will then use all this during the actual hearings, where he/she has the final authority to plead and propose a sentence. The prefix 'senior' is used to indicate years of experience as a prosecutor's clerk.

753 Bronson and others, *Drug use, dependence, and abuse among state prisoners and jail inmates, 2007–2009*; Goldstein, 'The drugs/violence nexus: A tripartite conceptual framework'.

hand over his cash to the offender. The addiction played a role in both offences: in the violent offence by causing the offender to be irritable and short-fused due to a drug craving, and in the property offence by needing money to satisfy the craving. Both versions explicitly made this connection between the addiction and the offence.

To avoid that any statistical difference between these offence types would emerge from the severity of the offence rather than the link between the offence and the disorder, the severity of the offence types had to be aligned as much as possible. Severity is largely a matter of personal perspective, and comparing a violent crime to a property crime may always be inherently problematic as one may always see violent offences as more morally wrong or harmful than property offences. However, to approximate equal severity, the offences were aligned based on equal sentencing guidelines.[754] This yielded a property and a violent offence with the same sentencing guidelines as well as similar circumstantial characteristics. The recommended sentence for both is 30 months' imprisonment.[755] The case mentions this proposed sentence and makes an explicit reference to these official guidelines, to attempt to create an equal perception about the severity of both offences for each participant. These guidelines are also the reason that the offender in the vignette had a previous criminal record because otherwise, the sentencing guidelines would no longer have been equal.[756] Apart from the offence-specific differences, the actual events contained exactly the same information as possible, by both including a victim as well as a knife.

Independent variable: addiction explanation. The independent variable *addiction explanation* had two variations. One version of the behavioural expert report excerpt focused on addiction as a brain disease, including some neuroscientific evidence. For instance, the excerpt focuses on the chronicity of addiction, the role of the brain and the capacities that were affected. The following example statements are copied from the neuroscientific version of the vignette.

> "*Recent neuroscientific research shows that substance dependency is largely caused by disruptions in the dopamine circuit, which influences the experience of motivation, reward and pleasure to a great extent. Changes in the dopamine circuit, particularly in the frontal side of the brains (the prefrontal cortex) result,*

754 These are guidelines (in Dutch: *strafvorderingsrichtlijnen*) which prescribe a standardised sentence for all types of offences and offence-specific characteristics (such as repeat offenders or specific weapons that were used). The public prosecutor employs these guidelines in order to reach the proposed sentence. The guidelines are publicly assessable via https://www.om.nl/onderwerpen/beleidsregels/richtlijnen-voor-strafvordering.

755 It must be noted that these sentencing guidelines are sometimes heavily debated and criticised for being unrealistic. Nonetheless, in order to create two types of offences which are objectively speaking somewhat equal in terms of severity, this was used as a standard.

756 If the offender had no prior record, then he would have a slightly lower proposed sentence, but only in the case of the property offence.

> *amongst others, in compulsive drug use and loss of control over drug-related behaviour. This impedes the individual's ability for reaching out for and sustaining professional help. Consequently, the disorder of the defendant can be classified as a brain disease of a chronic nature.*"

In contrast with the neuroscientific version, the second version (the choice version) elaborates further on addiction as a free choice, along the lines of the choice model of addiction. Particularly the continuously conscious decisions to continue the drug use instead of quitting or seeking help, while the negative consequences were known and foreseeable for the suspect, is important in this explanation. The following example statements are copied from the choice version of the vignette.

> "*The defendant's addiction is a disorder which continuously influences his behavioural choices. However, the defendant has regularly had the opportunity to cease his substance use. Additionally, he has had enough treatment in the past to be aware of his impulsive actions caused by these well-known cravings. These cravings, and the associated feelings of unrest and agitation, which were present at the time of the offence, were therefore foreseeable for the defendant.*"

Importantly, both versions explicitly link the addiction to the events of the offence. This is important, as the non-accountability excuse requires a causal connection between disorder and offence.[757] As both versions have the same underlying disorder, and only the explanation of that disorder is being tested, it is important that both versions are causally connected to the offence at hand.

Dependent variables. There is one main outcome variable, which is the *perceived (degree of) accountability*. In addition, I explore five other variables for potential trends that would warrant more research, namely: *suggested sentence length*, *recidivism estimate, addiction severity, impaired control*, and *perceived blameworthiness of impaired control*. The participants were questioned about these concepts after reading the vignette. The exact wording of the questions as well as the multiple choice answers the participants could choose from, are presented in Table 9.

757 Recall the explanation from section 3.5.1 regarding the exact requirements for the non-accountability excuse.

Table 9: Overview of the main dependent variable as well as the exploratory variables

Variable name	Phrased question	Multiple choice answers
Perceived (degree of) accountability	What is your perception of the degree of accountability?	a) Fully accountable b) Slightly diminished accountable c) Diminished accountable d) Strongly diminished accountable e) Non-accountable
Suggested sentence length *(student version)*	What is your perception of the suggested sentence?	a) Much too severe b) Somewhat too severe c) About right d) Somewhat too lenient e) Much too lenient
Suggested sentence length *(prosecutor version)*	What would be your proposed sentence?	a) 30 months, conform the sentencing guidelines b) Less than 30 months, namely [open space] c) More than 30 months, namely [open space]
Recidivism estimate	What is your estimate of the risk of recidivism?	a) Little to no chance of recidivism b) Small chance of recidivism c) Probable chance of recidivism d) Large chance of recidivism e) Very large chance of recidivism
Addiction severity	How would you estimate the severity of the defendant's addiction?	a) Very light b) Light c) Moderate d) Severe e) Very severe
Impaired choice	In your perception, to what extent was there an impairment in the defendant's behavioural choice?	a) No impairment b) Very light impairment c) Some impairment d) Large impairment e) Very large impairment
Perceived blameworthiness of impaired choice	Do you believe that the aforementioned impairment in choice can be blamed on the defendant?	a) Not blameworthy b) Partially blameworthy d) Blameworthy d) Not applicable

The first three variables and questions are clearly related to the legal outcomes of the vignette, and reflect real-life questions that jurists need to deal with. I note that the sentencing questions were phrased differently for the student population and the prosecutor population. As the prosecutors are experienced in drafting sentences, they were asked directly to do so. The students, on the other hand, were only asked to comment on the suggested sentence using a Likert scale. The last three variables attempt to identify the beliefs of the participants about the defendant and the addiction. The question regarding addiction severity is self-explanatory, as it aims to see if the disorder is considered more severe or lighter based on different descriptions and circumstances. The variable *impaired*

choice aims to assess the underlying capacities that are potentially impacted by addiction. As both versions of the vignette explain control as the main impacted capacity, this variable seeks to identify if neuroscientific evidence is more persuasive in that regard. The final variable assesses the influence of prior fault-like beliefs on the capacities by asking whether the impaired choice is the defendant's own fault.

Analyses. All data were entered in IBM SPSS Statistics 24. The main analysis of accountability assessment was performed using three-way 2 (*offence type*: violent vs. property) x 2 (*addiction explanation*: neuroscientific vs. choice) x 2 (*population*: prosecutors vs. students) factorial ANOVA. Even though technically the accountability variable uses a Likert scale which would classify as an ordinal variable, it is treated here as an interval variable which would justify performing an ANOVA. For the mediation analysis that assesses potential mediators in the relationship between the independent variables and *degree of accountability*, I used Hayes Process v3.3 macro in SPSS. The other dependant variables that were addressed exploratorily were examined using ANOVAs if the responses were Likert scales, and for the variable *sentence length* in the prosecutor sample, as well as the *perceived blameworthiness of impaired choice*, I performed a multinominal logistic regression, due to the categorical nature of the response options.

6.3.4 Additional vignette elements

Aside from the variables, the vignette contained some general information and circumstantial facts that were consistent for all four versions. These 'case facts' provide context to the variables on purpose, and thus are worthwhile to describe and justify.

The type of drug addiction was determined to be a cocaine addiction for the following reasons. First of all, this is an expensive substance, establishing a sensible link between cocaine and a property offence.[758] Moreover, cocaine is highly addictive,[759] it is amongst the top most common (substance) addictions and is the most common hard drug to which people in the Netherlands are addicted.[760] Third, cocaine is notably associated with strong cravings, including aggression, irritability and impulsivity, making it a sensible choice for a violent offence as well.[761]

In addition to the type of drug, all vignettes had the same circumstances and background scenarios in which the offence took place. This means that the place and time, the name

758 Boles and Miotto, 'Substance abuse and violence: A review of the literature' (2003) 8 Aggression and Violent Behavior 155-174; Brochu and others, 'Drugs, alcohol, and criminal behaviour: A profile of inmates in Canadian federal institutions'; Goldstein, 'The drugs/violence nexus: A tripartite conceptual framework' .

759 Salerian, 'Addictive potential: A= E/Tmax× t1/2' (2010) 74 Medical Hypotheses 1081-1083.

760 Wisselink, Kuijpers and Mol, *Kerncijfers verslavingszorg 2015* Landelijk Alcohol en Drugs Informatie Systeem (LADIS) 2016.

761 Gawin and Ellinwood Jr, 'Cocaine dependence' (1989) 40 Annual Review of Medicine 149-161 .

of the offender, as well as the presence of a victim and the weapon (a knife) were kept the same across the different vignette versions. All vignettes contained an explicit statement that André is the offender, to avoid any evidence-based concerns by the participants. Moreover, all vignettes explain that the offender has been addicted to drugs for several years and that previous treatment has been unsuccessful, before heading into the specific behavioural report excerpt.

This excerpt contains the different versions of the *addiction explanation* variable, as described above, but also covers some general and standard details about the defendant being dependent on cocaine. All vignettes contained these general remarks, which consisted of characteristics and symptoms of addiction as copied from the Diagnostic and Statistical Manual of Mental Disorders (DSM)-5.[762] The vignettes explain: "substance dependence, as described in the DSM-5, is characterised by (amongst others) strong desires to use the substance, continued substance use despite major negative interpersonal and occupational consequences, unsuccessful efforts to cut down or control substance use, and cravings when the substance is not within reach". After these general remarks, the two versions of the vignette diverge and contain the elements described under the 'independent variables' section.

6.2.5 Procedure

There were some major differences between the two samples in terms of procedure, most notably by offering the experiment in real-life in the case of the student sample, in contrast to an online testing environment for the prosecution sample. Hence, the procedure of the two samples is explained separately.

Student sample. The universities were visited during a lecture on substantive criminal law. The researcher explained the purpose and framework of the study and asked the students to participate. The students were, naturally, not informed about the existence of the four versions of the vignette. Their participation always remained voluntary and the students were allowed to drop out at any time. In class, the researcher handed out a small stack of papers containing the vignettes and the questionnaire, as well as a thorough explanation and the students' informed consent form. Afterwards, the students were debriefed about the four experimental conditions of the vignettes. This debriefing either happened in person, during the remainder of the lecture, or online, by posting a written statement on the online teaching environment of the course. No payment or other form

762 American Psychiatric Association, *Diagnostic and statistical manual of mental disorders, fifth edition* (American Psychiatric Association: Arlington, VA 2013).

of compensation was provided for their participation. It took participants about 15 minutes to fill out the questionnaire.

Prosecutors sample. The Dutch Public Prosecution Service divides the Netherlands into ten districts. Seven districts participated in this study by sending around an e-mail, via their team manager, to the employees with a request to cooperate and a link to the online testing environment. The software Qualtrics was used, in which the four versions of the vignette as well as the questions were digitalised. The informed consent was still presented at the start of the experiment, and in order to continue, the participant's consent was mandatory. There were no IP addresses or other personal data collected. In addition, the participants were asked to indicate how long they have worked as a public prosecutor. This question, as well as the question about their gender, was not mandatory to answer. After submitting the answers, the same debriefing as with the student sample was provided in writing. No payment or other form of compensation was provided for their participation. It took participants on average 10 minutes to fill out the questionnaire.

6.3 Results

Each outcome variable is discussed separately below. The student and prosecutor sample are discussed separately first, and in comparison to each other afterwards. The first three sections (*degree of accountability, sentence length* and *recidivism estimates*) can be considered the legal outcomes of the fictional case. The latter three questions (*addiction severity, impaired choice* and *perceived blameworthiness of impaired choice*) address the participant's perception of the defendant, his addiction and the behavioural consequences his addiction.

6.3.1 Degree of accountability

Tables 10 and 11 shows the responses to this question, whilst differentiating between *offence type* and *addiction explanation* respectively. The table contains the values for the prosecutor (abbreviated as 'pros') sample and the student (abbreviated as 'stud') sample. The percentage per column is also provided in italics.

Table 10: Overview of responses to the accountability variable by the prosecutor (pros) sample and the student (stud) sample, differentiated by offence type[763]

	Violent offence				Property offence				Totals			
	Pros	%	Stud	%	Pros	%	Stud	%	Pros	%	Stud	%
Fully accountable	20	*38.5*	17	*20.0*	21	*38.9*	14	*16.5*	**41**	***38.7***	**31**	***18.2***
Slightly diminished accountable	26	*50.0*	52	*61.2*	27	*50.0*	47	*55.3*	**53**	***50.0***	**99**	***58.2***
Diminished accountable	6	*11.5*	12	*14.1*	5	*9.3*	20	*23.5*	**11**	***10.4***	**32**	***18.8***
Strongly diminished accountable	0	*0.0*	2	*2.4*	1	*1.9*	4	*4.7*	**1**	***0.9***	**6**	***3.5***
Non-accountable	0	*0.0*	2	*2.4*	0	*0.0*	0	*0.0*	**0**	***0.0***	**2**	***1.2***
Total	**52**	***100***	**85**	***100***	**54**	***100***	**85**	***100***	**106**	***100***	**170**	***100***

763 One respondent did not answer this question, hence leading to 170 rather than 171 answers.

Table 11: Overview of responses to the accountability variable by the prosecutor (pros) sample and the student (stud) sample, differentiated by addiction explanation

	Neuroscientific explanation				**Choice-based explanation**				**Totals**			
	Pros	*%*	Stud	*%*	Pros	*%*	Stud	*%*	Pros	*%*	Stud	*%*
Fully accountable	13	*25.0*	9	*10.7*	28	*51.9*	22	*25.6*	**41**	***38.7***	**31**	***18.2***
Slightly diminished accountable	29	*55.8*	52	*61.9*	24	*44.4*	47	*54.7*	**53**	***50.0***	**99**	***58.2***
Diminished accountable	10	*19.2*	17	*20.2*	1	*1.9*	15	*17.4*	**11**	***10.4***	**32**	***18.8***
Strongly diminished accountable	0	*0.0*	4	*4.8*	1	*1.9*	2	*2.3*	**1**	***0.9***	**6**	***3.5***
Non-accountable	0	*0.0*	2	*2.4*	0	*0.0*	0	*0.0*	**0**	***0.0***	**2**	***1.2***
Total	**52**	***100***	**84**	***100***	**54**	***100***	**86**	***100***	**106**	***100***	**170**	***100***

The tables show that in general, across all conditions and combining the two participant groups, most participants considered the defendant to be fully accountable (26.1 per cent, $n = 72$) or slightly diminished accountable (55.1 per cent, $n = 152$). A small group thought that the defendant was diminished accountable (15.6 per cent, $n = 43$) and very few thought the defendant was strongly diminished accountable (2.5 per cent, $n = 7$) or non-accountable altogether (0.7 per cent, $n = 2$). These numbers also suggest that for the prosecutor sample, responses are highly similar when differentiating between the violent offence and the property offence condition. When addressing the distinction between the variable *addiction explanation*, it seems as if the defendant is generally considered less accountable in the neuroscientific condition, suggesting an exculpating effect. In terms of difference between the two samples, there seems to be a difference between the perceptions of the prosecutors and those of the students. The last columns of the tables above shows the difference between the two samples, regardless of the vignette version. This suggests that students are more lenient than prosecutors in terms of perceived accountability, and generally judged the offender to be less accountable compared to the prosecutors. 23.5 per cent of the students ($n = 40$) considered the defendant to be diminished accountable, strongly diminished accountable or non-accountable compared to 11 per cent ($n = 12$) of the prosecutors. Moreover, 40.4 per cent ($n = 44$) of the prosecutors thought the defendant should be held entirely accountable compared to 18.2 per cent ($n = 31$) of the students.

The following two tables 12 and 13 demonstrate the averages as well as the results of the three-way ANOVA. To be clear, the numerical values for the variable *degree of accountability* represent: 1 = fully accountable; 2 = slightly diminished accountable; 3 = diminished accountable; 4 = strongly diminished accountable and 5 = non-accountable.

Table 12: Overview of means for degree of accountability

		Mean	Std. Deviation
Offence type	Property offence	2.00	.761
	Violent offence	1.93	.769
Addiction explanation	Neuroscientific	2.14	.771
	Choice	1.80	.722
Sample	Prosecutors	1.74	.680
	Students	2.11	.780

Table 13: Test of between-subjects effects on degree of accountability

Source	df	F	Sig.
Offence type	1	.487	.486
Addiction explanation	1	15.537	.000
Sample	1	17.373	.000
Sample * Offence type	1	.297	.586
Sample * Addiction explanation	1	.374	.541
Offence type * Addiction explanation	1	2.884	.091
Sample * Offence type * Addiction explanation	1	.353	.553
Error	268		
Total	276		

These results indeed confirm the suggested trends. A non-significant main effect was found for *offence type*, showing that this variable does not affect the judgment regarding accountability, contrary to the expectation. On the other hand, significant main effects were found for *addiction explanation* as well as *sample*. This means that, as predicted, the neuroscientific conceptualisation of the vignette resulted in a lower degree of perceived accountability compared to the choice-centred perspective of addiction (as indicated by a higher mean score). Moreover, this means that the student sample judged the defendant to have a lower degree of accountability than the prosecutor sample did. Although there are interesting main effects, Table 13 shows no interaction effects: that is, whether the independent variables interact and affect the outcome variable. This is contrary to the expectation that the hypothesised mitigating effects of the neuroscientific explanation would be more pronounced for the violent offence compared to the property offence.

6.3.2 Suggested sentence length

This variable contains the answers to the question "which sentence would you impose?" for the prosecutor sample and "what is your opinion on the 30-month sentence demanded by the prosecutor?" for the student sample. As these questions are slightly different in nature and response options, I do not compare the sample groups directly. Table 14 shows the responses for the prosecutor sample as a function of both the *offence type* and *addiction explanation*. The percentages per column are added to the right of each value. In addition to the multiple-choice answers, the prosecutors could also indicate their preferred alternative.

Table 14: Overview of responses to the sentence length variable by the prosecutor sample, differentiated between both offence type and addiction explanation

	Offence type				**Addiction explanation**					
	Violence	%	Property	%	Neuro	%	Choice	**%**	**Total**	**%**
< 30 months	22	*42.3*	33	*63.5*	29	*55.8*	26	***50.0***	**55**	***52.9***
30 months	26	*50.0*	17	*32.7*	18	*34.6*	25	***48.1***	**43**	***41.3***
> 30 months	4	*7.7*	2	*3.8*	5	*9.6*	1	***1.9***	**6**	***5.8***
Total	**52**	***100***	**52**	***100***	**52**	***100***	**52**	***100***	**104**[764]	***100***

Half of the prosecutors considered the suggested sentence (30 months) too strict: 52.9 per cent ($n = 55$) would rather impose a shorter sentence. There does not seem to be a difference between the distribution of answers as a consequence of *addiction explanation* (Fisher's Exact test, $p = .201$). Neither is there a difference between the two offence types ($p = .058$) meaning that there is no difference in the participant's sentencing decision for the violent offence or property offence.

In the student sample, as illustrated in table 15, the majority of the participants (59.4 per cent, $n = 101$) believed the sentence to be slightly too long or much too long. In contrast, only 5.3 per cent of the students thought the sentence was too short or much too short ($n = 9$). A large proportion believed the sentence to be about right (35.3 per cent, $n = 60$). When looking at the percentaged responses on the level of *offence type* or *addiction explanation*, the responses come across as having a similar distribution. A factorial ANOVA indeed does not expose a potential trend for *offence type* or *addiction explanation* ($F(1, 166) = .893$, $p = .346$ and $F(1, 166) = 1.598$, $p = .208$, respectively) nor for an interaction effect ($F(1, 166) = .026$, $p = .872$).

764 Two individuals are missing as they responded that they would not demand any sentence at all. Such a situation would be the case if, for instance, the respondent considered the defendant non-accountable or considered that any other justification or excuse applied. In such circumstances, the defendant would not be further prosecuted, meaning no sentence can be imposed. However, it would still be possible to impose a measure, which is likely the alternative that the respondent would consequently propose and that was addressed later on in the questionnaire.

Table 15: Overview of responses to the sentence length variable by the student sample, differentiated between both offence type and addiction explanation

	Offence type				Addiction explanation					
	Violence	%	Property	%	Neuro	%	Choice	%	**Total**	**%**
Much too long	6	*7.1*	9	*10.6*	6	*7.1*	9	*10.5*	**15**	***8.8***
Slightly too long	39	*45.9*	47	*55.3*	48	*57.1*	38	*44.2*	**86**	***50.6***
About right	37	*43.5*	23	*27.1*	28	*33.3*	32	*37.2*	**60**	***35.3***
Slightly too short	3	*3.5*	4	*4.7*	2	*2.4*	5	*5.8*	**7**	***4.1***
Much too short	0	*0.0*	2	*2.4*	0	*0.0*	2	*2.3*	**2**	***1.2***
Total	**85**	***100***	**85**	***100***	**84**	***100***	**86**	***100***	**170**	***100***

The prosecutors could use the open space to specify what sentence they would rather impose than the suggested 30 months. A frequent suggestion was to conditionally suspend part of the 30 months, e.g. a 30-month prison sentence with 6-10 months suspended (n = 24). It was also common (n = 14) to demand a 24-month sentence, with or without a suspended part. Some prosecutors demanded a considerably lower sentence than the sentencing guidelines recommendation, such as 4 months, 12 months, 15 months or 18 months (n = 5). The prosecutors who suggested a sentence higher than 30 months, proposed 36 months with parts suspended (three respondents); 48 months (one respondent); or a 30 months' unconditional prison sentence plus an additional (unspecified) suspended sentence (two respondents). Moreover, many prosecutors suggested special conditions to the (suspended) sentence such as clinical or outpatient treatment, parole supervision (potentially specialised in addicted offenders) and recidivism-lowering treatment and supervision. Interestingly, two repondents indicated that a 30 months sentence was not conform the sentencing guidelines.

6.3.3 Estimate of recidivism

This variable reflects answers to the question "what is your estimate of the risk of recidivism?". Table 18 and 19 show the responses, as differentiated first by *offence type* and secondly by *addiction explanation*. In addition to the responses to this particular question, this table also encompasses the answers to the remaining variables, being *addiction severity, impaired choice* and *perceived blameworthiness of impaired choice*. From this point on, I refer to this compound table for a detailed overview for the remainder of this section.

When looking at the responses from the prosecutors first, most of the prosecutors considered the defendant to be at a high risk of recidivism, as 80 per cent of the respondents ($n = 85$) indicated a large chance or very large chance of recidivism. Amongst the students, the vast majority also considered the defendant to be high risk: 70.5 per cent ($n = 117$) indicated a large or very large chance of recidivism.

In both samples, the descriptive data shows little meaningful variation across the experimental conditions, suggesting that the *offence type* or *addiction explanation* does not affect their perception towards the recidivism risk of the defendant. Indeed, the means of this variable (see table 16) do not suggest any relevant effects. Based on the ANOVA in table 17, also for this variable, there is no evidence that an interaction effect may exist. To remind the reader, the numerical values to the variable *recidivism estimate* stand for: 1 = little to no chance of recidivism; 2 = small chance of recidivism; 3 = probable chance of recidivism; 4 = large chance of recidivism and 5 = very large chance of recidivism.

Table 16: Overview of means for recidivism estimate

		Mean	Std. Deviation
Offence type	Property offence	3.94	.731
	Violent offence	3.82	.656
Addiction explanation	Neuroscientific	3.93	.651
	Choice	3.83	.736
Sample	Prosecutors	3.95	.653
	Students	3.83	.719

Table 17: Test of between-subject effects on recidivism estimate

Source	df	F	Sig.
Sample	1	1.954	.163
Offence type	1	1.627	.203
Addiction explanation	1	.917	.339
Sample * Offence type	1	.333	.564
Sample * Addiction explanation	1	.589	.444
Offence type * Addiction explanation	1	.474	.492
Sample * Offence type * Addiction explanation	1	.153	.696
Error	264		
Total	272		

Table 18: Overview of responses to the variables (1) recidivism estimate, (2) addiction severity, (3) impaired choice and (4) perceived blameworthiness of impaired choice, whilst differentiating between offence type, and sample

		Offence type											
		Violence				Property				Total			
		Pros	%	Stud	%	Pros	%	Stud	%	**Pros**	**%**	**Stud**	**%**
Recidivism estimate	Little to no chance of recidivism	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	**0**	***0.0***	**0**	***0.0***
	Small chance of recidivism	0	*0.0*	3	*3.5*	2	*3.7*	2	*2.5*	**2**	***1.9***	**5**	***3.0***
	Probable chance of recidivism	12	*23.1*	23	*27.1*	7	*13.0*	21	*25.9*	**19**	***17.9***	**44**	***26.5***
	Large chance of recidivism	32	*61.5*	51	*60.0*	35	*64.8*	40	*49.4*	**67**	***63.2***	**91**	***54.8***
	Very large chance of recidivism	8	*15.4*	8	*9.4*	10	*18.5*	18	*22.2*	**18**	***17.0***	**26**	***15.7***
	Total	**52**	***100***	**85**	***100***	**54**	***100***	**81**	***100***	**106**	***100***	**166**	***100***
Addiction severity	Very light	0	*0.0*	0	*0.0*	0	*0*	0	*0.0*	**0**	***0***	**0**	***0.0***
	Light	3	*5.8*	3	*3.5*	2	*3.7*	2	*2.4*	**5**	***4.7***	**5**	***3.0***
	Moderate	16	*30.3*	18	*21.2*	15	*27.8*	22	*26.8*	**31**	***29.2***	**40**	***24.0***
	Severe	31	*59.6*	53	*62.4*	33	*61.1*	51	*62.2*	**64**	***60.4***	**104**	***62.3***
	Very severe	2	*3.8*	11	*12.9*	4	*7.4*	7	*8.5*	**6**	***5.7***	**18**	***10.8***
	Total	**52**	***100***	**85**	***100***	**54**	***100***	**82**	***100***	**106**	***100***	**167**	***100***

Impaired choice	No impairment	4	*7.7*	1	*1.2*	6	*11.1*	4	*4.9*	**10**	***9.4***	**5**	***3.0***
	Very light impairment	18	*34.6*	26	*30.6*	12	*22.2*	17	*20.7*	**30**	***28.3***	**43**	***25.7***
	Some impairment	25	*48.1*	44	*51.8*	29	*53.7*	44	*53.7*	**54**	***50.9***	**88**	***52.7***
	Large impairment	5	*9.6*	14	*16.5*	7	*13.0*	15	*18.3*	**12**	***11.3***	**29**	***17.4***
	Very large impairment	0	*0.0*	0	*0.0*	0	*0.0*	2	*0.0*	**0**	***0.0***	**2**	***1.2***
	Total	**52**	***100***	**85**	***100***	**54**	***100***	**82**	***100***	**106**	***100***	**167**	***100***
Perceived blame-worthiness	Not blameworthy	2	*3.8*	2	*2.4*	1	*1.9*	2	*2.4*	**3**	***2.8***	**4**	***2.4***
	Partially blameworthy	23	*44.2*	52	*61.2*	21	*38.9*	48	*58.5*	**44**	***41.5***	**100**	***59.9***
	Blameworthy	23	*44.2*	30	*35.3*	27	*50.0*	30	*36.6*	**50**	***47.2***	**60**	***35.9***
	N/a (i.e. there was no impairment)	4	*7.7*	1	*1.2*	5	*9.3*	2	*2.4*	**9**	***8.5***	**3**	***1.8***
	Total	**52**	***100***	**85**	***100***	**54**	***100***	**82**	***100***	**106**	***100***	**167**	***100***

Table 19: Overview of responses to the variables (1) recidivism estimate, (2) addiction severity, (3) impaired choice and (4) perceived blameworthiness of impaired choice, whilst differentiating between addiction explanation and sample

		Addiction explanation											
		Neuroscientific				Choice				Total			
		Pros	%	Stud	%	Pros	%	Stud	%	**Pros**	**%**	**Stud**	**%**
Recidivism estimate	Little to no chance of recidivism	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	**0**	***0.0***	**0**	***0.0***
	Small chance of recidivism	1	*1.9*	2	*2.4*	1	*1.9*	3	*3.7*	**2**	***1.9***	**5**	***3.0***
	Probable chance of recidivism	8	*15.4*	17	*20.2*	11	*20.4*	27	*32.9*	**19**	***17.9***	**44**	***26.5***
	Large chance of recidivism	35	*67.3*	52	*61.9*	32	*59.3*	39	*47.6*	**67**	***63.2***	**91**	***54.8***
	Very large chance of recidivism	8	*15.4*	13	*15.5*	10	*18.5*	13	*15.9*	**18**	***17.0***	**26**	***15.7***
	Total	**52**	***100***	**84**	***100***	**54**	***100***	**82**	***100***	**106**	***100***	**166**	***100***
Addiction severity	Very light	0	*0.0*	0	*0.0*	0	***0.0***	0	***0.0***	**0**	***0.0***	**0**	***0.0***
	Light	2	*3.8*	1	*1.2*	3	*5.6*	4	*4.8*	**5**	***4.7***	**5**	***3.0***
	Moderate	18	*34.6*	22	*26.5*	13	*24.1*	18	*21.4*	**31**	***29.2***	**40**	***24.0***
	Severe	30	*57.7*	51	*61.4*	34	*63.0*	53	*63.1*	**64**	***60.4***	**104**	***62.3***
	Very severe	2	*3.8*	9	*10.8*	4	*7.4*	9	*10.7*	**6**	***5.7***	**18**	***10.8***
	Total	**52**	***100***	**83**	***100***	**54**	***100***	**84**	***100***	**106**	***100***	**167**	***100***

Impaired choice	No impairment	3	*5.8*	3	*3.6*	7	***13.0***	2	***2.4***	**10**	***9.4***	**5**	***3.0***
	Very light impairment	16	*30.8*	22	*26.5*	14	*25.9*	21	*25.0*	**30**	***28.3***	**43**	***25.7***
	Some impairment	26	*50.0*	38	*45.8*	28	*51.9*	50	*59.5*	**54**	***50.9***	**88**	***52.7***
	Large impairment	7	*13.5*	20	*24.1*	5	*9.3*	9	*10.7*	**12**	***11.3***	**29**	***17.4***
	Very large impairment	0	*0.0*	0	*0.0*	0	*0.0*	2	*2.4*	**0**	***0.0***	**2**	***1.2***
	Total	**52**	***100***	**85**	***100***	**54**	***100***	**82**	***100***	**106**	***100***	**167**	***100***
Perceived blame-worthiness	Not blameworthy	3	*5.8*	2	*2.4*	0	*0.0*	2	*2.4*	**3**	***2.8***	**4**	***2.4***
	Partially blameworthy	21	*40.4*	55	*65.5*	23	*42.6*	45	*54.2*	**44**	***41.5***	**100**	***59.9***
	Blameworthy	25	*48.1*	25	*29.8*	25	*46.3*	35	*42.2*	**50**	***47.2***	**60**	***35.9***
	N/a (i.e. there was no impairment)	3	*5.8*	2	*2.4*	6	*11.1*	1	*1.2*	**9**	***8.5***	**3**	***1.8***
	Total	**52**	***100***	**85**	***100***	**54**	***100***	**82**	***100***	**106**	***100***	**167**	***100***

6.3.4 Addiction severity

This variable reflects the answers to the question 'How would you estimate the severity of the defendant's addiction?' The first noticeable finding is that the majority of the participants considered the addiction of the defendant severe: 66 per cent of the prosecutors ($n = 70$) and 73 per cent of the students ($n = 122$) rated the addiction to be 'severe' or 'very severe'. Contrarily, only 4.7 per cent of the prosecutors and 3 per cent of the students ($n = 5$ and $n = 5$, respectively) thought that the defendant's addiction was light, and none of the participants considered it very light. There does not seem to be a difference between the versions of the vignette or in their effects on severity estimates, as suggested by Tables 20 and 21. The numerical values to the variable *addiction severity* represent: 1 = very light; 2 = light; 3= moderate; 4 = severe and 5 = very severe.

Table 20: Overview of means for addiction severity

		Mean	Std. Deviation
Offence type	Property offence	3.75	.641
	Violent offence	3.76	.681
Addiction explanation	Neuroscientific	3.74	.634
	Choice	3.77	.687
Sample	Prosecutors	3.67	.658
	Students	3.77	.658

Table 21: Test of between-subject effects on addiction severity

Source	df	F	Sig.
Sample	1	3.044	.082
Offence type	1	.018	.892
Addiction explanation	1	.235	.628
Sample * Offence type	1	1.191	.276
Sample * Addiction explanation	1	.550	.459
Offence type * Addiction explanation	1	1.701	.193
Sample * Offence type * Addiction explanation	1	3.258	.072
Error	265		
Total	273		

6.3.5 *Impaired choice*

The following results show the answers to the question 'In your perception, to what extent was there an impairment in the defendant's behavioural choice?' Based on the descriptive numbers, it seems that the vast majority of the participants perceived some behavioural impairment to be present in the vignette: only 9.4 per cent of the prosecutors and 3 per cent of the students ($n = 10$ and $n = 5$ respectively) answered that there was no impairment. The majority of the samples thought there was either light impairment or some impairment, with only a small percentage of respondents considering a large impairment in behavioural choice. Interestingly, none of the prosecutors and only two of the students thought that there was a very large impairment. As suggested based on the distribution shown in the tables above, there is no evidence for any effects of *addiction explanation, offence type* or an interaction of these two factors. The ANOVA does suggest that there is a difference between the two samples, in which the students seem to consider impairment more in behavioural choice compared to the prosecutors. To recapitulate, the numerical values of the variable *impaired choice* are as follows: 1 = no impairment; 2= very light impairment; 3= some impairment; 4 = large impairment and 5= very large impairment.

Table 22: Overview of means for impaired choice

		Mean	**Std. Deviation**
Offence type	Property offence	2.83	.839
	Violent offence	2.75	.738
Addiction explanation	Neuroscientific	2.83	.797
	Choice	2.75	.784
Sample	Prosecutors	2.64	.807
	Students	2.88	.767

Table 23: Test of between-subject effects on impaired choice

Source	**df**	**F**	**Sig.**
Sample	1	6.035	.015
Offence type	1	.862	.354
Addiction explanation	1	.938	.334
Sample * Offence type	1	.000	.987
Sample * Addiction explanation	1	.228	.634
Offence type * Addiction explanation	1	.445	.505
Sample * Offence type * Addiction explanation	1	.407	.524

Error	265
Total	273

Aside from direct effects of the vignette on perceptions of choice, a mediation analyses was performed. This analysis did not find evidence for the suggestion that a larger perceived impairment is the underlying reason that the neuroscientific explanation has a mitigating effect on accountability. In other words, *impaired choice* cannot be considered a mediator in the *addiction explanation – degree of accountability* relationship.[765]

6.3.6 *Perceived blameworthiness of impaired choice*

The final main analysis concerned prior fault-like perceptions. The participants had to answer the question 'Do you believe that the aforementioned impairment in choice can be blamed on the defendant?' For this analysis, the participants who had answered that there was no impairment in the previous question, are not included in the analysis of this variable.

For the prosecutor sample, there seems to be no difference between the two offence types or the two addiction explanations. When modelling these variables on a multinominal logistic regression, indeed the model did not seem to predict the outcome variable well (χ^2 = 3.927, p = .416). When differentiated between *offence type* and *addiction explanation*, it seemed that neither is a significant predictor of *perceived blameworthiness of impaired choice* (χ^2 = .965, p = .617 and χ^2 = 2.836, p = .242). Similarly, when modelling the predictive value of the two independent variables in the student sample, the overall model did not significantly predict the responses to *blameworthiness of impaired choice* well (χ^2 = 2.740, p = .602). Neither were the two independent variables separately considered a significant predictor (χ^2 = .063, p = .969 and χ^2 = 2. 677, p = .262 for *offence type* and *addiction explanation* respectively).

The student sample most frequently considered the defendant to be 'partially blameworthy' for his impairment (n = 100, 59.9 per cent), whereas the majority of the prosecutor sample (n = 50, 47.2 per cent) considered the defendant to be 'fully blameworthy'. A Fisher's exact test between the two groups shows that this difference is significant (p = .015), suggesting that the prosecutors may find the defendant to be more blameworthy for his impairments.

765 I tested the significance of this indirect effect using bootstrapping procedures. Unstandardised indirect effects were computed for each of 5,000 bootstrapped samples, and the 95 per cent confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles. The bootstrapped unstandardised indirect effect was .0008, and the 95 per cent confidence interval ranged from -.029 to .006.

Aside from direct effects of the vignette on the perceived blameworthiness, a mediation analysis was run. This analysis did not find evidence that a heightened sense of blameworthiness for the impairment is the underlying reason that the neuroscientific explanation has a mitigating effect on accountability. In other words, *perceived blameworthiness of impaired choice* cannot be considered a mediator in the *addiction explanation – degree of accountability* relationship.[766]

6.4 Discussion

In this study, I researched legal decision-making for two samples consisting of students and prosecutors by alternating between a BDM explanation and CM explanation of addiction, and by differentiating between violent and property crime. The hypothesis was that neuroscientific information regarding addiction would result in lower perceptions of accountability and a more lenient perspective towards the suggested sentence. In addition, I aimed at exploring a couple of other effects. First, the effects of offence type on accountability as well as the sentence. Second, I wanted to address the trends between addiction explanation and recidivism risk. And third, I wanted to look into the differences between students and prosecutors, to be able to build hypotheses for future research about difference in samples. Aside from explorations regarding specific aspects of criminal liability, I also measured some aspects related to the participants' beliefs about the defendant. By doing so, I firstly examined the perception of the severity of the defendant's addiction, and whether this could be affected by the addiction explanation. Secondly, I outlined potential trends between the perceived impairment in behavioural choice as a consequence of addiction explanation. Moreover, I suggested that perceived impairment in choice may be correlated to a lower degree of accountability and a lower sentence, but a higher perceived recidivism risk. Lastly, I explored the connection between addiction explanation and the perceived blameworthiness of the defendant's impaired choice. This section of the chapter first discusses the implications of the main hypothesis, before addressing any potential trends relating to criminal liability and the beliefs about the defendant, and the hypotheses for future research that result from this. Finally, this chapter concludes by considering the strengths, limitations and implications of this experiment.

766 I tested the significance of this indirect effect using bootstrapping procedures. Unstandardised indirect effects were computed for each of 5,000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles. The bootstrapped unstandardised indirect effect was -.0241, and the 95% confidence interval ranged from -.0659 to .0066.

6.4.1 Aspects of criminal liability

The main purpose of this study was to assess perceptions on the degree of accountability. It was hypothesised that this perception would be affected by the different ways of explaining addiction, and that there would be an interaction effect between the type of offence and the effects of addiction explanation. Before addressing this hypothesis, it is interesting to make a general remark regarding the perceptions of accountability. It is noteworthy that many participants perceived accountability to be affected by the presence of addiction. Around three-quarters of the participants (73.1 per cent) considered some degree of diminished accountability. As there were no other circumstances that could have played a role in the assessment of accountability (addiction was the only relevant psychological element), it is clear that the majority of the respondents was willing to integrate addiction in the assessment of accountability. This is relevant in itself, as chapter 4 discusses whether exculpating or mitigating effects of addiction ought to be negated by *culpa in causa*.[767] The current study shows that the mere presence of addiction, as our hypothetical offender was not intoxicated, can be perceived as a reason for diminished accountability. Of course, only marginally, as the majority of the respondents would only consider the offender to be slightly diminished accountable. This is an important validation in light of my earlier conclusion, based on the doctrinal and dossier analyses, that addiction tends to be most appropriately addressed in the sentencing phase (which encompasses the notion of diminished accountability) and only marginally in other legal questions.[768]

Perceived degree of accountability. Now to the more specific findings of the different vignette scenarios and the consequences on perceived accountability. The results indeed confirm the hypothesis that the prosecutors and potentially also the students consider the offender to be less accountable for the offence when his addiction was explained from a neuroscientific perspective, compared to an explanation related to the defendant's own choice. The confirmation of this hypothesis is in line with several previous studies that indicated the exculpating effects of neuroscientific evidence.[769]

Importantly, these results cannot be compared directly with some previous studies that addressed the effects of neuroscientific evidence on the insanity defence.[770] The current results indeed support the notion that accountability is perceived as lower due to the neuroscientific perspectives, but this is conceptually different from having more successful insanity defences such as previous studies found. Especially the all-or-nothing application

767 For instance De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 355-356.

768 See chapter 3 for the doctrinal analysis and section 5.3 for the conclusions regarding the case file analysis.

769 Aono, Yaffe and Kober, 'Neuroscientific evidence in the courtroom: a review'.

770 E.g. Gurley and Marcus, 'The effects of neuroimaging and brain injury on insanity defenses'; Schweitzer and Saks, 'Neuroimage evidence and the insanity defense'.

of the common law insanity defence is, in principle, very different from the degrees of accountability employed in the Dutch legal system, which gives Dutch participants more freedom when making assessments in determining the effects of disorders on liability. This difference in jurisdictions is illustrated by the finding that none of the professionals in this study and only two of the students decided on a complete non-accountability judgment. The excuse of non-accountability is an exception and requires full loss of control or rationality, which is hardly ever proven, especially in cases of addiction.[771] Moreover, due to the various ways that addiction can be accounted for, such as in the different sentencing options and the degrees of accountability, it is not necessary to address addiction in the form of an entirely exculpating defence. Thus, all the differences that were found in perceived accountability are relatively small differences between full accountability, slightly diminished and diminished accountability, of which slightly diminished accountability is currently no longer used in practice. Although this finding suggests that neuroscientific information conceptually results in more leniency, in practice the consequences may be more nuanced than in other jurisdictions, in which the neuroscientific evidence resulted in more fully excusatory insanity defences.

Additionally, it was also hypothesised that the vignettes with the property offence would result in a lower degree of accountability compared to the violent offence, and that there was a potential interaction effect. This hypothesis was not only formed on intuition, but also mirrored the German approach to offences committed whilst being addicted. As explained before, the German Supreme Court differentiates between property offences that were strongly provoked by substance cravings, and other offences.[772] The first may lead to a valid appeal for diminished capacity of guilt (§ 21 German Criminal Code, GCC) or, exceptionally, a full incapacity defence (§ 20 GCC). Thus, it would have been interesting if this differentiation was reflected in general perceptions towards the offender in the vignette. However, no such effects were found. That means that either these differences, although they seem intuitively sensible, do not result in any differences in perceptions of accountability in practice. Another potential explanation is that the property offence in the vignette had a violent component to it, as the offender had used a knife to extort money from the victim. A more neutral property offence without a clear victim, such as a theft from a supermarket, may have exposed such hypothesised effects better. Nevertheless, such a vignette would have resulted in other problems, because both offences would not have been equally severe anymore.[773] A prior study found that the more heinous the crime,

771 Goldberg and Roef, 'Addiction, capacities and criminal responsibility – a comparative analysis'.

772 See footnote 737.

773 Recall that both offences were deliberately chosen to mimic the same recommended sentence, in order control the 'severity-factor' of the offence.

the stronger the perceived responsibility and the punishment for that crime.[774] Hence, to truly test the effects of *offence type* requires a different methodological set-up in which severity of the offence does not play a role, but in which the property offence is free of violent components.

Finally, an interaction effect was expected between *offence type* and *addiction explanation*. In the introduction, it was explained that the neuroscientific version of the vignette could have stronger excusatory effects in the violent offence. The reason for this was that the property offence is expected to be judged more leniently in any event, allowing for more pronounced exculpatory effects in the violent offence. However, no such effects where found. Similar to what was mentioned in the previous paragraph, one explanation may be that the property offence in the vignette contained a violent element. Consequently, creating the difference between a reactive and more instrumental offence may not have been achieved. This would have consequences for a potential interaction effect. In an experimental set-up in which the differences between the two types of offences is more pronounced, perhaps an interaction effect can be found. Another explanation is simply that the hypothesis was invalid and that there is no evidence for the existence of such effects.

Exploratory analysis: sentencing. In the explorative analysis, it seemed that no effects of either *addiction explanation* or *offence type* were visible in the sentence suggested. This contradicts previous research which found significantly lower prison sentences when neuroscientific evidence was presented.[775] Moreover, it seems somewhat odd, as the degree of accountability was impacted and reduced accountability often coincides with a reduction in sentence length.[776] Importantly, as the answers from this study do not further distinguish between prosecutors who suggested a considerably lower sentence than the 30 months benchmark and those who merely proposed that the 30 months be partially suspended (as they are both within the category of 'less than 30 months'), potentially more subtle differences would need more thorough and detailed analysis. On the other hand, perhaps the beliefs about sentencing are not affected by neuroscientific evidence the way that perceptions of accountability are: due to the nature of the Dutch legal system, the sentencing phase generally provides plenty of space for individualised sentences, and the personal circumstances of the defendant and the situation can always be accounted for.[777] Indeed,

774 Appelbaum and Scurich, 'Impact of behavioral genetic evidence on the adjudication of criminal behavior' (2014) 42 The Journal of the American Academy of Psychiatry and the Law 91-100.

775 Sinclair-House, Child and Crombag, 'Addiction is a brain disease, and it doesn't matter: Prior choice in drug use blocks leniency in criminal punishment' (2019) 26 Psychology, Public Policy, and Law 36-53.

776 Claessen and de Vocht, 'Straf naar de mate van schuld?'

777 In the next chapter, which covers several interviews, many legal professionals also indicated that the sentencing phase was generally most suitable to incorporate addiction and addiction-related circumstances. See section 7.2.3.

most of the prosecutors indicated in the open space that they would propose specific sentences and special conditions tailored to the addiction of the defendant. Thus, it may be that regardless of the explanation of how and why the addiction exists, the participants already took into account that addiction played a large role in the offence and that the sentence ought to reflect that. Hence, the additional difference between a neuroscientific perspective and that of choice may not have altered this. To test this assumption, future research ought to include clear and detailed questions about the sentencing and a more conclusive analysis should be conducted to examine the potential effects of neuroscience on sentencing.

Moreover, participants may also have a different theory or justification in mind for the question of accountability than for the question of sentencing. Since determining the sentence can fulfil various punishment goals, both retributive as well as utilitarian (for instance, by proposing additional measures), it is a distinctly different question than that of (non-)accountability, which is mainly about personal responsibility for the offence. These two do not necessarily need to correspond: one can perceive an offender to be fully responsible, yet still believe that a lower sentence or additional measures are appropriate for utilitarian purposes. Thus, it is not surprising that the exculpatory effects of neuroscience are evident in the one legal question but not the other. For future research, it would be interesting to address the underlying goals of punishment that the participants have in mind when making the assessments. Either by including such a question in the questionnaire, or by running follow-up interviews. It is also interesting to note that a previous German study similarly found effects of neuroscientific information on responsibility-related questions, but not on sentencing.[778] Perhaps a difference in civil law countries compared to common law countries (in which the majority of previous research was situated) also relates to this.

Another important aspect that plays a role in addressing addicted offenders is that of prior fault. The legal doctrine *culpa in causa* effectively blocks defences when these exculpatory conditions are culpably caused.[779] In the Netherlands, the doctrine prevents mental incapacity as a result of voluntary intoxication to be used as an excuse.[780] Although the vignette did not mention the term *culpa in causa* explicitly, to prevent prompting the participant into negating the mental incapacity altogether, the choice version of the vignette does relate to this concept. This could explain why the neuroscientific version of the vignette resulted in lower perceptions of accountability: the choice version may have suggested to

778 Guillen Gonzalez and others, 'Neuroscientific and genetic evidence in criminal cases: A double-edged sword in Germany but not in the United States?'

779 Jansen, 'Drie modellen voor eigen schuld bij strafuitsluitingsgronden'. See also chapter 4, in which *culpa in causa* is discussed extensively.

780 Van Kalmthout, 'Intoxication and criminal responsibility in Dutch criminal law' (1998) 4 European Addiction Research 102-106.

the participants that the drug use was voluntary, and thus negate the applicability of the excuse. At the same time, this may explain why I did not find evidence for such a trend in the question of sentencing. *Culpa in causa* is generally applied to excuses and does not influence sentencing to the same extent. Therefore, this doctrine may explain the suggested discrepancy between the results for the perception of accountability and of sentencing. This potential explanation is not supported, however, by the exploratory analysis of the variable *perceived blameworthiness of impaired choice*, which did not show any potential trends, suggesting that prior fault was not directly influenced by the neuroscientific version.

Also for perceptions on sentencing, there was no evidence suggesting that *offence type* had played a role. Although this contradicts the expectation that an instrumental or reactive link between the offence and disorder would have an effect, it does suggest that the vignette managed to create two hypothetical scenarios that are perceived as equals in terms of sentences. This was the aim, as two offences were constructed that were equally severe in theory, by matching the sentencing guidelines for both. Lastly, it is relevant to realise that a potential trend can be spotted when looking at the exploratory findings of *offence type* on sentence length, in the prosecutor sample, as this p-value approaches significance ($p = 0.58$). Thus, this potential trend is worthwhile researching further, leaving a possibility for different types of offences to be still relevant.

Exploratory analysis: sample differences. The trends that were observed between the student sample and the prosecutor sample are interesting, as the students were more lenient in the accountability assessment than the prosecutors. Earlier, I suggested that due to their experience and a more nuanced view of the law, professionals might be more lenient. Perhaps this divergent trend can be explained by the seemingly major classification of the addiction by the behavioural expert, who discusses the cocaine addiction of the defendant as "suffering from a pathological disorder". Although this is the standard term used in those reports, for students this may sound very serious and hence very impactful in terms of accountability. As the students learn that the excuse of non-accountability is standard doctrine in which to address severe psychological problems, the students may have felt drawn to this excuse as the most appropriate way to incorporate the notion of 'pathological disorder'. Conversely, the prosecutors are more familiar with the terms used in a behavioural report, and therefore may not immediately consider the addiction as a severe disorder. Consequently, they may not be immediately swayed into thinking about non-accountability. Their experience may have rather taught them that addiction is in practice not dealt with in the accountability stage but more often in the sentencing phase, in which they can account for such special circumstances. Additionally, prosecutors likely realise that addiction is always referred to as a pathological disorder by experts and that this does not yet inform them of the severity, exact nature and consequences of the addiction. This is an intuitive theory of why the students may have a more lenient assessment of accountability than the prosecutors. The suggested finding that students also seem to perceive volition to be more

impaired than prosecutors corroborates this idea, although it would also be expected that *addiction severity* would also differ between the two samples. This was not the case, although a nearly significant result could warrant further research.

With this in mind, it equally stands out that there were no observable trends between the two sample groups concerning sentencing. Perhaps this can be explained by the knowledge of prosecutors that addiction is commonly dealt with in the sentencing phase, thereby allowing for mitigating effects of addiction only in their suggested sentence. For the students, the distinction between discussing addiction in terms of accountability or the sentence may not be so apparent, leading them to consider the defendant's mental state in both elements. Thus, there would be a discrepancy between the two groups only in the accountability assessment and not the sentence. To address if there is a true difference between the samples (in terms of accountability perception as well as sentencing perception), and if so, what the underlying reason is, it would be beneficial to conduct more studies in which professionals and students are more directly examined and compared.

Exploratory analysis: risk of recidivism. Also, it seems that there were no differences between the estimate of risk of recidivism and explanation of the addiction. This goes against the earlier-mentioned theory of the double-edged sword.[781] This suggests that the assessment of risk of recidivism is not solely impacted by neuroscientific information. Luckily so, as risk assessment is generally considered a dynamic exercise in which various risk and protective factors need to be accounted for.[782] Mere predisposition is not a valid predictor of recidivism: perhaps the participants of this study were – inadvertently – aware of that. Another explanation is that previous research indicating the double-edged sword did not focus on cases of an addicted offender, whereas addiction is a common factor in recidivism.[783] The fact that, regardless of the type of explanation, addiction is already perceived as a risk of recidivism can explain why the estimates were generally considered high and can explain why additional neuroscientific information did not significantly change this. Indeed, the defendant's addiction was considered severe among most of the participants, which may already be enough to consider his risk of recidivism to be high. A future study could test this hypothesis by differentiating between an addicted and a non-addicted defendant in an otherwise equivalent vignette, with or without neuroscientific information.

781 Aspinwall, Brown and Tabery, 'The double-edged sword: Does biomechanism increase or decrease judges' sentencing of psychopaths?'; Barth, 'A double-edged sword: The role of neuroimaging in federal capital sentencing'.

782 Campbell (ed), *Risk assessment and sentencing in the criminal justice system: Considerations and proposals*.

783 Dowden and Brown, 'The role of substance abuse factors in predicting recidivism: A meta-analysis'.

6.4.2 Beliefs about the defendant

Although the exploratory analysis did not find any evidence for effects of *addiction explanation* on the beliefs about the defendant, it is interesting to address the general findings. The perception of addiction severity shows that the majority of the participants (64 and 73 per cent of prosecutors and students respectively) rated the severity to be 'heavy' or 'very heavy'. There does seem to be a difference between the two populations here: a potential trend is visible in which the students perceive the addiction to be more severe than the prosecutors do. The reason for this may be the experience that prosecutors have with addiction-related criminal behaviour, and the frequency of encountering an addicted defendant in criminal cases. In any event, the perceived seriousness of addiction may have impacted students in their assessment and regarding other students it is relevant to understand how students differ from professionals. Thus, such potential differences in perception are worthwhile to explore further.

Regarding the perceptions of the impairment in choice, most respondents indicated at least some form of impairment. Interesting are the few responses that indicated no impairment at all, as the vignettes clearly stipulate that the defendant experienced cravings and that generally, problems with impulse control are a central characteristic of addiction. Perhaps these respondents strongly adhered to the *culpa in causa* principle and believed that the defendant was culpable in creating any such impulse or control-related impairments. Additionally, again there were signs of a difference between the students and the prosecutors, in which students seemed to judge the impairment as more severe than the prosecutors did. This suggestion might go hand in hand with the perception of the severity of the addiction: after all, it makes sense that a more severely perceived condition would lead to more severely perceived impairment. Similarly, no worthwhile trends were found either when asking the participants about their perceptions of the blameworthiness of the impairments in choice. This suggests that the choice version of the vignette, despite focusing on the defendant's own share in his behaviour, did not affect their perceptions of blameworthiness for the defendant's condition. This is interesting, as the choice perspective hints towards a prior fault perspective: prior fault, in turn, emphasises culpability for creating the situation. Nonetheless, the question was not explicitly framed as a prior fault question (purposefully so, in order to avoid influencing the participants too much), and thus, the question may have been formulated too ambiguously. Future research can perhaps focus explicitly on the role of prior fault in the assessment of the defendant's addiction.

The questions regarding the beliefs about the defendant were included in particular to assess whether these beliefs are the underlying reason why accountability differs between the vignette versions. Thus, the next section discusses the potential explanations for the relationship between *addiction explanation* and *degree of accountability*.

6.4.3 *Explanations for the exculpatory effects of neuroscientific information*

It is very interesting that the exploratory analyses do not show any signs that *impaired choice* or *perceived blameworthiness of impaired choice* were affected by neuroscientific explanation or that they could be considered a mediator in the exculpating effects. If not impairment in volitional capacities, or the blameworthiness of this, what is the underlying reason that neuroscientific information has such effects? I have a few suggestions, which are worthwhile exploring further in future research.

The first potential explanation relates to sympathy or understanding, which the neuroscientific vignette may have stimulated. The participants may simply feel for the defendant, due to the implicated role of brain dysfunction in the disorder and the associated impairments in behaviour. The addiction and the consequences of the addiction may be perceived as something beyond the defendant's control, or as something the defendant never intended. Although the *impaired choice* variable largely aims to assess exactly this perception, the current wording is perhaps too formal or too theoretical. Indeed, impaired choice may be the behavioural consequence of a condition or disorder existing 'unintentionally', this may not be the first intuitive reaction of the participants. Rather, their first gut feeling may be that of compassion for the defendant and his circumstances. In order to address if this is the case, the types of questions need to be changed to encompass perceptions of compassion or sympathy. Alternatively, a more thorough explanation of 'impaired choice' needs to be given, to invite the participants to reflect on why they feel that the addiction should lead to a reduced degree of accountability. However, qualitative research may be better suited to address such introspection. In short, impaired choice may still be the mediator in the neuroscientific information and reduced accountability relationship, but the participants may not characterise it as such.

The second potential explanation is that I am perhaps wrong to look for answers in the exculpating tendencies of neuroscientific information, and that the opposite would be more informative: aggravating effects of notions of choice. A suggestion is that perhaps the neuroscientific version did not necessarily have an exculpating effect, but rather that the choice version resulted in a stricter perception towards accountability. In other words, perhaps the choice version triggered a prior fault-like attitude, causing the participants to hold the defendant more accountable for his actions than they would have otherwise done. A future study, in which a control group is accounted for, could potentially test this hypothesis. Previous studies have, of course, found evidence for exculpating effects of neuroscience, so it is sensible to use that as a starting point. Yet especially when opposing two vignettes in terms of (implied) choice, potential aggravating effects of the vignette on

the other side of the spectrum should not be forgotten. Although currently, the variable *perceived blameworthiness of impaired choice* was not affected by the differences in *addiction explanation*, a more concrete question regarding prior fault may change this finding, as suggested earlier.

A third and final explanation for the relationship between *addiction explanation* and *degree of accountability* is the perceived superiority of 'scientific' explanations. As mentioned in the introduction, a suggested phenomenon is that of the 'seductive allure' of neuroscience.[784] The authors studying this seductive allure presented evidence that the addition of neuroscientific information, despite it being irrelevant, is considered more persuasive than non-neuroscientific explanations. Although other authors have questioned the evidentiary basis of this claim,[785] it is possible that this seductive allure is the explanation for the relationship between the neuroscientific version and the reduced degree of accountability. There might not be any deeper meaning to the exculpatory neuroscience effects: simply, participants are swayed by the presence of brain-related evidence.

A last point to note is regarding the lack of mediating effects of prior fault-like notions on the relationship between accountability and addiction explanation. Perhaps prior fault is perceived consistently across all versions of the vignette. The current findings offer a careful suggestion to the notion that perhaps prior fault is indeed experienced as something objective and normative rather than dependent on how the disorder (addiction in this case) is conceptualised.[786]

6.5 Limitations and recommendations

Although the findings of this study are an interesting and valuable addition to the body of neurolaw literature, there are some important limitations to be mentioned. First of all, students were not randomly assigned to the different conditions. This means that the four versions of the vignette were not distributed randomly across each university cohort. For instance, the vignette with the violent offence was only distributed amongst students from the University of Utrecht, whereas the students in Groningen received only property offence versions of the vignette.[787] There may have been small differences between the

784 Weisberg and others, 'The seductive allure of neuroscience explanations'; Weisberg, Taylor and Hopkins, 'Deconstructing the seductive allure of neuroscience explanations' (2015) 10 Judgment and Decision Making 429-441.

785 Farah and Hook, 'The seductive allure of "seductive allure"'.

786 See also the discussion on the basis of *culpa in causa* in sections 4.2 and 4.3.

787 As the student sample was initially used as a pilot, several versions were first tested in isolation, such as the violent offence only, as the property offence was added later. Afterwards, the remaining students were allocated to the conditions that had the least respondents in order to ensure (approximately) equal sample sizes per condition. Later, all student responses were pooled to create the student sample.

students from the different universities due to, for instance, differences in curriculum. Nonetheless, the general content is likely very similar, as the students are all following a master program in criminal law, meaning any potential differences are likely insignificant. Despite this potential limitation, the addition of a student population in their last phase of their education provides a valuable comparison to the prosecutor's responses. By representing early-career professionals, it becomes interesting to compare them to late-career professionals. To my knowledge, such a comparison is not common.

For the prosecutor sample, a limitation is the importance that was placed on the accountability question, as prosecutors do not make that decision in practice. Of course, they still reflect upon the matter and incorporate these elements into their sentencing demands. Nonetheless, because courts bear the ultimate decision regarding accountability, a sample of professional judges would have been valuable as well. For future studies, it is recommended to include such a sample. In any event, the prosecutor sample is considered a relevant group with practical experience and, therefore, potentially different perspectives than the students. This reflects the law in action, as opposed to the law in books. Consequently, one of the strengths of this study is the final body of participants. Using students of law as well as currently active public prosecutors, this experiment expands on previous research with relevant and valuable participatory bodies that have not been researched often.[788] Previous research has used, for instance, psychology students or participants from the general public, which has its own strengths. The current samples thus expand our general knowledge of neuroscientific influences to new groups.

An important suggestion for future research is also the addition of a control group in which the defendant is not addicted and/or in which there is no particular type of explanation. For the sentences suggested, it would be valuable to address whether the addiction caused a higher sentence than a defendant would have gotten for the same crime, without the addiction. Currently, it was explored whether type of offence or explanation of addiction affected the length of the sentence, but these effects would be interesting to be placed alongside the sentence suggested in a more neutral situation. If a non-addicted defendant were judged more leniently, for instance, or the same as the addicted defendant, this would have implications for legal practitioners in their willingness to discuss addiction during trial.[789] In theory, as the addiction resulted in reduced perceptions of accountability in the majority of cases, this ought to also be reflected in a more reduced sentence than for the non-addicted defendant. A follow-up study could confirm or reject such hypothesis. Lastly, it is imperative to include a control group to test the assumption that the neuroscientific version indeed had a mitigating effect. Perhaps, as discussed earlier, the

788 Previous research used, for instance, psychology students or participants from the general public, which has its own strengths.

789 As chapter 5 shows, defence lawyers may be hesitant to do so.

neuroscientific perspective did not change anything, but the choice-centred perspective resulted in a *more serious* decision towards responsibility. Comparing the two groups with a control group without any explanation at all, might be able to clarify this.

Another relevant suggestion for future research is to explicate the role of prior fault. Currently, this was embodied in the *perceived blameworthiness of impaired choice* variable. This was done on purpose, not to nudge the participants in negating any of their exculpatory or mitigating tendencies. Yet a more explicit study focusing on the role of prior fault in decision-making, and whether prior fault has different effects depending on the conceptualisation of the situation, would be highly informative. Somewhat related to this is the (underlying) role of societal or moral perceptions towards addiction. As was shown in the previous chapter, sometimes implicit notions of a *Lebensführungsschuld* (character culpability) were provided. Perhaps this can function as an explanatory variable and it worthwhile studying further.

A strength of this particular structure is the comparison between two types of offences, which was not previously done. Although this did not result in any significant findings, it is interesting to compare the two. With a larger sample, perhaps more subtle differences can be detected. It remains a major difficulty to find two offences that are functionally different (such as a violent and a property offence, as this study entailed) yet are equally severe. If the severity is perceived differently, then the study may not measure the effects of the nature of the offence, but rather the effects of the severity. One solution is to first run a pilot study in which the severity of the offences are rated, and consequently finding two or more offences that were rated equally severely. An interesting alternative is to incorporate the severity of the crime as a variable. Although this would not work for all outcome variables, certainly accountability is an element that should not depend on the severity of the crime. It would be interesting to see whether accountability would be assessed differently depending on the severity of the offence.

One important implication from this research relates to the role and perception of jurists towards addiction and addicted offenders. As this research shows, the addiction of the offender was considered relevant for several questions of criminal liability, and the conceptualisation of addiction further impacted this tendency. This exemplifies the need to discuss the exact role that addiction plays in the assessment of liability, and a wider discussion of the perception towards addicted offenders amongst legal professionals. As this research shows, there is a need to inform jurists about the nature of addiction and the range of mental (in)capacity that it may or may not cause, and its consequences for behaviour. Training sessions, for instance, could devote attention to the nature and potential consequences of addiction, especially since addiction cases are abundant in criminal law. In such sessions, it would be relevant to include the neuroscientific explanation of the addictive behaviour and the different ways that it could impact behaviour. Thus, this

research may serve as a stepping stone for a more practical application and discussion in the field of criminal law in the Netherlands and beyond.

6.6 Concluding remarks

This chapter expands on the previous chapters by examining the effects of the different ways addiction can be conceptualised. In the previous chapters, we saw how addiction is a heterogeneous phenomenon, which scientists and practitioners all over the world attempt to model and explain. Moreover, we saw the role that addiction plays in criminal law, both in doctrine as well as in practice. By adding the findings of the current study to this information, it is possible to state that the differences in perspectives on how addiction can be modelled has very practical implications for the law. Being addicted is relevant and does play a role for prosecutors: it plays a role in reducing the degree of accountability. When the addiction is also explained from a neuroscientific perspective, this effect is even more pronounced. This means that legal practitioners, such as defence attorneys who are generally cautious to mention or emphasise defendants' addiction out of fear of aggravating circumstances, can be less hesitant in involving their clients' addiction in the trial. As a result, this may lead to more discussion, both in theory and in practice, on the role that addiction ought to play in criminal cases. As I have shown, addiction is often approached as a one-dimensional concept, to which *culpa in causa* often homogenously applies, and further discussion may lead to a more nuanced perception of addiction in the law.

Aside from the direct effects on accountability, this chapter also provides many new and exciting ideas for further research. Based on some preliminary and cautious conclusions, it becomes clear that it is interesting to further investigate the effects of addiction, and different conceptualisations of addiction, on other measures such as sentencing and perceptions on capacities or prior fault. Moreover, it is still unclear *why* neuroscientific explanations have a mitigating effect (or, as I pointed out, why choice-centred perspectives have an aggravating effect). Although there are some obvious explanations suggested, such as: neuroscientific information implies a more severe disorder, it induces more sympathy, or it signifies a lower degree of behavioural control. Yet the current study found no evidence for these explanations. Incorporating perceptions of societal or moral disapproval is another valuable insight to be studied further. In the next chapter, I reflect on these findings, as well as on other aspects of the addiction debate and criminal liability, with a diverse group of legal professionals. This creates the final bridge between theory and research findings, and practice.

7 An Experiential Account of Addiction in Criminal Law

Throughout the previous chapters of this study, there has been a gradual shift from theoretical reflections to practical implications. In this final empirical chapter, I round off this development by discussing several interviews with legal practitioners. After discussing the theoretical basis of addiction, and the different legal questions in which these questions can play a role, I examined the law in action: first in the case file study, and second by using an experimental vignette design. The major question that remains unanswered is how legal professionals *experience* the role of addiction in criminal legal practice. What are their perceptions of the nature of addiction, of the role of addiction in the assessment of criminal liability, and potential problems or limitations they encounter? This is the central research question of this chapter. In order to answer this, I interviewed ten professionals from the four major disciplines that work with addicted defendants: judges, public prosecutors, defence attorneys and behavioural experts. These four categories also correspond to the groups of legal actors that were part of the case file research, as discussed in chapter 5. By focusing on the same groups of professionals, the interviews are also relevant in explaining some of the findings from the previous studies. Importantly, the aim of this chapter is to illustrate the context of the previous studies and to provide depth to the discussion. As the number of interviewees is limited to ten, and because I specifically focused on professionals with considerable knowledge of addiction and mental disorders more in general, the conclusions from this chapter are not meant to be generalised as pertaining to the population of legal professionals as a whole. Instead, I aimed to generate insight from the practical experience of seasoned and/or interdisciplinary professionals. Although this framework does not allow for generalisations (for instance, regarding the prevalence of certain perspectives more generally), it did generate a wealth of information and many compelling insights.

This chapter first explains the methods, such as the participants, the questions asked and the six categories of analyses. These are the nature of addiction, the relevancy for accountability, the relationship with sentencing, profession-specific experiences, impairments in capacity and *culpa in causa*. The analyses and consequent discussions are also structured along those same categories. Unlike the previous two chapters, which separately examined the results and the subsequent discussion, this chapter integrates the findings and the discussion due to the nature of qualitative research. Each section contains a summary at the end to wrap up the main points.

7.1 Methods

7.1.1 Participants

The potential participants were asked to participate via multiple channels, including various professional connections, personal referrals and individuals who had earlier expressed interest in this research. Consequently, the interviewees operate in different areas in the Netherlands and it was ensured that they did not work together, for instance in the same prosecutor's office. In addition, there were a few characteristics that this study looked for in its participants. First, all interviewees were asked to participate based on their professional experience with addicted defendants. Second, I aimed to interview at least two participants from each of the four professions (judges, prosecutors, defence lawyers and behavioural experts) that were deemed relevant. An additional characteristic that I considered valuable, but not essential, was whether the individuals had experience with multiple professions, an interdisciplinary background, and/or a specific interest in addiction or mental health in general. Having fulfilled multiple professional roles, such as judges who also had worked as prosecutors at some point in their career, was considered a valuable characteristic as it allows for reflection on the differences between the professions. If their role or attitude towards addiction differed depending on their role in the criminal process, this would be an interesting and relevant observation. Expertise or interest in addiction or mental health, beyond regular experience with such cases, was considered useful for the reason that the participant may have a wider range of experiences to reflect on, as well as having a more developed or explicit opinion on the topics.

The ten interviewees were mixed in terms of gender: six were men, four were women. Throughout the chapter, I use pseudonyms, in which P stands for public prosecutor, J for judge, B for behavioural expert and D for defence attorney. In terms of distribution amongst the professions, this means I interviewed three prosecutors (P1-3), three defence attorneys (D1-3), two judges (J1-2) and two behavioural experts (B1-2). Six of the participants also have multidisciplinary backgrounds, which is not explained in further detail in order to maximise their anonymity. For the interviewees who represented more than one profession, their reference reflects their current, most active role.

7.1.2 Procedure

All potential interviewees were contacted via e-mail with a brief explanation of the research and an invitation to participate. In the case of an affirmative reply,[790] the participants were sent further background information on the topic. If the participants so requested, I also sent them an overview of the interview questions. It was, unfortunately, not possible to conduct the interviews in real life due to COVID-19 travel and meeting restrictions. As a consequence, all interviews were conducted either by phone or via a video call. The duration of the interviews ranged from 50 to 70 minutes and the interviewees were notified about this prior to the interview. Of course, participants were free to discontinue the interview or retract their consent afterwards at any time. At the beginning of the interview, the interviewees were asked for their consent to having the conversation recorded. Additionally, I explained the purpose of the interview again and gave some background information about the research as a whole. If there were no further questions from the participant, the interview began with the first question on the list below. Lastly, the first draft of this chapter was sent to each participant to allow for their feedback regarding the use of citations. The participants were also asked to comment on whether they felt that all citations were accurately used and interpreted in the context of the research findings, and whether they sufficiently ensured their anonymity. Based on their feedback, some minor changes were made, either nuancing their original statement or providing some further context, and all participants approved the final draft of this chapter. One respondent did not reply to the draft version of the chapter.

7.1.3 Interview questions and themes

The interview questions were semi-structured. This ensured that the different legal actors were asked similar questions, in order to focus on differences between the professions, but still allowing for some deviation from the topic where necessary or interesting. All interviews were conducted in Dutch, the native language of all participants. Below, the interview questions are outlined.[791] Some of the anticipated probing questions are also provided between brackets, even though they were not always necessary and thus not used in all the interviews.

790 I invited 15 people in total to participate in the interviews, of which four did not return my e-mail. One potential interviewee did not have the time to conduct a full interview, but replied with some answers to my (preliminary) interview questions in writing. These answers were quite general in nature, which is why they are not incorporated in this chapter, but they were helpful in finalising the questions that were ultimately asked of the remaining ten interviewees.

791 Own translation of the original.

1. Could you please give a brief overview of your career as a legal professional, and in doing so, explain in which professions and which contexts you have been involved with addicted defendants?
2. In your professional experience, in what way(s) can the addiction of the defendant play a role in criminal cases? *(Probing questions: How about premeditation or intent? How about excuses? How about risk-assessment or sentencing?)*
   a. How do you feel about this role and the effect of addiction?*(Probing question: Why do you feel this way?)*
   b. Has this role of addiction in criminal cases changed over the years? *(Probing questions: In what way? Can you illustrate this?)*
3. How would you describe the perceptions and attitudes of the different legal actors (i.e. defence attorneys, prosecutors, judges and behavioural experts) towards the defendant's addiction? *(Probing questions: Would you describe this as a positive or negative connotation? Are there any noticeable differences between the professions? How do these differences manifest?)*
4. [If not brought up in the second question:] Do you believe that the defendant's addiction ought to play a role in the assessment of his/her liability for the offence, if committed when he/she was addicted? And if so, why and in what way, and if not, why not? *(Probing questions: What is the role of* culpa in causa [prior fault] *in this assessment? How would you describe the relation between addiction and* culpa in causa *? Are these notions compatible?)*
5. Imagine that you were able to change the way that criminal law addresses addiction, would you change anything? If so, how, and if not, why not?
6. What is your perception of the model that addiction is a disease? And do you believe this theory affects legal professionals in their perceptions towards the liability of an addicted defendant? *(Probing questions: Based on previous research, using neuroscientific information can be seen as more persuasive and exculpating when discussing the mental capacities of a defendant. Do you think this is relevant? Is there awareness of this kind of research amongst legal professionals, or is there a need for such information? Do you believe that the law should take such influences into account?)*

The interview questions cover a variety of themes that are based on the findings and topics that were part of the previous chapters. There were two main aims in revisiting such topics. First is the potential to examine practical experiences with certain topics that were theoretically unclear or controversial, such as the seeming lack of criteria for *culpa in causa* related to potential impairments caused by addiction.[792] Even though this study outlines some criticism of the current application of prior fault, there may be very practical reasons

792 See section 4.4.2.

or advantages to it that were not incorporated in this discussion. Thus, revisiting theoretically complex or controversial topics in interviews could help further an understanding for it. A second aim is to find potential explanations for findings and phenomena that I encountered, such as the low number of attorneys discussing their clients' addiction[793] or the exculpating effects of the neuroscientific information in the vignette study.[794]

On a practical level, this means that the following themes were addressed in the interviews, which also function as a basic structuring mechanism for the data: the nature of addiction (Q6), the relevancy for non- or diminished accountability (Q2 & 4), the relationship with sentencing (Q2 & 4), the differences between the professions (Q3), impairments in capacity (Q2 & 6) and *culpa in causa* (Q2 & 4). Of course, in many instances there is an overlap between the questions and the categories. Consider, for instance, a hypothetical explanation of how diminished accountability can lead to a reduced sentence despite *culpa in causa*. Such a remark could already fall under three categories. Hence, these themes merely serve a practical and structural purpose.

7.1.4 Privacy and data security

Throughout this interview study, it was ensured that the protocol complied with the university's privacy regulations and the General Data Protection Regulation.[795] A Data Privacy Impact Assessment was made in collaboration with the university's data manager, and the personal data of interviewees was not recorded, although some participants shared some personal background information. In transcribing the interviews, any names or other identifiable markers were omitted. The raw data, being the recordings and the transcripts, were all stored on the university's internal server[796] and on SURFDrive.[797] Some interviews were transcribed by a research assistant, who also stored the data on the university server only. The data was always sent and received using end-to-end encryption. In the following results section, the footnotes contain the citations quoted in the original language as well as the page number of the citation in the transcript of the particular interview.

793 See section 5.2.2.
794 See section 6.3.1.
795 Uitvoeringswet Algemene verordening gegevensbescherming (AVG).
796 Only the main researcher had access to the folder and the files were password protected.
797 SURF is a cooperative association of Dutch educational and research institutions. Their services include SURFdrive, a personal cloud service for members affiliated with Dutch education and research institutions as well as SURFfilesender, a tool to safely send and receive files from members affiliated with Dutch education and research institutions. SURFfilesender uses end-to-end encryption. See also: https://www.surf.nl/en/about-surf.

7.2 Results and discussion

7.2.1 The nature of addiction

When asking the participants how they viewed addiction or thought addiction was perceived in general, the answers were quite diverse. One thing everybody agreed upon, however, is the complexity of it. There were several remarks about the various comorbidities and additional problems that the interviewees encountered when dealing with addicted defendants. For instance, P-1 stated that "addiction is a layered problem"[798] and D-2 explained that "in my experience, addiction is not the only problem of the client. […] I don't believe that you just become addicted, there are usually different underlying causes to it. In the end, it is really about coping".[799] Also in discussions on non-accountability and the TBS measure, it was often mentioned that addiction was not the defendant's only problem. In the interviewees' experiences, behavioural reports were rarely drafted in the case of 'just' an addiction and even if so, usually underlying causes (such as trauma) were revealed as a major contributor to an addiction. P-1 stated that he felt that for TBS measures, the disorder requirement[800] was never solely fulfilled by the addiction, but that it was always combined with at least comorbid personality disorders.

This does affect the decisions on sanctioning and treatment: what is the core of the problem, and thus what should be the central focus of the sentencing? J-1, for instance, remarked that it is difficult to treat psychiatric problems if there is a comorbid addiction, and that she often had to ask herself which of the two was most pronounced in order to decide which judgment was most appropriate. It was also remarked that addiction often is so interwoven with other dysfunctionalities that the exact effects on behaviour and the resulting legal consequences become very complex. Especially the two experts expressed their struggles with this. "What is the effect of addiction exactly, and what are the effects of all other personality aspects? This is an endless puzzle that I always need to solve" (B-1).[801] A similar sentiment was provided by B-2, who also explained how each case was a new puzzle to solve and is relevant in different ways per individual. She experienced that, in many cases, the addiction is secondary to other conditions.

In addition to remarks about the various comorbidities related to addiction, in most interviews the different models of addiction were discussed and whether the interviewee

798 Original: "Verslaving is een gelaagd probleem." 2.

799 Original: "In mijn ervaring is de verslaving niet het enige probleem van de cliënt. Ik geloof zelf niet dat je gewoon verslaafd wordt, […] daar zijn over het algemeen allemaal onderliggende oorzaken aan. En dat het toch coping is, eigenlijk." 5.

800 The presence of a disorder is not the sole requirement for a TBS measure: see also section 3.6.2.

801 Original: "Welke is dan precies het effect van verslaving, wat is precies het effect van alles overige persoonskenmerken? Het blijft mijn eeuwige puzzel." 2.

experienced such a discussion in his/her job (question 6). Only one interviewee remarked specifically that the disease perception of addiction had become more prominent over the years. Others were a bit more nuanced: J-1 and B-1 both stated that it depended very much on the case at hand whether or not the addiction was viewed as a disease and that it often depended on the individual judges. B-1 himself explained the addiction in terms of dimensions and capacities – which then add up to either fulfil the diagnostic criteria or not. He addressed addiction from a dimensional perspective, in which the exact nature of addiction is dependent on the type and number of characteristics of the addiction. Conversely, in the experience of B-1, most judges view addiction as a black-or-white concept: either there is an addiction, or there is not, leaving little room for such dimensions.[802] He felt that viewing addiction in dimensions rather than just present or absent, would lead to more freedom in decisions and sanctioning. This is in line with the capacity approach that is advocated throughout this dissertation. One of the main conclusions based on this chapter and those before is for the courts to discuss these capacities – or dimensions – more overtly and more specifically. I elaborate on this in the next chapter.

Overall, B-1 felt that the character flaw model still prevails in the legal arena.[803] D-3 had a similar outlook, stating that "Although addiction is likely a disease, it is rather perceived as a choice, in the sense that it is fine if you are addicted but as soon as you start breaking and entering, we are bothered by it, so we need to do something about it."[804] D-1 as well as J-2 do not often see a disease-based description of addiction in the reports, although J-2 ran across the term 'addiction disorder' sporadically. He also noted that the addiction is not explained as a separate, stand-alone disorder, but is instead part of an underlying condition, as mentioned before. That underlying condition is then focused on, for instance regarding the defendant's accountability. This is somewhat different from the experience of B-2, who felt that among her behavioural expert colleagues, the disease perspective prevailed. "I have the feeling that all healthcare providers as well as behavioural experts believe that mental problems are the basis of addiction. And that on the one hand, at the so called 'front end' you find the problems causing an addiction and on the 'back end' you find the consequences of using for years on end, which leads to deteriorated functioning and the workings of your brain."[805]

802 Original: "Maar het ziektemodel wat er eigenlijk ook het basismodel daarin is, dat wordt door de meesten [rechters – AEG] gehanteerd. […] het ziektemodel meer in termen van zwart-wit. Je hebt het of je hebt het niet. Zo bedoel ik het. Dus het dimensionele karakter zit er nog niet in." 8.

803 Ibid.

804 Original: "Want je had het ook over verslaving als ziekte, en dat is waarschijnlijk ook wel zo, maar het wordt meer gezien als een keuze, in die zin dat je 'oke, je mag best verslaafd zijn, maar zodra je gaat inbreken dan hebben wij er last van' en dat willen we niet dus dan gaan we er wat aan doen." 3.

805 Original: "Ik heb het idee dat eigenlijk alle behandelaren en ook de PJ-rapporteurs allemaal wel het idee hebben dat zeg maar psychische problematiek ten grondslag ligt aan verslavingsgedrag. En dat je aan de

The view that addiction was a disease is perceived both positively as well as negatively. P-1, for instance, explained that the notion of being 'ill' or diseased is not beneficial to the debate. "I do not like labelling people as sick persons. I do not want to be seen and treated like that myself, and I believe we should also not do that to others."[806] Indeed, it seems that labelling others as ill, despite initially feeling sympathetic, also reduces a sense of agency over the individual's behaviour and future. This also seems to hinder recovery, and thus the (brain) disease label may feel caring but does not necessarily help the individual.[807] J-2 also believes that the disease label can be problematic, but for a different reason, namely that it suggests a connection with the non-accountability excuse. "The term disease hints at 'well, he has a disease, he could not help himself, he is addicted, he is ill'. And I think that many judges are enormously apprehensive of that, and to a lesser extent, the reporting experts as well."[808] D-2 stated that as a defence attorney, she always attempts to focus on a disease-like classification to induce more sympathy and understanding with the judges, but that not everyone is equally receptive to such an argument. "Yet I understand very well that in a system such as our criminal law, this [*the perception of addiction as a disease*] is difficult to incorporate."[809] In the previous chapter, however, I showed that how addiction is conceptualised and explained seems to have an effect on the assessment of liability. Although in the vignettes it was the psychologist who described the addiction and not the defence attorney, it is expected that such information generally has exculpating effect, rendering D-2's approach beneficial indeed.

Yet it does seem that the controversy surrounding different models, and the discussion of which model ought to prevail, is mostly held outside the legal arena. B-1 explained that this distinction is more an academic discussion rather than one he sees in practice.[810] D-3 simply stated, with regard to addiction being a disease, that "I don't think people are terribly occupied with that matter. There is just a general goodwill in trying to reach out and help people."[811] What seems to be important is perhaps not the label itself but the ensuing

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ene kant, zeg maar aan de voorkant de problematiek hebt die de verslavingsproblematiek veroorzaakt en aan de achterkant de gevolgen hebt van jarenlang gebruik wat leidt tot verslechterd functioneren en heeft het invloed op hoe je brein het doet." 8.

806 Original: "Ik houd er niet van om mensen als zieke te bestempelen. Zo wil ikzelf niet worden gezien en behandeld en ik vind dat we dat ook niet met de medemens moeten doen." 6.

807 Lewis, *The Biology of Desire: why addiction is not a disease*. See also the discussion on this in section 2.3.

808 Original: ". En ziekte daar zit toch te veel de zweem omheen van 'ja hij kan er uiteindelijk ook niks aan doen, hij is verslaafd, hij heeft een ziekte'. En ik denk dat daar een enorme koudwatervrees is bij rechters en eerlijk gezegd merk ik dat bij deskundigen ook wel, zij het in mindere mate." 12.

809 Original: "Maar ik begrijp wel heel goed dat dat in een systeem als het strafrecht heel moeilijk is om te verwerken." p.12. Although not stated explicitly, it seems that the reason for this is that there are elements of voluntary behaviour in acquiring and sustaining an addiction.

810 Original: "En dan is dat eigenlijk meer een academisch onderscheid waar het nou precies door wordt veroorzaakt." 2.

811 Original: "Ja nou ja. Ik geloof niet eens dat men zich daar vreselijk mee bezighoudt. Het is meer, wat ik net zei, een algehele welwillendheid om die mensen een helpende hand te reiken." 6.

connotations. What D-2 seemed to do is emphasise that the defendant experiences hardship and that we should not think of him or his behaviour too harshly. Others, such as P-1 and J-2 were focused on the legal questions, and were hesitant for exculpating too quickly. What this merely shows, in my opinion, is what chapter 2 also concluded, namely that the addiction models seem not that relevant for the assessment of legal questions, and that the capacities of the individual ought to be the focal point of the discussion.[812] Reducing the focus on labels and models,[813] and focusing on capacities, levels out the playing field and ensures that everybody speaks the same language. The experts can assess the specific characteristics of the defendant as adequately as possible,[814] and these same findings may be immediately related to the legal question at hand. Moreover, this avoids the dreaded exculpatory association that the disease label has (by increasing risks for *psycholegal errors*), but also avoids the moral connotations of a choice perspective towards addiction. P-1 summed up this sentiment nicely in some critical remarks regarding a disease approach to addiction. He said that we need to be careful: "the excessive use of substances can evidently change you, neurobiologically speaking, that can lead to deformations and can affect your personality. That is definitely true, who would contest such a thing? Yet, from a dogmatic and substantive criminal law perspective, it is much more important to me whether it is something that disturbs your free will, regardless of whether this was caused by a disease or not."[815]

To continue with this notion of the *psycholegal error*, this error addresses that pointing to causes of disorders, such as the brain being the root of addiction, may erroneously be perceived as exculpatory in itself.[816] Some interviewees either reasoned along the lines of such an error, or pointed out that they had experienced such arguments. J-1, for example, explained that "the concept of disease is quickly associated with something beyond your control. Although the next step could also be, well, if you take medication, you can go a

812 See also section 2.4.2. Of course, models of addiction may serve a very important purpose in other areas beyond substantive criminal law, such as improving treatment and understanding aetiology.

813 The diagnostic labels themselves are still necessary to related the impairments to the non-accountability excuse, as art. 39 DCC requires a disorder (*stoornisvereiste*, see section 3.5.1). Diagnostic markers are also still important in clinical practice, so the plea is not to eliminate diagnostic tools altogether.

814 Which remains a difficult task in any event, as the expert needs to make an assessment of the capacities in the past at the time of the defence, based on (often limited) information or cooperation.

815 Original: "Je moet voorzichtig zijn met iets wat evident, als je te veel gebruikt van het één of van het ander, dan kan dat in neurobiologische zin veranderen, dat kan deformeren, en dat kan je persoonlijkheid veranderen: dat is zeker allemaal waar, en wie zou dat kunnen of willen betwisten? Het is meer dat dat vanuit een strakker dogmatisch tot en met materieelrechtelijk kader, gaat het mij veel meer om de vraag los het wel labelen als ziekte of niet, is het iets wat de vrije wil kan verstoren?" 7.

816 See section 2.5 for a first introduction and section 6.1.1 for an explanation applied to the context of the vignette study.

long way even when you have a disease."[817] Alternatively, P-3 said that "you almost entirely take away the responsibility if you would say 'oh your situation is so sad, the disease has complete grip on you and strips you of your capacities'. I think that such a point of view does not help the defendant".[818]

In terms of developments through the years, P-1 remarked that the disease model had increased in prevalence and prominence. Others made remarks about changes in the perception of addiction as well, and interestingly, multiple interviewees remarked that the change from the Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV to DSM-5 was important, too. P-1: "Addiction has gotten a more prominent role in DSM-5 compared to the DSM-IV".[819] Additionally, a few interviewees remarked that the type of substance and thus the type of addicts had changed. For instance, J-2 noticed that the nature of addiction itself had changed, referring to different substances and the way it affects the individual. He mentioned that the 'stereotypical junkie', a heroin addict, had disappeared. On the other hand, alcohol abuse was 'something of all time'. D-3 specifically remarked that GHB is one of the more serious contemporary hard drug addictions, comparable to the heroin addict of the previous century. Thus, it also seems that the type of substance use and dependency is continuously changing, indicating once more that the capacity approach is a more appropriate framework to discuss addiction.

As a final note, what became most clear from discussing the presence and nature of addiction in criminal law, is that the role of addiction in criminal law is enormous. "You know, in our field of work, this is a daily thing. Every day, there is a case in which addiction plays a role."[820] This emphasises the relevancy and conclusions of this research.

To summarise this section, the most important points are as follows. Most, if not all, interviewees agreed that addiction is a complex, layered problem and that it seldom exists in isolation from other conditions. This results in difficulties when assessing the specific role of addiction and how it ought to relate to legal themes such as defences or sentencing. When addressing the consequences of addiction in the law, it became clear that the models central to the (social scientific) addiction debate are predominantly an academic or clinical discussion. Moreover, between the interviewees, perspectives on addiction differed and no clear trend in terms of conceptualisation became apparent. Although the models did

817 Original: "Bij ziekte denk je al snel aan iets waar je niks aan kunt doen. Terwijl een volgende stap ook best zou kunnen zijn dat je denkt van nou, maar bij heel veel ziektes als je maar je medicijnen slikt kun je met die ziekte best een heel eind komen." 10.

818 Original: "je laat de verantwoordelijkheid dan bijna helemaal wegnemen. Als je zou zeggen: oh wat ben je zielig, je ziekte heeft je in je greep en je kan niks meer. Ik denk dat als je je zo zou opstellen richting iemand dat dat niet zal helpen." 2.

819 Original: "Ja, verslaving heeft, en dat zie je ook in de DSM5, een prominentere rol gekregen, dan in dsm IV, dus alleen daarin zie je al een verandering." 6.

820 Original: Weet je, het is in ons werk iets van elke dag. Elke dag speelt er wel bij een zaak de verslaving een rol." J-2, 13.

not take central stage in practice, many interviewees implicitly or explicitly were concerned with the consequences of addiction. Some individuals explicitly stated how pointing at the cause was not necessarily informative (suggesting an awareness, potentially unconscious, of a *psycholegal error*) whereas others made such an error themselves. Finally, several interviewees felt that the perspective of addiction, but also the way it manifests and the type of substances, change and develop throughout the years.

7.2.2 Addiction and (diminished or non-)accountability

Aside from a general discussion of the nature of addiction, I was specifically interested in the role of addiction in the assessment of accountability.[821] A first point that many interviewees agreed on is that the question of accountability is complex, and there is no straight-forward answer to how addiction ought to play a role in the assessment of accountability. J-1 commented: "I find it very complicated, very difficult. That really requires a tailor-made approach."[822] Both experts also stated that the role of addiction in the accountability assessment is a difficult one. Both stated that they had not seen a case in which the addiction alone was severe enough to negate accountability. B-2 also explained, as discussed previously as well, that it is a bit of a theoretical question: in practice, there are usually additional psychological factors at play. Thus, whether addiction can negate accountability by itself is not in practice relevant and the additional factors often provide enough basis to create a recommendation. B-2 also explained that there is no one-size-fits-all approach. "Whenever an offence was committed whilst being intoxicated, there is always the question of whether the person knew that he would lose control by taking the substance, and thus whether he should not have taken the substance, the *culpa in causa* matter. Or on the other hand, whether taking the substance is part of the mental condition, meaning that although the person was intoxicated, this is a consequence that fits into the larger picture. I find this very difficult. This is also a very grey area about which many experts can differ in opinion."[823]

Most of the interviewees, generally, did feel that applying non-accountability as an excuse is not the most appropriate way to address the addiction. J-2 stated that addiction

821 Please see section 3.5.1 for more thorough information on addiction in relation to non-accountability and on diminished degrees of accountability.

822 Original: "Ik vind het zelf heel ingewikkeld, heel moeilijk. Dat is echt maatwerk." 6.

823 Original: "Ik vind altijd als het gaat om de toerekeningsvatbaarheid vind ik altijd een hele ingewikkelde wanneer iemand z'n delict heel duidelijk onder invloed heeft gepleegd. Dan is er altijd de vraag van 'ja had ie nou, wist ie dat hij door dat middel zo van 't padje kon raken dat hij dit zou doen', en had hij in een vroeg stadium het middel moeten laten staan, het *culpa in causa* principe. Of is dit gewoon de problematiek en was hij wel onder invloed, maar past helemaal dat in het hele stoornis plaatje. Dat vind ik soms een lastige. Dit is ook een heel grijs gebied waar veel rapporteurs ook over kunnen verschillen van visie." 1.

in itself can never really result in non-accountability. According to him, such an argument will always be negated by *culpa in causa*. He described the thought process by judges as follows: "In the end, the addiction is your problem, you put yourself into this situation, and we won't hold you less accountable for the offence due to your problems with addiction."[824] Yet he believes there are exceptions to this rule, most notably Korsakoff syndrome: a neurological disorder typically associated by prolonged alcohol use. He explained that if the brain is significantly affected by alcohol abuse, and the offender is no longer sane, it would not make sense to hold him accountable. In other words, when the substance (ab)use advances into a degenerative disease, the accountability question becomes relevant. Similarly, J-2 explained that when the use of substances results in a psychosis, (non- or diminished) accountability can be appropriately discussed.

This reasoning is relevant when exploring accountability from a theoretical perspective. In a hypothetical case of equally impaired capacities, which argument underlies the difference in approach for a condition such as addiction (and related impairments) versus disorders such as Korsakoff syndrome?[825] Is it the 'status' of the disorder, or the perceived choice and control in the continuation of the disorder (which arguably is less freely willed in the case of Korsakoff syndrome)? When asked why addiction, in extreme cases, could not have such a similar reasoning, the judge explained that the sentencing possibilities are much more suitable to incorporate the defendant's addiction. "Addressing addiction in the context of accountability is an inadequate route that would evoke much [*societal*] disapproval."[826] Thus, as a thought experiment, consider two defendants who have identical impairments in their capacities, but one of them is diagnosed with Korsakoff syndrome, and the other is diagnosed with (severe) addiction. If one of the two attracts more societal disapproval, as J-2 suggests and which is indeed likely, these two would be addressed differently despite their identical mental states. Similarly, the previous chapter discovered a lower perception of accountability when addiction was described from a neuroscientific perspective, whilst all other case characteristics remained equal. Thus, it seems that the label or explanation does remain influential, even though this does not necessarily inform us of the nature or degree of the defendant's impairment. Additionally, whether or not it is appropriate that societal disapproval determines whether addiction can be discussed in the context of accountability – as the capacities for liability in this hypothetical example

824 Original: "De redenering is vrijwel altijd zowel bij Officieren van Justitie als bij rechters, van ja: de verslaving is toch uiteindelijk jouw probleem, jij hebt je in die situatie gebracht, en we gaan je dat feit niet verminderd toerekenen vanwege de verslavingsproblematiek." 6.

825 In this case, Korsakoff syndrome often results in severe cognitive impairments (memory and intellectual disabilities specifically) which is different from the most common impairments stemming from addiction. Thus, this thought experiment mostly points out an interesting theoretical thought pattern rather than a very practical situation.

826 Original: "Naar mijn idee is, hoe zou ik het zeggen, is de andere weg via de toerekeningsvatbaarheid, een heilloze weg wat heel veel onvrede oproept." 7.

remain equal – is debatable and would require a broader sociological and criminological framework to discuss.

The attorneys shared the perception that non-accountability is often not the most desirable or appropriate legal aspect in which to discuss addiction. The attorneys interviewed unanimously focused on the diminished accountability assessment. D-1 explained: "On the accountability level, well, there are some opportunities there. Oftentimes I get enough input from the behavioural reports to make amends in that regard, so to speak."[827] This does refer more to the diminished degree of accountability than to the complete excuse, however. In his experience, it is commonplace that due to the addiction, a diminished degree of accountability is accepted by the courts if the addiction is classified as a disorder and the defendant suffers from the illness. This suggests that there is an importance attached to the diagnostic label itself. D-2 also stated that one of the aims is always to work towards a diminished degree of accountability, because this is widely accepted as a mitigating condition in the sentencing. Yet she is generally hesitant to cooperate with a behavioural report, as there is genuine fear of the non-accountability excuse (and thus a mandatory treatment as part of the TBS measure) for most clients. In her field, she explains, behavioural reports are among the most dangerous, as they may lead "to a long and very severe trajectory that can keep somebody incarcerated for a very long time."[828] Thus, if they (have to) cooperate with a behavioural report, the goal is always to receive a diminished accountability recommendation at most. "It's a bit weird to explain to the clients, but ideally we want the report to declare you a little bit crazy, but still accountable."[829] As explained, mere addiction is often not enough for this, and D-2 emphasised that she had never experienced that a behavioural report was drafted that focused just on the addiction. This is, naturally, expected given the various comorbidities that are experienced to begin with.

As a side note, D-3 felt that in his experience, addiction used to play a bigger role in assessing accountability than it does today. He stated that people used to claim that the defendant was addicted and thus could not help himself, but that with current knowledge, this reasoning does not hold any more. He believes that GHB might be an exception to this: "under certain circumstances, GHB can influence the accountability assessment, because it affects your entire functioning and brain capacity."[830] It is interesting that he

827 Original: "[over toerekenbaarheid] Nou, daar liggen wel kansen. Ik heb regelmatig, met name aan de hand van deskundigenrapporten, psycholoog of psychiater meestal NIFP, genoeg input om daar een correctie, om het even zo te zeggen, op toe te passen. […] Dus voor dat tweede onderdeel, zeg ik ja, zeker kansen." 5.

828 Original: "PJ rapportages zijn één van de meest gevaarlijke dingen in mijn veld. Als in, je opent heel erg een weg naar een heel heftig traject waar iemand heel lang niet uitkomt." 7.

829 Original: "Dat is altijd heel gek om tegen de cliënt te zeggen maar je wilt het liefst een beetje gek worden verklaard maar wel toerekenbaar." 3.

830 Original: "Bij GHB begin in nu langzamerhand op de gedachte te raken dat dat wel de toerekenbaarheid onder omstandigheden kan aantasten. Omdat het namelijk gewoon je hele functioneren en je hersencapaciteit aantast." 9-10.

mentioned this substance specifically, as it had not come up before. Based on several studies in the Netherlands, this indeed seems to be a substance with very high (if not highest of all types of substances) relapse rates[831] and many consequences such as strong cravings, severe detoxification symptoms, hallucinations, memory loss and overdoses.[832] This seems to underline the need for individualised, tailor-made approaches to addiction and differences in type of substance and consequences.

Interestingly, several interviewees mentioned that for traffic offences, addiction or intoxication cannot affect the defendant's degree of accountability (as mentioned by J-1, P-3, and D-2) or may even increase it. J-1 explained that in traffic cases, judges often argue that "well, an addiction, or being drunk… It is all your own responsibility. We hold you fully accountable for that".[833] At first sight, it may seem quite remarkable that the offence plays a role in the accountability assessment. If, hypothetically, the underlying condition or disorder (and resulting (in)capacities) were to be the same in two offences, why would the accountability of the defendant be questioned in one case but not in the other? In the previous chapters it was explained that the basis of the non-accountability excuse is primarily focused on aspects of mental impairment rather than the offence itself. But as P-3 explained, accountability is also not questioned (and thus not negated) in more minor offences. As the basis is always a behavioural report, only the more serious offences (such as murder, rape or arson, which warrant such a report) can be discussed in the context of non-accountability.

A more fundamental reason why addiction should only exceptionally be addressed in the context of accountability, however, was explained by P-1. He contends that we should not excuse an offender based on his addiction too easily. "There has to be a much broader problem that influenced the defendant's free will to such an extent that there is insufficient responsibility for the acts committed. And it can be said that […] there has to be a much more extensive palette of behavioural problems which disturbed somebody's free will to such an extent that the offence cannot be fully accounted to him."[834] It is not impossible to do so, he explained, but in his perspective, the matter of accountability is not generally the most appropriate place to incorporate the addiction. He has seen a trend in which addiction is more frequently portrayed as a disease, which affects the likelihood of it being

831 Mol and others, 'GHB: recidive op eenzame hoogte' (2014) 10 Verslaving 69-79.

832 Klootwijk and others, 'GHB: een verborgen probleem' (2020) 15 TPO - De Praktijk 14-16.

833 Original: "wat ik zei in verkeerszaken is het heel vaak zo dat we zeggen: nou een verslaving, dronken. Dat is allemaal je eigen verantwoordelijkheid. Dat rekenen we je volledig toe." 6.

834 Original: "[…] dat we niet te snel iemand als verdachte of als veroordeelde niet te snel moeten disculperen via een verslaving. Maar dat er wel sprake moet zijn van een veel breder probleem wat iemands vrije wil zodanig heeft beïnvloed dat daardoor onvoldoende verantwoordelijkheid genomen kan worden voor datgeen die iemand heeft gedaan. En voornamelijk kan er worden gezegd dat als het gaat om de DSM-IV en nu DSM-5 dat er wel sprake moet zijn van een veel breder palet aan gedragsproblemen, welke iemand z'n vrije wil zodanig hebben verstoord, dat daardoor minder toe te rekenen valt." 2-3.

assessed in the context of accountability. What is important to bear in mind, according to him, is that the sentencing possibilities are much more suitable to tackling the addiction: he explained that a non-accountability judgment (and the TBS order that usually accompanies this judgment) is one that lacks proportionality. Thus, he prefers an approach focused on the severity of the offence (rather than focusing on the risk of recidivism) in order to provide the offender with a prospect of freedom and returning to society. He explains that by incorporating rehabilitative measures in the sentencing phase, rather than the accountability assessment, the sentence remains proportional to the offence. By widening the scope of the accountability excuse, he is afraid that the final measure or sentence becomes more excessive than the initial offence warrants.

This is an important notion to emphasise. This perspective shows that although it seems like a humane and caring response to allow addiction to play a role in the non-accountability excuse, it actually does allow for restrictive measures more extensively. It does seem sensible that, especially for less serious offences, the most adequate approach to addiction is not within the setting of accountability, to ensure a proportional outcome in relation to the severity of the offence. As D-2 explained, this lack of proportionality is something that underlies the general fear of many defendants, who prefer a prison sentence over a rehabilitative measure, as the prison sentence is more definitive and predictable. The lack of proportionality scares many defendants and prevents them from cooperating in behavioural reports, even though such reports may be helpful in determining the most appropriate way forward.

Related to this is also an important point by J-2, who also finds that addiction is often better incorporated in the sentencing phase rather than on the accountability level. He explained this with the use of the following hypothetical situation: "What if we say, in the context of non-accountability, 'well this is a typical case of a disease, so we reduce the degree of accountability and impose a lower sentence'. And when we eventually get to the actual sentence, we decide to impose a sentence of which a part is suspended. But in such a case, you can argue that the threat of the suspended sentence is not big enough, because you can only impose a smaller sentence after all [*due to the reduced accountability*]. So this scenario is not favourable for all sorts of reasons."[835] In other words, it may be more effective to not address the disorder in terms of accountability and consequently have a bigger or longer sentence as a starting point. Then, a large chunk of that may be suspended during

835 Original: "Stel nu eens voor dat je in de sfeer van de toerekeningsvatbaarheid zegt van 'nou, typisch geval van ziekte, we zien verminderde toerekeningsvatbaarheid en leggen een lagere straf op'. En vervolgens gaan we in de sfeer van de uiteindelijke strafoplegging wel een deel voorwaardelijk opleggen. Maar dan zou je ook door kunnen redeneren dat daarmee de stok achter de deur een stuk minder dik wordt, want je kunt immers maar minder straf opleggen, dat is weer om allerlei redenen niet wenselijk." 12.

the sentencing phase, based on the personal circumstances.[836] This may serve as more motivation, or threat, for the defendant to stick to the conditions of his suspended sentence, as opposed to only a small remainder of a sentence which is not as big of a threat. If we look at it like this, indeed, it seems that in the sentencing phase the options are more varied and more easily adjustable to the case at hand. Moreover, the sentencing phase also allows for personalised approaches to the capacities of the defendant, for instance by demanding special conditions or further treatment.

A final theme that was discussed by some interviewees is the complex entanglement of addiction and psychoses. Some interviewees felt that judges are generally inclined to allow addiction to play a role in the accountability assessment if the defendant was psychotic and due to this disorder, experiments with drugs or alcohol. This relates to the temporal order discussion in section 4.5.4, which discussed the problems of determining the causal manifestation of the addiction, the psychosis, or the intoxication. If a disorder that is generally accepted as a ground for non-accountability (such as schizophrenia or other psychotic disorders) plays a major role in the substance use or addiction, is the perception of those consequent impairments different from intoxication or addiction without such a prerequisite? Based on the remarks of J-2 specifically, it seems like it is indeed a different perspective. "In such cases [*experimenting with substances because of a psychotic disorder*] the judge is really willing to take the disorder and the background into account when assessing the accountability."[837] It goes to show that it is very relevant to address the addiction and the complex (causal) relationships with the comorbidities in detail.

Summarising the themes discussed in this section, it becomes clear that the most central aspect is the complex nature of the question of accountability and how it does not have a one-size-fits-all approach. Nonetheless, some trends and agreements were visible. Many interviewees felt that the non-accountability excuse is not the most appropriate way for addressing the addiction: for some, it was considered redundant due to *culpa in causa*, for others because the impairments were usually not severe enough. Additionally, defence attorneys try to steer away from non-accountability due to mandatory treatment, potentially lasting longer than the alternative of a definitive prison sentence. The only exception mentioned by several interviewees was the interaction between addiction and psychoses, which sometimes should allow for non-accountability. Overall, diminished degrees of accountability were considered a more appropriate method to incorporate addiction. In sentencing, there are indeed more varied options to address the impairments and the personal circumstances. These options are addressed specifically in the next section.

836 Recall that when diminished accountability is accepted, this typically leads to a reduced sentence (although not formally required). See Claessen and de Vocht, 'Straf naar de mate van schuld?'

837 Original: "Dan is de rechter echt wel geneigd in de sfeer van de toerekeningsvatbaarheid rekening te houden met die stoornis en met die achtergrond." 8.

7.2.3 Addiction in relation to sentencing

The previous section already touched upon the area of sentencing, as a diminished degree of accountability is generally accepted to lead to a mitigated sentence.[838] Other topics that relate to sentencing is the role of the risk of recidivism assessment, the defendant's motivation for treatment and interventions, the ISD verdict and lastly the role of various special conditions. These themes are discussed in turn.

B-1 explained the role of addiction in risk assessment as a complex interaction. From a historic, or static perspective, addiction is generally seen as a risk-increasing factor. Yet to create a dynamic assessment of risk, he stated, you need to identify all the types of impairments and obstacles in the defendant's life. "Living situation, jobs, finances and all that. But really, you also find individuals with an addiction where the addiction is not a risk factor. And then you need to be able to say so as well."[839] All in all, he said it often remains very vague what the exact role of addiction is. To him, it is very difficult to establish, yet he is required to report on it. "They [*the legal actors involved*] only want to hear a concrete estimate of risks: is it a high risk, medium risk, or low risk? And what is the advice [*in terms of sentencing*]? There is no link whatsoever to my viewpoint on risk assessment or the kinds of things you write about the risk in the different paragraphs."[840] This development is not just the interviewee's perception, but other aspects in criminal law are also made quantifiable and expressed in terms of risk or opportunities.[841] It indeed fits into the larger picture of the risk to society to demand a concrete risk assessment.[842]

One of the prosecutors also referred to a heightened risk of recidivism, as a consequence of addiction, playing a role in the sentencing. Instead of the dynamic approach explained by B-1, P-2 felt as if addiction is generally considered as a risk factor. He explained that the assessment of the duration and continuation of pre-trial detention is based on the risk of recidivism and that addicted defendants almost naturally fulfil this requirement. Consequently, even before the defendant is brought to trial, his addiction has already negatively impacted his criminal process. What is crucial, according to P-2, is the willingness and introspection of the defendant to submit to treatment and changes in his lifestyle. Otherwise the addiction is a negative factor throughout the process, from pre-trial detention

838 Claessen and de Vocht, 'Straf naar de mate van schuld?'

839 Original: "Wonen, werken, financiën en allemaal dat soort dingen. Maar je komt ook wel degelijk tegen dat er wel verslaving is maar geen relatie met risico. En dan moet je het ook kunnen zeggen." 6.

840 Original: "Die willen eigenlijk alleen maar weten: laag, middel, hoog? En wat is het advies? Er zit geen enkele link naar mijn visie over hetgeen je daarover opschrijft in de verschillende paragrafen." 6.

841 Mackor, 'Juridische beroepsethiek: Over macht en moraal, soft law en soft skills, T-vormige juristen en kansen-rechters' in A. Berlee and others (eds), *De toekomst van de jurist, de jurist van de toekomst* (Wolters Kluwer: Deventer, NL 2020) 82.

842 van der Woude and van Sliedregt, 'De risicosamenleving: overheid vs. strafrechtswetenschap? Aanwijzingen voor het debat rondom veiligheid en risico's' (2007) 6 Proces, Tijdschrift voor Strafrechtspleging 220.

to the sentence the court pronounces, and ultimately in the assessment of being eligible for early release or possibility of parole.

Thus, some interviewees consider the motivation for treatment and change an important factor to assess the defendant's risk of recidivism. As many risk assessment tools also include clinical or prospective factors, such as lack of insight or non-compliance with interventions, this indeed is a relevant point.[843] This willingness to submit to treatment was stressed as an important factor by other interviewees as well. According to D-1, there are many opportunities to get a mitigated sentence when the defendant's approach to the trial is positive and his general commitment to making changes is intrinsically motivated. D-2 added that judges are generally receptive to such motivations by the defendants. "Judges really like to hear explanations and justifications [*for the behaviour/offence*], they find that important, they always want to know why why why, how come? What are we going to do about this? So I address it [*the addiction*] in that context. But in practice, this does not often lead to a reduced sentence.[844] In her view, the addiction is only 'used' in trial and as an argument when she can spin it into something positive, something that results in a bit more sympathy or understanding. Or, in her words: "It's not an excuse, but rather an explanation".[845] Ultimately, of course, she tries to get a reduced sentence, so she explained that she is always looking for opportunities within the defendant to gain such sympathy from the judges. If it is not possible to give a positive spin to the addiction, she does not mention it. In practice, this means that in cases of defendants who are unwilling to submit to treatment or other interventions, she does not elaborate on or even mention the addiction of her client. Perhaps this is one of the reasons that the case file study found only sporadic mention of the addiction in the attorneys' closing arguments (see section 5.2.2).

P-3 explained that in her experience, mostly dealing with petty crimes, willingness to be treated was a rarity. When a defendant opposes treatment, she stated, the prosecutor is also not very willing to provide alternatives to a (strict) prison sentence, whereas defendants who realised they needed help were offered alternatives. "If you see somebody again for the umpteenth time with the same reason, that is, to support an addiction by stealing (and this is what happens in the majority of the cases), well then at a certain point we are finished. In such cases, I think: if you get all these opportunities, and you are given so many chances, but you won't do anything with them, then it's a done deal at a certain point. Then I will demand a bare prison sentence. If you are capable of understanding

843 de Ruiter and Hildebrand, 'Risk assessment and treatment in Dutch forensic psychiatry'.

844 Original: "Rechters houden heel erg van verantwoording afleggen, dat vinden ze belangrijk, ze willen graag horen waarom waarom waarom, hoezo dan? Wat gaan we daaraan doen? En in die context komt het veel aan de orde. Maar om dan ook te zeggen dat het tot strafvermindering leidt, nou bijna niet eigenlijk." 8.

845 Original: "Zo van, het is geen excuus, maar het is wel een uitleg." 7.

everything and you are functioning normally – well normally, at least knowing that the defendant often uses the behaviour instrumentally – then it's really a different story."[846]

In case of high risk, or after multiple offences of a similar kind, one of the potential measures in the range of sanctions is the ISD measure.[847] This repeat offender sanction has a dual purpose of rehabilitating and incarcerating. The ISD measure, which involves a potential incarceration period of two years, can be imposed after a relatively small offence was committed if the offender does so in a sequence of other offences. Often, these type of offenders are addicted and commit property offences. Within the context of this measure, the defendant can receive specialised treatment and interventions to reduce the risk of recidivism, but this is not always the case. The defendant also has to be motivated and participate in this program: otherwise, the potentially rehabilitative purpose is mostly just a plain method of incarceration. D-1 disclosed that in his experience, the dual nature of rehabilitation and incarceration is a very theoretical perspective. In practice, the measure is very often simply incarceration. J-2's experience is similar and he stated that in practice, the ISD measure is repressive rather than rehabilitative. D-3 added that many of his clients are worried about or afraid of the ISD measure, although it often still is more pleasant than a regular prison sentence. D-2 stated that the ISD measure often is nothing more than a long prison sentence without any added resocialisation processes. In the end, the repeat offender has just as high a risk of recidivism as he had before the measure was imposed. Empirical studies indeed find a limited effect for reducing recidivism after an ISD decision.[848] The experience of D-3 is also that merely incarcerating the defendant, especially when addicted, is not helpful. "If somebody is severely addicted, well then we can just lock that person up, but that won't work of course. Everybody knows that. It's just a political statement to incarcerate this person for a longer time than another. It is useless. […] It only ruins lives."[849] These experiences illustrate that, at best, the ISD measure does not always live up to its promise, but at worst, that it is ineffective in its purpose. This finding has not gotten much attention yet throughout this study, although it is the everyday reality

846 Original: "Maar als iemand inderdaad voor de zoveelste keer er zit, met dezelfde reden, namelijk om in de verslaving te voorzien door te stelen, en dat is eigenlijk wel het gros wat je ziet, nou dan is het op een gegeven moment ook gewoon wel echt klaar. Dan eis ik ook gewoon een kale straf. Ik denk dan ook: als je alle kansen krijgt, alle mogelijkheden worden geboden, en je doet er niks mee, dan is het op een gegeven moment ook klaar. Als je verder alles gewoon begrijpt en normaal functioneert, of ja normaal, dat je ziet dat de verdachte zijn gedrag heel instrumenteel inzet, dan vind ik het echt een ander verhaal." 2.

847 For more details, see section 3.6.2.

848 Tollenaar and others, *Effectiviteit van de ISD-maatregel*.

849 Original: "Als je op een gegeven moment schreeuwend verslaafd raakt, ja dan kun je de deuren wel achter iemand dicht trekken maar dat werkt natuurlijk helemaal niks. Dat weet iedereen ook. Dan is het symboolpolitiek, 'dan zal het wel weer voor de slachtoffers zijn' dat denk ik dan. Het is symboolpolitiek om iemand dan langer dan iemand anders op te sluiten. Dat heeft helemaal geen zin. […] Dat maakt alleen maar levens kapot." 5.

for many addicted defendants. The next chapter elaborates further on potential improvements in sanctions: both in general as well as this ISD measure specifically.

In general, whether it is part of a suspended sentence or comes with parole opportunities, addicted offenders often need to adhere to special conditions. With regard to such special conditions, a couple of interviewees noticed a (worrisome, in their perspective) trend. They experienced an increase in the number of special conditions that the offender has to fulfil, generally as part of a suspended sentence but also in 'earning' parole or early release. For instance, P-1 explained that in "the last ten to fifteen years, the probation office has demanded many more special conditions regarding the behaviour of the defendant before he is eligible to have a reduction in his pre-trial detention or before he is eligible to a suspended sentence rather than a unsuspended one. And this is due to an increase in suggestions to the judge or prosecutor, by the parole officers, that the conditions should include more behavioural interventions for the individual."[850] This idea is corroborated by D-2, who explained that she also asks the judge not to add too many special conditions to the sentence. "Because it's usually too much for people. They have a weekly appointment with the parole officer to see how things are going, and they have to go to Jellinek [*an organisation specialised in addiction*], and they have to visit a psychologist, and the lady from the community service. It's too much. They are not able to keep up. And then they freeze, and won't go anywhere anymore."[851]

This sentiment is summed up eloquently by P-1: "The higher you set the bar, or the narrower you make the hoop that the defendant has to jump through, the more you know that somebody cannot fulfil these requirements. And that is a concern that I have actually had for a long time."[852] This relates back to the previously mentioned context of the risk to society, in which more and more measures are taken that are aimed at reducing risks. Judges are generally more reluctant to grant parole-related decisions and experts are more hesitant in their advice to terminate treatment of forensic patients, fuelled by political and

850 Original: "Is dat de reclassering in de loop van de laatste 10-15 jaar veel meer bijzondere voorwaarden is gaan stellen aan het gedrag van de verdachte voordat hij een voorschot op de voorlopige hechtenis, voor hij in aanmerking komt voor een voorwaardelijke veroordeling in plaats van onvoorwaardelijke veroordeling. En dat komt omdat de reclassering de voorwaarden zo heeft opgeschroefd dat hij veel meer gedragspreventies voorstelt aan de rechter of de officier voor de betrokken cliënt/justitiabele." 9.

851 Original: "Ik vraag ook heel vaak aandacht voor, he, leg nou niet te veel voorwaarden op. Omdat het voor mensen gewoon te veel is. Die moeten dan én 1x per week naar reclasseringswerker om te babbelen over hoe het met ze gaat, én ze moeten naar de Jellinek, én ze moeten een keer nar de psycholoog, én ze moeten naar de taakstrafmevrouw. Dat is te veel. Dat kunnen ze niet aan. En dan blokkeren ze dus, en gaan ze nergens meer heen." 14.

852 Original: "En hoe hoger je die meetlat legt, hoe strakker je de hoepel maakt waar iemand doorheen moet springen, oe meer je weet dat iemand daar niet aan kan voldoen. En dat is een zorg die ik eigenlijk al heel lang heb." 9.

media outcry.[853] Consequently, what D-2 suggested is that the accumulation of special conditions does the opposite of reducing risks: paradoxically, too many requirements often results in an inability to keep up with it all. In her experience, what is more effective is one central contact point who is able to reach the defendant, literally and figuratively. Based on the available literature, however, it does show that a combination of support and care-related interventions together with security and supervision-related interventions reduces recidivism. Conversely, purely restrictive interventions or special conditions indeed do not reduce recidivism.[854] Thus, although both P-1 and D-2 made valuable points regarding their experience with (too many) interventions for the defendant, it is important to bear in mind that measures and conditions can still be beneficial when executed properly. Support and treatment, however, should be an integral part of these conditions and be suited to the defendant's circumstances. Related to this is also the Risk-Need-Responsivity model which is discussed in more detail in section 7.2.7.

Related to the imposition of conditions, J-1 struggled to determine whether or not to demand special conditions relating to substance use when the defendant is addicted. "If you instruct a drug addict that he is not allowed to use substances, then you know for sure that he will break this mandate. Does that mean that I shouldn't impose these conditions? Or should you not even begin with conditional releases at all? Those are difficult questions."[855] Related to this, she also pleaded for a shift from the legal arena to healthcare in cases of defendants with psychological problems.[856] She has noticed a trend in which mental health care is not subsidised enough, or do not have any space. As a result, she often resorts to legal possibilities for (mandatory) treatment, as this is faster and more successful (in terms of finding a free place) than the regular healthcare route. With more opportunities to receive the required care, she thinks, there is no need to impose that on the individual with a repressive sanction.

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853 Harte, 'Predictie van criminaliteit' in M. Boone and C. Brants (eds), *Criminologie en Strafrecht* (Boom: Den Haag, NL 2020) 212-213.

854 See for instance Van Gestel, Van der Knaap and Hendriks, *Toezicht buiten de muren. Een systematische review van extramuraal toezicht op TBS-gestelden en vergelijkbare groepen in het buitenland*, 2006 or Bosker and others, *Effective practices in probation supervision. A systematic literature review*, 2020.

855 Original: "Zeg je tegen een drugsverslaafde dat hij absoluut niet meer mag gebruiken, dan weet je al bijna zeker dat hij twee weken later de voorwaarden verbreekt. Moet je dan die niet opleggen? Moet je dan überhaupt niet schorsen? Dus dat zijn best wel lastige vragen." 5.

856 Since 2020, the Netherlands has some new regulation regarding referral to (mandatory) healthcare. As also mentioned in section 3.6, mandatory psychiatric treatment (art. 37 DCC) has been removed from the code. In its place, a possibility for treatment was added to the Civil Code, namely art. 2.3 of the Forensic Care Act (*Wet forensische zorg, Wfz*). This allows a (criminal) judge to impose the Mandatory Mental Healthcare Act *(Wet verplichte geestelijke gezondheidszorg, Wvggz)* or the Care & Constraint Act *(Wet zorg en dwang, Wzd)*, under specific conditions. See also: Klappe, Mevis and van der Wolf, 'Het afgeven van een zorgmachtiging door de strafrechter: overzicht en eerste indrukken van de praktijk betreffende art. 2: 3 Wfz sedert 1 januari 2020 ' (2020) 2020 Delikt en Delinkwent 584-623.

Lastly, an interesting point from the perspective of the prosecution was brought up. For certain offences, especially less severe crimes such as violence related to night clubs and late-night partying, violence against authorities, or traffic offences that often do not require behavioural reports, P-3 explained that being under the influence of a substance is considered an aggravating condition which has a higher recommended sentence.[857] This leads to an interesting thought experiment. What if a severe underlying addiction, which can lead to a mitigated sentence, is the cause of the intoxication, which then leads to an aggravated sentence suggested? Is the starting point a higher sentence, incorporating the increased sentencing guidelines, which is later mitigated again? As this was a hypothetical example, P-3 said she had not encountered such situations yet, and stated it would very much depend on the details of the case whether the aggravated element of the sentence would be reduced or negated again in case of addiction. She did explain that this is also largely a political decision and viewpoint, in which certain offences need to be punished strictly from a retributive perspective. The prosecutors merely follow these politically-influenced guidelines in that regard.

In sum, the major themes addressed in this section are as follows. It was stressed that risk assessment and addiction is much more than simply an aggravating circumstance. However, interviewees suggested that legal practice does not necessarily address it as such. Moreover, many interviewees stressed the importance of willingness to be treated in how the defendant was generally perceived and how lenient or understanding the courts would be in their judgments. Yet some experienced that the majority of the addicted defendants did not want to receive help. Regarding sanctioning possibilities more concretely, some interviewees were sceptical about the effectiveness and execution of the ISD measure. Also, special conditions were sometimes perceived as too demanding with regard to the defendant's abilities to adhere to these. As previous research suggests that a combination of appropriate care and security measures can be effective, perhaps this means that a well-drafted, evidence-based plan is sometimes lacking rather than special conditions being inadequate in general. Lastly, concerns were voiced regarding regular mental health care being under-funded and overcrowded. This arguably results in many (addicted or otherwise struggling) defendants resorting to legal routes to receive treatment, which was considered a problematic development.

857 As explained in section 3.6.1, the judges as well as prosecutors have guidelines to determine the (proposed) sentence. Certain conditions, such as the intoxication in this event, can be listed in those guidelines and can correspond to an increase in recommendations.

7.2.4 Profession-specific experiences

This section explores whether there are fundamental differences between the legal actors in how they address and perceive addiction. This largely relates to their roles in the process, of course, as a defence attorney has different objectives when compared to a prosecutor, and so on. Thus, aside from some of the more obvious differences that can be explained due to their professional roles, I also asked the interviewees how the different legal actors perceived addiction and an addicted defendant. Below, I discuss the four different roles and their remarks in turn.

To start with the defence attorneys, the perception of J-1 is that they often avoid the topic of addiction, most likely because of the association with increased risk of recidivism, an important element for the attorneys. "An addiction immediately is a red flag, so to speak."[858] When speaking with D-1, he said that personally he did the opposite and often found aspects related to addiction to (positively) emphasise during trial. Thus, he did not shy away from mentioning it. Consequently, he was surprised by my findings from the case file study and the suggestion by J-1, which found that most defence attorneys did not discuss the addiction in their pleadings. When asked what could explain these findings, D-1 suggested that this could be related to the personal vision of the attorney in question regarding his or her role in the process and the client. Speaking for himself, he always tried to encourage the defendants to get help and accept treatment: "First and foremost for themselves, to prevent recidivism, but also because it benefits the defendant's attitude during trial which may improve the outcome overall. So there is a strategic as well as a personal interest in bettering your life."[859] He said that some other attorneys may not perceive their role as such, i.e. standing up for the defendant's interest beyond solely being legal counsel, and thus may not discuss the addiction if this is not actively brought up by the defendant as something he wants to work on.

This is corroborated to a certain extent by D-2. She explained that most attorneys want to help their clients, which is why they started working as defence attorneys in the first place. Yet, not all attorneys understand the dynamics of the defendant's behaviour and really go beyond their direct duties of legal counsel to help the client. "It's something that takes a lot of time, time we don't get!"[860] Thus, if the defendant is not willing to make changes, oftentimes there is not much to do and there is no point in elaborating on the addiction during the trial. D-3 explained that very often, the client does not want to discuss the addiction, does not think it is a problem or is not willing to give up substance abuse.

858 Original: "Een verslaving is meteen een rode vlag, zeg maar." 5.

859 Original: "Allereerst omdat het goed is voor henzelf, om herhaling te voorkomen, maar soms ook wel proceshouding wat daardoor je uitkomst van de strafzaak kan verbeteren. Dus zowel strategie als persoonlijk belang zeg maar, om je leven te verbeteren." 3.

860 Original: "Maar dat kost je heel erg veel tijd, waar je niet voor betaald krijgt!" 6.

In such cases, he explained, it's not his job to convince the defendant otherwise. "I am serving the interests of the defendant here. I mean, there are boundaries to that, of course. But to a certain extent, I am just the defendant's mouthpiece."[861] Thus, the lack of discussion about the defendant's addiction by the attorneys may be due to the fear of negative reprisal ('red flags') but may also simply be the unwillingness of the defendant himself to involve the addiction in in his defence. As stated before as well, having other (potentially more valid) arguments available, for instance other mental disorders, may possibly also reduce the likelihood of using the addiction as an argument.

The perceptions of the prosecutors and their attitude towards addiction is quite varied. J-1 explained that out of the four professions, there is the most diversity among prosecutors. Especially in terms of years and experiences, she explained that she often observes younger prosecutors being very shocked by everything, whereas the more experienced ones have seen it all already. Indeed, P-3 explained that there is a common saying: 13 prosecutors means 13 opinions. Of course, there are sentencing guidelines (*strafvorderingsrichtlijnen*) that ensure consistency and legal certainty in the prosecutors' decision-making and the prosecutors frequently collaborate to discuss the most appropriate sentence. Hence, she experiences the differences among prosecutors mainly in their opinions and perspectives towards the nature and role of addiction. This is in line with the vignette study, conducted amongst prosecutors. In the open questions regarding appropriate sentencing, a wide range of answers was provided, but mostly within the expected range based on the guidelines.[862] What J-1 additionally emphasised, regarding the prosecutors' jobs, is that "There is a lot of pressure, a lot of societal pressure. They are not really allowed to make any mistakes. Unstable or addicted individuals should not be visible too much, because society does not like that. So I think: the role of the prosecutor is different [*than that of the judge*], and in general I find them very careful, very hesitant and they very heavily emphasise the problems."[863] D-3 generally felt that prosecutors are benevolent towards the defendant's personal situation as well, even though initially the prosecutors can act tough. "The prosecutor sometimes states 'well, he chooses to remain addicted'. Okay, hold on. It is not that simple. And yes, at that point I use my experiences to shine a different light on the situation. And then that person [*the prosecutor*] can think 'oh, hmm yes I guess you can look at it that way as well'."[864] P-3 also found that in practice, prosecutors are

861 Original: "Ik ben in dienst van die verdachte. Ik bedoel, daar zijn natuurlijk grenzen aan. Maar tot op zekere hoogte ben ik alleen maar een spreekbuis." 7.

862 See section 6.3.2.

863 Original: "En er zit ook een grote druk, een maatschappelijke druk natuurlijk hè. Er mogen niet te veel missers gemaakt worden. Mensen mogen niet te veel in beeld komen, verwarde mensen of verslaafden, want dat vindt de maatschappij niet fijn. Dus ik denk: de rol van de officier is ook een andere, en over het algemeen vind ik ze erg voorzichtig, heel op hun hoede en de problemen zwaar aanzetten." 4.

864 Original: "Dat is ook bij het OM best wel enige welwillendheid is over verslaving. […] De officier roept nog weleens van 'ja, meneer kiest er voor om verslaafd te blijven.' Ho, wacht eens even. Was het maar zo simpel.

willing to offer many second chances. In the experience of B-1, judges are more inclined towards recidivism-lowering judgments than the prosecutors, meaning that the judges more often impose mandatory treatment or interventions than suggested by the prosecution. The prosecution is, in his opinion, not always as lenient and understanding of the defendant's situation and addiction.

Judges are generally perceived as sympathetic towards the addicted defendant and willing to help. As a judge, J-1 stated that she always tries to assess how much she needs to intervene in somebody's life with legal methods such as special conditions or sanctions. If it is better suited to solve a problem via behavioural interventions outside the arm of the law, she believes that it is also her job to guide the defendant there. She commented that as a judge, she is quite lenient and willing to offer intervention opportunities and alternatives to bare prison sentences. Not all her colleagues are like that: generally, she thought, most of them are willing to give a couple of chances by imposing suspended sentences or reduced punishment, but after a while they seem to resort to straightforward sentences. Partly due to her social work background, she explained that she understands how the defendant's situation is continuously changing. Thus, one time a certain intervention may not work, but the next time it may. As a result, she is sometimes a bit more patient with the developments of a defendant. This insight was shared by J-2, who also sees quite a bit of variation amongst judges in the patience they have and willingness to put up with a troubled defendant. "I notice that some judges want to provide new opportunities until hell freezes over, and after that, still provide the defendant another chance. And there are judges who are more hesitant to do so. But broadly speaking, everybody is willing to try something with the defendant."[865] P-2 added that "There is a compassionate disposition in all those judges: if you are on the right track, you will receive the benefit of the doubt."[866]

This is also the experience of the three defence attorneys. D-1 explained that in the majority of cases, judges are receptive to his plea to be accommodating to the defendant and his addiction. He said he rarely encountered strict or harsh judges that mainly focus on incarceration. "I often do encounter judges who are willing to go along with a tailor-made, customised sentence, when the dossier and reports focus on such a strategy."[867]

En ja dan vertel ik het vanuit mijn ervaring en laat ik daar een ander licht over schijnen. En dan kan iemand denken van 'oh, ach hmm ja zo kun je het ook bekijken'." 7.

865 Original: "Sommige rechters merk ik willen iemand tot sint juttemis een kans geven en daarna nog wel weer een nieuwe kans. En er zijn andere rechters die daar wat terughoudender in zijn. Maar de grote lijnen is wel dat iedereen wel wat wil proberen met een verdachte." 5.

866 Original: "Er zit wel een goede inborst bij al die magistraten: als je op de goede weg bent, dan krijg je het voordeel van de twijfel." 5.

867 Original: "En ik kom ook meer rechters wel dan niet tegen die bereid zijn om maatwerk te bieden, op moment dat er gewoon vanuit het dossier, dus ook vanuit de strategie die is ingezet, daar begint het nog al eens meestal mee, dat er iets wordt gepresenteerd is wat verre is van vergelden." 8.

He added that this is necessary anyway, as long prison sentences rarely have a positive effect, and that reducing recidivism is also a priority for judges. D-2 also found that judges are very willing to help others and to minimise recidivism to ensure that the defendant gets his life back on track. However, as a defence attorney, she sometimes needs to diverge from the judge's opinion, especially regarding the TBS measure. Even though the judge may think this is the best for the defendant, and she may personally agree, if the defendant is scared of such indefinite confinement, she needs to serve those interests. She feels that judges often do not recognise this fear on the defendant's behalf, or judges are not interested in it, and rather take on a more paternalistic role of imposing what is in the best interest from the their perspective. This is understandable as well given the court's priorities. D-3 also stated that the judiciary is usually very benevolent towards the well-being of the defendant.

It was also mentioned several times (e.g. by J-2 and P-2) that judges almost always follow the recommendations from the behavioural expert, for instance in their recommendations in terms of accountability. P-2 commented: "We don't have any own opinion on the matter, to put it bluntly. We do not have any expertise in that area".[868] In P-2's view, this also applies to prosecutors. Speaking for himself as a prosecutor, he (exaggeratingly) said that he sometimes pretends to know all about it, but that in the end, he has to be cued in by the experts, which he then just copies in to his own closing arguments and demands for sentencing. B-2 experienced that the language used by attorneys is fundamentally different from the language she and other experts use. "Although it is entirely clear to us that the defendant, due to everything, is incapable of stopping his substance use or is incapable of understanding the consequences, this is not always the case for the attorneys. You really need to explain this."[869] An interesting anecdote was that she once related her psychological findings to the concept of prior fault, *culpa in causa*. After, she was explicitly told not to do so anymore as this was beyond the scope of her assignment. This is not the experience of B-1, however, who commented that he does frequently mention *culpa in causa* in his conclusions. For instance, he could explain the impairment caused by intoxication or addiction, and conclude that this affects the degree of accountability: then, he would offer different perspectives dependent on whether or not *culpa in causa* was applicable. For instance, he stated that *if* prior fault was considered relevant by the judge, that he would advise full accountability, but if not, that his recommendation would be different.

868 Original: "Dus wij vinden daar niet zelf iets van, om het maar plat te zeggen. […] Dus nogmaals, wij zijn leken op dat gebied." 4.

869 Original: "Waar het voor ons dan soms heel logisch is dat iemand vanwege alles niet in staat is om niet te gebruiken, of de gevolgen niet te overzien, is dat voor de jurist helemaal niet zo klip en klaar. Dat moet je dan echt uitleggen." 8-9.

What seems to be the most appropriate course of action, given the expertise of the expert and the (arguably) ambiguity of the legal requirements for prior fault,[870] is for the expert to address the specific capacities of the defendant that may enable or negate the presence of prior fault. If the experts were to focus explicitly on whether the defendant was capable of fulfilling the requirements of *culpa in causa*, this would enable the legal professionals to then make an informed judgment on it. Not only would this leave a (clearer) division between the behavioural versus the legal matters, but also, by reporting on prior fault capacities, legal professionals may become more inclined to explicitly discuss this. I further elaborate on this conclusion in the next and final chapter.

To go back to professional differences mentioned in these interviews, problems of professional jargon were also experienced by B-1, but rather in the form of peculiar requests from defence attorneys. For example, he might be asked to report on 'to what degree does this disorder have consequences on behaviour' or 'what percentage of free will was left to the defendant', questions suggesting an empirical calculation that is impossible to provide. This indeed seems to be an issue of different professional jargon. This was also discussed in the introductory chapter as one of the challenges of neurolaw, and inherent to situations in which different disciplines are integrated. The jurists that are subjected to behavioural reports ought to be able to adequately interpret these in the context of the relevant legal questions. Alternatively, the expert would need a basic understanding of criminal law to be able to relate research findings to legal aspects. To be clear, the interviewees were all very aware of the subtleties that interdisciplinary work requires. One of the earlier suggestions, i.e. a capacity-oriented approach to mental states and impairments, would already be useful to ensure that all parties are using the same concepts. In any event, it seems paramount that there is an adequate understanding between an expert's report and a defence attorney's understanding and interpretation of the findings as applicable to the legal practice.

To end this section with a brief overview again, the main topics were as follows. Many interviewees found that the role of defence attorneys is such that they do not always discuss the addiction. As they are trying to get the most favourable outcome for their client, this may involve not mentioning the addiction or merely using it in their plea for understanding and sympathy (rather than as a concrete defence). Moreover, prosecutors were often

870 I elaborate on this in section 4. For several straight-forward cases the current legal framework is sufficient and above all else, *culpa in causa* seems to be a pragmatic solution to prevent exculpation in such cases. I do elaborate on more complex (and more uncommon) cases in which it is unclear what the defendant is exactly blamed for. By clarifying the type of foreseeability that prior fault demands, the scope of the doctrine becomes more delineated; and by clarifying a capacitarian framework for prior fault, such as by incorporating volitional impairment as a factor to prevent *culpa in causa*, the doctrine could deal more adequately with complex cases. These impairments and capacities are, consequently, something that behavioural experts can address in their reports.

considered a bit tougher and more restrictive in the sentence they demanded as opposed to judges, who were generally perceived as understanding and inclined to favour recidivism-lowering sentences. This is largely explainable due to their differences in roles in criminal law. Judges also tend to accept and uphold the behavioural expert's decisions. This section also discussed the role of the expert in advising on prior fault. Although the normative conclusion ought to be reserved for the court, it could be relevant to include a bigger role for experts in informing the court explicitly on the presence or absence of prior fault-related capacities. I further reflect on this possibility in the next chapter 8. Lastly, a cautionary remark was made by some respondents on the use of professional jargon and the need to ensure a proper translation between the demands of the law and the qualities of (behavioural) science.

7.2.5 Impairments in capacity

This theme was not directly incorporated in the interview questions, but was sometimes brought up by the interviewees when explaining the nature of addiction or the role it may play in the assessment of liability. In general, I found that separately approaching addiction in terms of capacities, i.e. whether there were volitional or cognitive impairments due to the addiction specifically, was very uncommon. This seems to be mostly a theoretical approach and in practice, a general assessment of the defendant's mental health is made, taking not only the addiction into account but also all other relevant disorders or circumstances. This is undoubtedly related to the lack of a legal standard for diminished or non-accountability. As was discussed in section 3.5.3, the Dutch system does not define capacities (such as cognitive or volitional) as the basis of the excuse, unlike German and English law. Consequently, it is not surprising that an explicit capacitarian approach is not generally employed. One of the main recommendations of this study, and thus further discussed in the closing chapter, chapter 8, is to increase the use of specific and explicit capacities when assessing a defendant, wherever possible. This is also in line with the more general recommendation formulated in the literature, and seemingly corroborated by recent case law, for a clear and appropriate legal standard for the diminished and non-accountability defences.

When talking about the difference between traffic violation cases that were committed whilst intoxicated or addicted, versus other types of offences, J-1 indirectly mentioned that judges address volitional and cognitive capacities of the defendant. "When they [*alcohol addicts that are intoxicated*] drive their cars, even though they function well in society otherwise and are capable of exercising rationality and will, then we hold people accountable for that. Then we say: well, you knew how you handled your alcohol, and that it can have consequences. […] And so you think: well, I can see that you have a problem here, but

you were quite capable of determining the course of events yourself."[871] Hence, although she does not qualify it as such, there is an underlying division between cognitive capacities: knowing the consequences of substance use, and volitional capacities: determining the course of action, are central. As volitional and cognitive capacities are also central to determining a range of legal questions, from intent to non-accountability, it makes sense that such a division in ingrained in thinking about legal dilemmas, even when this is not done consciously.[872] This merely suggests that it is commonplace to express the defendant's behaviour based on these two types of capacities and that it may be relevant to address this more explicitly. Additionally, J-2 experienced that particularly in marijuana addiction cases, the concrete impairment of the defendant is often mentioned. He specifically recalled comments regarding memory impairment, but also a more general decline in executive functioning. With regard to alcohol, he stated that he considers the link between alcohol and aggression very prominent.

We already saw in section 7.2.2, P-1 believed the capacity for determining one's will freely is an essential requirement for criminal liability.[873] Similarly, in the reports of B-1, the central focus is on freedom of action: a volitional capacity. Yet to him this is interconnected with a cognitive capacity, and he explained how reduced rationality has an impact on behavioural action.[874] He commented that he often writes in his reports that addiction results in reduced capacity in the sense that "It has become habitual, there is no specific awareness about concrete criminal offences involved. There is simply no more awareness that you are becoming involved with certain behaviour, with certain situations in which you have lesser control over yourself. Especially not after using for years."[875] This seems to be relevant for the concept of diachronic control, which was discussed in the earlier chapters as a potential marker to determine how much control (and thus fault) can

871 Original: "En als die dan gaan rijden, terwijl ze verder gewoon maatschappelijk functioneren en gewoon over hun verstand en wil kunnen beschikken, dan wordt dat mensen wel aangerekend. Dan wordt er wel gezegd van: nou je wist best hoe je om ging met drank, dat dat gevolgen kon hebben. […] Dus dan denk je van ja hier is wel een probleem, maar jij was nog best bij machte om daar zelf een richting aan te geven." 7.

872 And more consciously when a clear legal standard explicates these capacities.

873 What it means to 'freely determine your will', philosophically, legally and empirically, was discussed in section 1.3.

874 The relationship between cognitive and volitional capacities were also discussed earlier this thesis in footnote 381 as an argument by e.g. Van Dijk or Morse. To sum up: "Human beings control themselves by using their reason. If they cannot use their reason, it is very difficult to behave properly. No logical or legal reason prevents a court from understanding and interpreting "control" problems as rationality defects." See Morse, 'Uncontrollable urges and irrational people' 1064.

875 Original: "Wat ik vooral beschrijf is dat het een gewoonte is geworden, dat er echt geen denken aan bepaalde strafbare feiten daar in zit, en de zo geheten bewustzijn dat je jezelf tot bepaalde gedragingen kunt brengen, bepaalde situaties kunt brengen waarbij je minder controle over jezelf hebt die is er gewoon niet. Zeker niet na jarenlang gebruik." 3.

be found in the addict's behaviour.[876] As B-1 mentioned, after years of substance abuse, the awareness of the substance's detrimental effects becomes blurred. Consequently, diachronic control may indeed be a valuable tool to determining the extent of the volitional impairment.

When specifically asking B-1 about the interplay of cognitive and volitional capacities, he explained that substance use affects the capacity for control, which allows the underlying cognitive impairments to surface, relating to personality traits or strong emotions. In any event, he strongly advocates an individual approach to cases of addiction, as impairment of capacities varies widely and is not universal across cases of addiction. "That would be the essence of my argument: that addiction is not addressed as addiction, but as something that affects the individual and the kinds of consequences it leads to."[877] He additionally explained that he usually focuses on capacities but does not necessarily discuss them as distinct concepts. "There are not really any cases in which they [*cognitive and volitional impairments*] are nicely divided, so I integrate them."[878] Hence, the recommendation to specify these capacities separately may be a difficult endeavour in practice.

D-2 felt that addiction mostly affects her clients in the volitional domain. She mentioned that she commonly notices poor impulse control, yet also realises that this does not rob the defendant fully of his ability to control his behaviour. "Of course, the addiction orchestrates everything, but it's not like they are incapable of making the decision to go into the supermarket [*to steal*]".[879] Indeed, this is an important element in the context of capacities and liability: when does reduced capacity, such as problematic impulse control mentioned by D-2, affects the freedom of will to such an extent that P-1 speaks of? Aside from being an important question, it is also a very difficult if not impossible question to answer. It is also closely connected with the next theme, namely that of prior fault in creating these impairments. Whether there was a volitional or cognitive incapacity is a first major theme to report on, but an equally important one is whether this incapacity was culpably caused.

Before addressing this in detail, a quick overview of the themes discussed in this section include the following. Interviewees frequently mentioned capacities in their experiences with addiction, but this was rarely explicit. It seemed that the respondents had their own implicit interpretation of the capacities that were required for certain legal questions, such as for prior fault. Perhaps a more explicit focus on capacity is hindered by a lack of clear

876 See sections 2.4.1 and 4.5.

877 Original: "En dat is in feite wat mijn betoog zou zijn. Dat je verslaving niet als verslaving bekijkt, maar iets wat speelt bij deze persoon en wat het allemaal tot gevolgen heeft." 8.

878 Original: "Dat is bij mij geïntegreerd omdat ik bijna geen casussen tegen kom waar het mooi gesplitst is." 4.

879 Original: "[…] het is natuurlijk wel zo dat die verslaving alles regeert, maar het is niet zo alsof ze vervolgens niet meer de beslissing kunnen maken om wel of niet de supermarkt in te stappen." 7.

legal standard for legal questions such as accountability and *culpa in causa*. As you may recall, the call for more clarity and legal standards was discussed in the previous chapters 3 and 4. However, as some respondents remarked, even though it may be important to address cognitive and volitional impairment separately, this may be difficult to execute in practice.

7.2.6 Culpa in causa

The topic of prior fault is complex: an entire chapter was already devoted to explaining and discussing the intricacies of the topic.[880] Thus, it was no surprise that most interviewees had some interesting experiences with it. First, the behavioural experts have an interesting role here, as the fulfilment of *culpa in causa* criteria are quite normative, thus not something that behavioural experts decide on directly. Yet they do need to provide all information necessary in order for the court to make an informed decision. B-1 explained that he does weigh the concept of prior fault whilst writing his report. He stated that he often explains the impairment by the addiction, even though he realises that this explanation will be invalidated by *culpa in causa* anyway. As mentioned before, he then delineates several scenarios in order for the judge to make a decision. B-2 sees differences in the way that experts report on prior fault. "Some may say: you know what, he very often messed up when intoxicated, so he knew this, therefore he should not have used the substance, so we can hold him accountable. Whereas another expert may say: well, this is exactly the nature of his problem, he doesn't see the effects of his using and is incapable of evaluating the circumstances adequately. So there is room for differences in interpretation."[881] This is a major point regarding the use of an (explicit) volitional prong in the *culpa in causa* application, which was advocated in chapter 4. In some cases of addiction, admittedly only very severe ones, the impaired volitional capacity should be borne in mind when addressing prior fault. Impaired volition can then explicitly feature in the assessment of *culpa in causa* – of course, in conjunction with all other circumstances, specifically the opportunity of taking diachronic responsibility or the cognitive impairments such as described in B-2's example.

J-1 recalled that she was initially surprised by the concept of *culpa in causa* as it seemed to contradict psychological perspectives towards addiction. Yet over the years, she has become aware that people's autonomy and thus their personal responsibility for their

880 See section 4.

881 Original: "Dat de één zegt, weetje hij heel al vaker er een puinhoop van gemaakt terwijl hij onder invloed was, dus hij wist dat, dus hij had het moeten laten staan, dus je kan het hem aanrekenen. Terwijl de ander zegt ja nou ja dat is nou net zijn problematiek: en hij overziet dat niet en schat dat niet goed in. Daar zit wel ruimte voor interpretatieverschil." 2.

actions is a great good. "Look, there are also people who need to make tough decisions and still decide for the better. Other people make easy decisions that don't fare well. So then, surely, you need to hold these latter people responsible for the aspects that, within their powers, could have been changed. We shouldn't think 'ah well, he had a difficult time growing up, so I understand his choices' too easily, so to speak. And well, *culpa in causa* is related to that."[882]

Some interviewees also discussed the relevancy of *culpa in causa* specifically to cases of addiction. A problem that was mentioned is that control is assumed in prior fault blame, 'being able to do otherwise', even though control-related impairment is often a core symptom of addiction. J-1, for instance, remarked that this is a matter that is discussed in courts, even though this is often implicit or not reflected in the published judgments. What troubles her evaluation of addiction, however, is that there are other individuals who do choose the right path despite difficult upbringing, comorbid disorders, anti-social peer groups, and the use of substances. To her, this means that there is an element of choice involved that *culpa in causa* appeals to.[883] Consequently, although it is a complex matter, she generally considers it appropriate to apply prior fault for addiction-related impairments. Similarly, J-2 also believes *culpa in causa* to be applicable in cases of addiction. For example, the thinking that "Addiction is your problem and you brought this situation upon yourself."[884] This is interesting, as two matters seem to become conflated here: being held liable for (addiction-related) criminal acts and being held liable for being addicted. The first is a relevant, yet complex matter to address. However the latter, hinting more towards a *Lebensführungsschuld*, seems inappropriate to discuss in the context of criminal liability. Therefore, it seems that – probably unconsciously – legal professionals conflate these two matters in practice, and that an explicit distinction between these two problems is necessary. This is further discussed as one of this study's conclusions in the next chapter.

To P-1, it was clear that prior fault is a necessary evil. He explained that he understands how it may be problematic to justify *culpa in causa* in cases of addiction, and that doctrinally, it can seem artificial to still construct liability despite lacking the mental states required for accountability. "I admit that it is forced. I realise very clearly that the moment that somebody's consciousness is greatly reduced, or absent, that you are pulling a trick (doctrinally speaking) by saying 'yes, but this person has used a substance prior, even days

882 Original: "Kijk er zijn ook heel veel mensen die moeilijke keuzes moeten maken en die kiezen dan toch voor het goede. En er maken ook mensen makkelijke keuzes en die doen het dan niet goed. En dan moet je toch zeker wel degene die het dan niet goed hebben gedaan proberen verantwoordelijk te houden voor het deel wat wel in hun macht had kunnen liggen om daar een andere wending aan te geven. En niet te makkelijk te zeggen: 'Oh ja ik begrijp het wel, want je hebt ook zo'n rot jeugd gehad' bij wijze van spreken. En *culpa in causa*, ja dat vormt daar een onderdeel van, vind ik." 8.

883 This argument is rebutted, however, by Corrado: see Corrado, 'The case for a purely volitional insanity defense' 499-450.

884 Original: "De verslaving is toch uiteindelijk jouw probleem, jij hebt je in die situatie gebracht." 6.

prior, to the time of the offence, and with that he factually assumed responsibility for the offence days later'. Of course, I can see that that's somewhat forced. Yet it's something we can hold onto as lawyers, and sometimes, we are just looking for a way to work around the issue."[885] This perspective is discussed elsewhere as well, and represents the pragmatism regarding prior fault that can sometimes characterise Dutch criminal law.[886]

In P-2's view,, the application of *culpa in causa* in cases of addiction was very much dependent on the previously discussed willingness to be treated. He remarked that, in his experience, as long as the defendant shows a willingness to change, he is not directly blamed for the addiction. Conversely, if the attitude of the defendant is not pro-treatment or intervention, then the defendant is more likely to be punished for the addiction. "What we say about offences that were committed while intoxicated is: whatever you did while you were drunk, you must have wanted when you were sober, so tough luck."[887] Whether or not it was just, or appropriate, to apply *culpa in causa* in cases of addiction, D-1 remarked that he feels that judges are quick to assume responsibility for the addiction-related impairment. However, it is a complex question and that the answer is case-specific. "It would be too simplistic to merely say yes or no to that. I think that, to a large extent, the expert should play a role in this. And that defence attorneys should proactively request that."[888] This is interesting, as I previously remarked that one expert was reprimanded for involving the *culpa in causa* doctrine in her conclusion. The key seems to be for the expert to inform (specifically) on capacities for prior fault, in order for the legal professional to interpret this in light of the legal, normative question. A clearer legal framework, as argued for in chapter 4, would improve bridging the distinct expertises of the behavioural expert and the legal expert in this regard. Moreover, as D-1 suggested, attorneys could more actively request such information, or emphasise a problematic prior fault reasoning themselves.

D-3 remarked that although it happens, *culpa in causa* is not as quickly applied to cases of addiction as it is to *sec* substance intoxication. "No, you cannot simply negate the effect

885 Original: "Ik geef toe dat het wat geforceerd is en ik realiseer me heel scherp dat op moment dat iemands bewustzijn sterk vernauwd is of weg is, dat je toch wel een streek uithaalt, materieelrechtelijk, door te zeggen 'ja maar deze persoon heeft eerder, dagen eerder een middel is gaan gebruiken en dat hij daarmee éígenlijk al verantwoordelijkheid heeft genomen voor het wangedrag de dag later'. Ik zie ook wel dat dat natuurlijk wat geforceerd is. Maar het is een beetje het houvast wat we nodig hebben als jurist en ik geef toe dat we soms zoeken naar een manier om het gewoon wat werkbaar te maken." 11.

886 Discussed in, for instance, Goldberg and others, 'Prior-fault blame in England and Wales, Germany and the Netherlands' but also Jansen, 'Drie modellen voor eigen schuld bij strafuitsluitingsgronden'.

887 Original: "Ik denk dat daar toch geldt, net als delicten die in dronkenschap zijn begaan, wordt gezegd 'wat je in je beschonkenheid hebt gedaan dat heb je nuchter gewild, dus je hebt gewoon pech'." 8.

888 Original: "nou, het is een beetje te kort door de bocht, denk ik, om deze vraag zo met ja of nee te beantwoorden. Ik denk dat, in belangrijke mate, de deskundige hier een rol zouden kunnen of moeten spelen. En dat advocaten daar ook pro-actief een verzoek in kunnen doen." 6.

of addiction with it [*prior fault*]. It requires more nuance than that."[889] To him, it also depends on the situation and the type of offence. Initially, courts may be willing to forego a *culpa in causa* reasoning by stating that indeed, it is the essence of the defendant's condition that he had trouble controlling himself. Yet if it is a violent offence, committed regularly, then "A different argument starts to prevail. Then the following reason becomes more relevant: 'sure, we understand your situation, but this starts to bother us and you need to find professional help. And if you won't find help, well then we have to put you away so you won't bother us anymore'."[890] He explains that in his perception, public order and safety ought to prevail in such cases, despite realising that being unwilling or unable to find help and ceasing the use of substances might be inherent to the addiction. Naturally, in his position as the defence attorney, he would argue differently.

What stands out, throughout all these observations about prior fault, is that none of the individuals mention if or how to assess the concrete capacities of the defendant in this regard. Life choices, willingness to be treated and so on are all elements that informed, in the opinion of the interviewees, the applicability of *culpa in causa*. Based on the previous discussions about prior fault, particularly in chapters 4 and 5, I emphasised the role of foreseeability and control in determining culpability of prior behaviour. Based on the interviewees' remarks, it instead seems to be an assessment of the situation and the defendant as a whole. Specific requirements are not mentioned or discussed. This may also explain some of the differences in the application of *culpa in causa* that were noted in some of the cases discussed earlier. Finally, none of the interviewees actively distinguished between impairments caused by intoxication and those impaired by being addicted, i.e. the consequences of prolonged substance use. This is interesting, as they are clearly different. However, specifying concrete capacities and distinguishing between scenarios were also not explicitly asked, so perhaps this topic was simply not brought up.

In sum, this section started out with discussing with the role of behavioural experts in determining prior fault. The role of impaired volition in the legal framework, as well as the potentially more explicit task of the expert in defining this, was discussed. Some felt that the expert should play a larger role, and that other actors, such as the defence attorney, could request this proactively. Some voiced their opinion that *culpa in causa* for addiction was generally appropriate or simply a necessary evil. Others were a bit more cautious and mentioned a difference between the relevancy of prior fault for addiction as opposed to intoxication.

889 Original: "Je kunt het er niet mee afdoen, nee. Dat heeft vooral wat nuancering nodig." 9.

890 Original: "Dan gaat die redenering toch voorrang krijgen van 'ja joh, prima, maar wij hebben daar last van dus je moet daarmee ophouden. Dan moet je maar hulp zoeken en als je geen hulp zoekt moet je maar een tijd weg want dan hebben wij een tijd geen last van jou'." 8-9

7.2.7 Remaining topics

Aside from the six themes mentioned, there were a few remaining matters that were brought up by the interviewees. First, there were several remarks made about treatment availability and efficacy in cases of addiction. Second, two interviewees brought up how the 'reasonable person standard' is inherently disadvantageous for addicted defendants. Lastly, one respondent had an interesting remark related to the relevancy of addiction for intent. I discuss these three issue in this order.

B-1 pointed out that the topic of responsivity to treatment and interventions is a crucially relevant topic in addiction and criminal law. "The element of responsivity hardly comes back in criminal legal judgments."[891] A core model for offender rehabilitation is the RNR principle: Risk, Need and Responsivity.[892] According to B-1, the first two elements are often covered and discussed extensively. Yet responsivity is overlooked, even though it is crucial to the effectiveness and relevance of sentences and measures, especially for addicted defendants. Often the various comorbid disorders are addressed separately in interventions, even though addiction hampers the effective treatment of other disorders. Consequently, when an intervention is suggested, for instance to improve coping or to address an anxiety disorder, there is not enough attention to whether this intervention will be efficient or even possible. This is problematic, as without such an assessment of responsivity, the intervention is more likely to be ineffective: the defendant may not be able to adequately participate or make changes, often because the addiction is not involved in the intervention.[893] Many (forensic) healthcare institutions focus on either addiction or other psychological disorders, hardly integrating the two. J-2 also pointed out that it is crucial for effective treatment that there are more institutions willing and able to deal with addiction and comorbid disorders simultaneously. In his experience, most treatment institutions are equipped for one but not the other. In addition, he stated how difficult it can be for judges to navigate within the mental healthcare sector. "There definitely is a big problem for judges in getting an overview of all the treatment organisations, and determining where one can go to best address each type of issue, this is really unclear and confusing. And you notice that there are long waiting lists, difficult placement procedures, which is really a very big problem."[894]

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891 Original: "Dus dat responsivity-idee dat zie je helemaal nergens in de rechtspraak naar voren komen." 10.

892 See footnote 473.

893 Kay-Lambkin, Baker and Lewin, 'The'co-morbidity roundabout': a framework to guide assessment and intervention strategies and engineer change among people with co-morbid problems' (2004) 23 Drug and Alcohol Review 410.

894 Original: "Sowieso wel de hele problematiek van het overzicht in hulpverleningsland waar je precies met wiens problematiek terecht kunt, dat is voor rechters vaak heel weinig inzichtelijk. En je merkt dat veel wachtlijsten zijn, ingewikkelde plaatsingsprocedures, da's echt een heel groot probleem." 11.

Related to treatment is also the notion that due to waiting lists it is sometimes quicker and more efficient to get help via a legal route, for instance with mandatory treatment as a special condition (*ex* art. 14c s.2 under 10 DCC) order, than via regular healthcare admissions. This was first mentioned by D-2, but corroborated by P-3 who explained that it is sometimes possible to receive treatment via the Mental Health Care Act (*WvGGZ*), but only if the defendant has a very urgent, pressing problem with mental health. P-3 added that this was mostly due to the severe budget cuts in the healthcare sector, particularly mental healthcare. "This leads to all those confused persons being pulled into the criminal legal circuit, even though we shouldn't want them there at all, like you say. I find this development very poignant."[895]

Secondly, the reasonable person standard is a concept that is relevant in many jurisdictions. Under Dutch law, for instance, the reasonable person (*criteriumfiguur*) is considered the standard for negligent offences.[896] Alternatively, common law jurisdictions often make use of the term 'reasonableness', which is mostly addressed objectively. This means that there is an independent standard, unrelated to the defendant's particular characteristics, regarding what kind of qualities and capacities an individual should have.[897] Thus, it sets out the standard against which we mirror the defendant's conduct. Regarding this standard, P-2 mentioned that "You have the legal, reasonable man standard, and this man is a sensible person who understands what the consequences of his actions are. And we are all subject to this standard. Also when we are intoxicated, when we have a gambling debt, or when we have a sex or drug addiction. You name it. And if those things cause us to end up in trouble, we are all subject to this same standard."[898] He then remarked that it is a bit of an unfair standard, as we already know that some individuals may never be able to meet this standard. After all, it's a fictional average person: sensible, as P-2 remarked. Inherent to an average person means that there is a group of individuals below that average.[899] D-2 followed up on this notion. She explained that "The reasonable person

895 Original: "En met al die verwarde personen die allemaal het strafrecht in worden getrokken, waar je zoiets absoluut niet wil, wat jij ook zegt. Die ontwikkeling vind ik ook heel schrijnend." 10.

896 Van Dijk, *Strafrechtelijke aansprakelijkheid heroverwogen. Over opzet, schuld, schulduitsluitingsgronden en straf* 45-46.

897 Westen, 'Individualizing the reasonable person in criminal law' (2008) 2 Criminal Law and Philosophy 137-162.

898 Original: "Je hebt gewoon die juridische maatman, en die maatman is een verstandig mens die snapt wat de gevolgen zijn van zijn handelen. En langs die meetlat gaan we. Ook als we gedronken hebben, ook als we gokschuld hebben, ook als een seks- of drugsverslaving hebben. Noem maar op. En als dat ons inde problemen helpt, dan gaan we allemaal langs diezelfde meetlat." 12.

899 A discussion on the qualities that are required by the reasonable person standard is not new. Especially in Anglo-American literature, this is often debated in light of various conditions, such as learning disabilities. This was also mentioned before, in the discussion on negligence in criminal law (section 3.4, footnote 340). See, for instance, Levick and Tierney, 'United States Supreme Court adopts a reasonable juvenile standard in JDB v. North Carolina for purposes of the miranda custody analysis: Can a more reasoned justice system

standard misjudges a large part, I dare say 75 per cent, of the people who come into contact with the law, and who don't meet this standard. It's not the average citizen. This is really the vast majority of my clients. […] And this results in difficulties in the objective reasoning of the Supreme Court with regard to the average citizen."[900]

P-2 drew a comparison with defendants who have a learning disability, and who are not expected to meet the reasonable person standard. He then questioned why we expect the same from (severely) addicted defendants. To answer his own question, he explained that "The alternative, namely have most of society participate in the legal system for real, and some individuals only for show, is clearly not an option either. Thus, we may need to accept that a certain group of individuals cannot meet this standard." Yet, as discussed in section 7.2.3 of this chapter, this would be good to bear in mind before imposing too many or too strenuous special conditions that are beyond the defendant's capacity to conform to. Moreover, a more fundamental discussion on the manifestation of this default standard need to be held. Especially the default position of the law in which all individuals are presumed to be in control of their behaviour would need to be evaluated critically, which is an important part of the next chapter. This topic was also discussed in relation to the reasonable person standard in negligence offences in section 3.4. It seems that sometimes, regarding topics like this, the dogmatism of the law may not reflect the practical reality of behavioural and mental capacities.

One final remark relates to addiction and intent. As I discussed before, intent is objectively inferred from behaviour, meaning that disorders or other mental incapacities very rarely negate intent.[901] Indeed, several interviewees mentioned that addiction is not relevant in negating intent and went on to discuss more appropriate possibilities, such as accountability or sentencing. However, P-3 did note the relevancy of addiction for intent, but in a different direction. She explained that when drug use or addiction is used instrumentally, it can weigh heavily on determining intent. "Yes, I have seen it [*addiction in the context of intent*] in cases where the substance use has an instrumental purpose, for instance in a violent robbery, in order to give into their substance craving. Yes, we think that this is a significant element: doing it so intentionally, for your personal gain without much regard for the victim's consequences, so to speak."[902]

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for juveniles be far behind' or Northrop and Rozan, 'Kids will be kids: Time for a reasonable child standard for the proof of objective mens rea elements'.

900 Original: "Inderdaad, die normale-man-maat die miskent heel erg, ik durf wel te zeggen 75% van de personen die in aanraking komt met strafrecht, voldoet niet aan de maatman. Dat is niet de gemiddelde burger. Dat is echt het overgrote deel van mijn cliënten. […] En dat maakt natuurlijk zo'n objectieve redeneren wat de hoge raad doet inderdaad aan de gemiddelde medemens eigenlijk heel lastig." 14.

901 See section 3.4.

902 Original: "Ja, bij opzet wel gezien, op moment dat hij zijn middelenmisbruik echt instrumenteel inzet, dus afdreiging met geweld, net als in jouw casus dat iemand werd afgedreigd met een mes, om in de zucht naar

7.3 Limitations and recommendations

Before concluding this chapter, a few brief remarks on limitations and recommendations are appropriate. Due to the nature of conducting a limited number of interviews, the data is not meant to generalise about all legal professionals. Instead, this chapter aimed to illustrate some of the problems that were highlighted in the previous chapters by indicating how legal professionals approach these issues. There are a few specific remarks that warrant additional caution when interpreting the results. First and perhaps most obvious is that two or three individuals per profession is a low number. Their insights must be carefully interpreted, as these could reflect uncommon or unusual situations. This is also the reason why the questions were already focused on the themes that were researched throughout this study. Even though very open questions about addiction and the law could potentially result in completely new and valuable ideas, it is more difficult to address their significance against the larger picture.

A second important notion is that the public prosecutor's office has different specialisations for their officers. For instance, there are distinct sections which officers operate in, such as 'intervention' (*interventies*) which addresses minor crimes; 'assessment' (*onderzoeksomgeving*) which is for more severe crimes, often warranting a behavioural report; and 'subversive crime' (*ondermijning*) which addresses, for instance, organised crime. Prosecutors working in the intervention section are usually not concerned with accountability, *culpa in causa* or behavioural reports. As I did not purposefully select prosecutors from a specific sector, the experiences of the prosecutors in this cohort may not reflect the same type of cases as those focused on in the previous chapter. Nevertheless, prosecutors from the intervention sector do have valuable experience with petty crimes in which addiction and drug use plays a large role.

Similar to the limitations and recommendations section in chapter 5, it is important to acknowledge the potentially relevant experiences of parole officers. These officers usually have more personal contact with defendants (as opposed to, for instance, the judge or prosecutor) and may offer alternative insights into the role of addiction throughout the criminal proceedings. In order to remain focused on the points central to this study, which are mostly substantive criminal legal matters, I decided to stick to the four types of professions. For future research, parole officers may be a valuable addition.

For future research, it may also be interesting to further address underlying moral or societal perspectives towards addiction. In some of the citations, there were several overt or covert notions of blame towards the general state of being addicted. Firstly, it would be relevant to address explicitly whether addiction is (still) perceived as a moral weakness.

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middelen te voorzien. Ja dan vinden we dat wel zwaar wegen. Dat je dat zo bewust doet. Voor je eigen gewin, zonder een moment bezig te zijn met wat het voor het slachtoffer betekent, zeg maar." 8.

But secondly, further analysis of the implicit notions (such as confusing anterior responsibility for taking substances with responsibility for becoming addicted) on choice and culpability surrounding addiction would be very interesting. When coding the data for this interview study, I personally realised that I did not address these notions of choice in becoming addicted, nor did I specify clearly the difference between responsibility for addiction and responsibility for addiction-related behaviour, which is regrettable.

7.4 Concluding remarks

This chapter discussed the various perceptions and experiences of four groups of legal actors: judges, prosecutors, attorneys, and behavioural experts. The purpose of this chapter is to illustrate and provide context to the discussions earlier in this study, but also to identify perspectives that were not covered in those earlier discussions. Indeed, in many of the interviews, new ideas or insights originated that were relevant for better understanding some of the previous findings or for providing alternative explanations. Beyond the topics and citations presented here, the conversations proved to be very valuable for producing new (research) ideas that were used in this study and beyond. I was also able to discuss some of my own ideas about addiction in criminal law with professionals who deal with addicted defendants on a regular basis. This turned out to be of great help in the writing process.

Some of the most relevant findings are as follows. First, the often-mentioned capacity approach has once again taken central stage. Many interviewees either remarked how the focus on capacities (especially as opposed to diagnostic labels or classifications) was more beneficial in addressing legal questions, or implicitly hinted towards the need to be more concrete about the defendant's impairments, thereby also favouring a capacity-based approach. As this has been a central theme throughout the study, it is significant that many professionals also acknowledge this as a valuable perspective. Yet based on the interviews as well as the analyses in the previous chapters, even with a capacitarian outlook, there are many remaining points for discussion. Even though capacities are important, these are still discussed integrally (addiction and other circumstances combined) and not explicitly linked to a legal framework, for instance accountability or *culpa in causa*. As suggested, this may be largely related to a lack of clear legal standards regarding these. Moreover, the practical implementation and assessment of capacities, as also mentioned by one of the behavioural experts, is still difficult to establish for practical reasons (do we have the appropriate tools?) as well as due to the complex nature of addiction itself, let alone with comorbidities. I further elaborate on these remaining topics in the next, the final, chapter.

Additionally, several interviewees remarked that the various conceptualisations of addiction do result in different connotations: some more positive, e.g. by reducing blame

or inducing sympathy, and others more negative, e.g. by suggesting higher risks of recidivism. I claim that these various connotations, as well as the ambiguity that comes with the use of different terms and concepts, are the reason why a capacity-based approach is preferable. Moreover, normative legal questions as well as empirical psychiatric questions can both be discussed in terms of capacities. Thus, providing a context that uses the same terms can help improve connectivity between the two disciplines.

Interventions were also discussed in detail. The assessment of accountability and prior fault was impacted by how motivated the defendant was to accept treatment, according to some interviewees. This was interesting, as the legal requirements for neither is concerned with treatment or willingness to change. Thus, this would have been an implicit element to influence judges or prosecutors in their judgments. Although it is understandable that a remorseful and motivated defendant induces more sympathy and thus leniency from the jurists, it is an interesting perspective that has not been addressed before. Moreover, many legal professionals also stressed the perceived ineffectiveness of too many interventions or too many special conditions as a major point of concern. As this seems to be increasingly popular, especially in the context of the risk society, we must not forego the importance of the defendant's ability and responsivity to adhere to all these elements. As previous research does demonstrate effectiveness of (appropriate) care and security-related measures, perhaps this perceived problem is mostly related to a lack of an evidence-based and coherent plan when employing or imposing special conditions.

Lastly, a relevant perspective relates to the role of defence attorneys and experts in the discussion of *culpa in causa*. In the previous chapters, prior fault was mostly discussed normatively and doctrinally, and changes in the formal requirements were suggested. More practical, however, is the role of professionals in this process. As the interviewees suggested, defence attorneys can request more concrete evaluation of the defendant's capacities for (diachronic) control and address the prior fault discussion more explicitly. As a result, general gut feelings about choice (and thus culpability) in maintaining and causing addiction might play a smaller role in the unconscious assessment of the defendant. When made explicit, chances are that the formal requirements of *culpa in causa* are more strictly adhered to. Relatedly, experts can provide additional insight about the defendant that is relevant for determining *culpa in causa*, such as the amount of diachronic control and the capacity for control that the defendant naturally has.[903] In the next chapter, these remarks are further integrated in a final discussion.

903 See also the suggestion on how to address the capacity for control in other ways than just the amount of control at the time of the offence: section 5.3.5.

8 Conclusions and Further Discussions

How may addiction influence the criminal liability of addicted offenders and in what manner may the neuroscientific perspective of addiction inform and affect this? As this research shows, this problem may be addressed from various perspectives: from a normative angle to an empirical perspective, or by starting from 'the law in the books' moving towards 'the law in action'. In fact, the combination of these approaches ensures a holistic perspective of such a complex problem. Throughout this book, some findings inadvertently ran across the chapters already as a common thread, whereas other findings are yet to be harmonised. In this final discussion, I summarise and integrate the main conclusions to develop recommendations for theory and practice. The same categorical distinctions as in the introductory chapter are employed in doing so. Also as in the introductory chapter, these categories are not entirely distinct and the conclusions may overlap somewhat. It is a pragmatic division, but it allows for a more focused discussion of the topics. In the table on the next page, a summary of the main findings is provided first, distinguished between those on a micro, meso and macro level, as well categorised as legal matters or matters from the behavioural, cognitive and neurosciences (BCN-sciences). To recapitulate from the introductory chapter, micro-level themes mainly concern individual matters, such as the assessment of criminal liability of a concrete addicted defendant. On a meso-level, findings regarding addicted individuals as a group may be explained and macro-matters address (legal) policies and practices.

After this summary, I first provide a succinct answer to the research question. Then, I briefly address some of the conclusions in more detail while simultaneously addressing any recommendations that originate from those. The purpose of these sections (8.2, 8.3 and 8.4) is not just to refer back to the conclusions from the previous chapters, but to stimulate a discussion based on them. Thus, I aim to integrate the conclusions in order to provide suggestions based on these. In the next section 8.5, I mention some general limitations to the research conducted, as well as specify potentially relevant themes that were not discussed in this study. The empirical chapters already indicated the limitations that were specific to those studies, but there are several more general points to be stressed. In addition, there are many unknowns still that may be the basis for some interesting further research. Thus, this final chapter also provides some research recommendations that are worthwhile exploring further. Importantly, this concluding chapter compiles and discusses the main conclusions from the previous chapters, but does not provide a lengthy overview of the content of each chapter. For a general summary of the contents, please see Annex II.

8.1 Overview conclusions and answer to the research question

Table 24: Overview of main conclusions per theme, divided into BCN-scientific and legal topics

	BCN-scientific conclusions	Legal conclusions
Micro	Neuroscientific methods can play a role in identifying the impairments associated with addiction (in combination with other forms of more traditional assessments) in general. For individual cases, it remains difficult to quantify the impairments. Yet certain neuropsychological tools can, together with other (more traditional) methods, provide an adequate estimate of volitional impairment by addressing empirical factors such as impulsivity *(chapter 2)*	In individual cases, addiction is often not explicitly discussed. Defence attorneys often do not mention the addiction. Behaviour experts (and consequently also judges) often approach the addiction integrally, together with other conditions or impairments (comorbidity problem). Additionally, this obscures a researcher's assessment of the exact role of addiction in criminal liability *(chapter 5.2 and 7.2)*
	It remains very difficult to determine the exact capacities at the time of the offence, although there are possibilities to make a more accurate assessment than is currently done. Especially for volitional capacities, there is an essential question regarding the 'twilight and dusk' problem: was an impulse irresistible, or simply not resisted. Internal (e.g. general impulsivity levels) and external (e.g. peer pressure) aspects may be used to approximate the concrete capacities at the time of the offence. Moreover, it can be difficult to disentangle volitional and cognitive impairment *(chapter 2.4, 2.6 and 7.2)*	For substance-induced psychoses, there are complex (causal) roles at play. The German system illustrates that, for instance, the cause of the substance use informs the culpability at T1. If substance use was part of the defendant's symptomology (e.g. self-medication), or it was caused by an underlying addiction, this is relevant to assess. Importantly, culpability may be still be found, but in other circumstances. Thus, the law needs to specify how the psychoses came about, as it could affect the consequent assessment of criminal liability *(chapter 4.5, 4.6 and 4.7)*
	Neuroscientific information or tools were not often encountered in case files, suggesting that these are not commonly part of the assessment battery in criminal cases (with the exception of several neuropsychological tests) *(chapter 5.3)*	*Culpa in causa* is convincingly used to block addiction-related defences. Apart from these explicit explanations, jurists often implicitly express prior fault-related arguments, in which *culpa in causa* is not directly addressed, but which suggests a choice-centred perspective towards addiction *(chapter 5.3 and 7.2.6)*
Meso	Prolonged substance use effects the brain, particularly the prefrontal cortex and dopamine pathways. Neuroscientific research has been able to identify differences between healthy and addicted brains in this regard. However, the purpose and value of substance use ought not to be overlooked, as many factors contributing to addiction can be explained as correlates of choice *(chapter 2.3)*	Addiction can – in severe cases – result in an inability to take diachronic control (for instance due to external barriers), or result severe impairment in volitional capacity. These are relevant for a discussion on prior fault situations, premeditation, or degrees of accountability *(chapter 2.4, 3.3, 3.5 and 4.5)*
	Severe addiction can result in several impairments, most notably control (which includes compulsivity and impulsivity at the time of the offence, as well as difficulty	Implicit or explicit remarks seem to suggest that responsibility for addiction-related behaviour (i.e. criminal liability, which is dependent on individual capacity) and (moral)

	foreseeing, managing and controlling behaviour for future purposes), attention or motivational bias (leading to salience towards the addictive substance) and negative emotional states (important in sustaining a cycle of abuse) *(chapter 2.2, 2.3 and 2.4)*	responsibility for being addicted, are often conflated. This is problematic in light of *Lebensführungsschuld*, but also because it does not address the behaviour at the time of the offence, thereby resulting in difficulties in terms of temporal order as well as establishing normative connections *(chapter 4.5, 5.3 and 7.2)*
	The conceptualisation of addiction affects legal decision-making regarding accountability (i.e. a neuroscientific perspective is associated with a lower degree of accountability perceived by samples of prosecutors and students). The reason for this effect is uncertain. A possibility is that (unconscious) prior fault-like arguments are reduced by the availability of neuroscientific evidence that specifically suggests impaired choice *(chapter 6.3 and 6.4)*	The addiction debate in terms of a specific model is not all that relevant for the law: it does in itself not inform on the requirements for criminal liability. The debate does inform on capacities, and these are – in turn – highly important for the law. The addiction debate also is seen as a predominantly (social-scientific) discussion within a clear practical influence *(chapter 2.5 and 7.2)*
	In case files, there is oftentimes not a distinction made between impairments caused by intoxication and impairments caused by addiction in general *(chapter 5.2)*	*Culpa in causa* is often indiscriminately applied, regardless of circumstances or exact capacities of the defendant. This is often considered a pragmatic approach by scholars and legal actors *(chapter 5.2, 5.3 and 7.2)*
Macro	The capacities that underlie the ability to take diachronic control may be used as a marker to determine prior fault. As such, it is relevant to discuss how this may be empirically assessed. Determining internal or external barriers, for instance, would be a good starting point *(chapter 4.6)*	Based on the theoretical requirements for premeditation, severe addiction could be considered a contra-indication for the ability of 'calm deliberation'. Yet practically, this is not often done, or it is negated by *culpa in causa (chapter 3.3)*
	There seems to be a distinction between different 'types' of addicted individuals: severe addicts, who may have considerable difficulty controlling their behaviour and taking (diachronic) responsibility for their actions, and individuals who do not experience such severe impairments. Such a distinction may prompt different approaches for the law *(chapter 2.4 and 2.5)*	If non-accountability requires a strict mono-causal connection between the disorder and the offence, it would be difficult to fulfil this requirement based on addiction. Moreover, the degree of impairment must be very severe and there cannot be prior fault (which is currently limited to general foreseeability). Consequently, although it seems theoretically possible to have addiction as a basis of non-accountability, it seems to be most appropriately accommodated in the sentencing phase (which includes diminished accountability). This is also the experience of several practitioners *(chapter 3.5 and 7.2)*
	Sanctions in cases of addicted defendants, such as imposing measures or adding special conditions, are suggested to be most effective if they are based on an individualised approach. The Risk-Need-Responsivity model may be used as a starting point *(chapter 3.6 and 7.2.7)*	A clear legal framework, and subsequent standard based on capacities, is lacking for non-accountability and *culpa in causa*. For non-accountability, several scholars have made valuable and thorough suggestions for such a framework. For *culpa in causa*, foreseeability is discussed as a potential requirement, but needs to be explicated whether this is subjective or objective, concrete or abstract.

> Moreover, volitional impairment seems to be either missing in the requirements or not adequately addressed, even though volitional incapacity would interfere with the ability to take anterior responsibility. Demanding a clearer normative link between T1 and T2, can be helpful in developing such standard *(chapter 3.5, 4.5 and 4.6)*

The main research question, which was 'How may addiction influence the criminal liability of addicted offenders and in what manner may the neuroscientific perspective of addiction inform and affect this?' can be – roughly – answered based on these conclusions. First, addiction has shown to be relevant in the assessment of criminal liability in several ways, and across several occasions. Based on the doctrinal analysis of chapter 3, I concluded that the lack of a clear legal standard for non-accountability, and the current framework that emerged from the Supreme Court, does not necessarily exclude addiction as a basis for non-accountability. It will, however, be difficult to satisfy the mono-causal requirements, as stipulated in some recent case law, and it will be difficult to prove the large – if not absolute – degree of impairments in volitional or cognitive capacities. Here, the neuroscientific perspective on addiction, and the knowledge this provides on the nature of the impairments, may increase the possibilities for a successful defence. Yet together with the negating possibilities of the prior fault rules, it is not surprising that currently in practice, addiction is most commonly address in the context of diminished accountability and thus the sentencing phase. However, it was concluded that a clearer framework for non-accountability would lead to a more appropriate assessment of addiction, especially in complex cases of co-morbidities. With the addition of neuroscientific methods to the existing diagnostic tools (currently, neuropsychological testing seems mostly relevant, but this may be expanded in the future), courts may obtain a more accurate picture of the defendant's capacities and impairments caused by prolonged substance use.

Similarly, this study concluded that *culpa in causa* is often directly applied to cases of addiction, with or without intoxication. Although this 'quick fix' is often satisfactory, a clear normative framework is lacking, specifying the fault in prior fault. I suggest to include a concrete foreseeability requirement in such a framework, which also allows severe volitional impairment to negate a *culpa in causa*. Again, based on neuroscientific research, this seems to do more justice to some extreme cases of addiction. There is a potential role for the expert to report on these capacities, and a potential role of the legal actors to request such an assessment. In any event, both accountability and prior fault would benefit from developing a clearer framework based on, or at least including, a capacitarian approach.

In addition to the more doctrinal perspectives to the research question, the empirical studies also shed some light on this interdisciplinary topic. Based on the case file study, it was found that there are many ways in which addiction plays a role in criminal cases, and

that this is often interwoven with other aspects (such as comorbidities) or only addressed implicitly. There was no prominent preference for a specific perspective or model of addiction, even though the implicit remarks seemed to mostly resonate with the choice model. The effects of such differences in perspectives did show to be significant. The vignette study demonstrated that when criminal law students and prosecutors are presented with a neuroscientific perspective towards addiction, that they perceive the defendant's accountability for the offence to be lower compared to a choice centred perspective. This stresses the importance of addressing any underlying or implicit views on addiction. Moreover, it shows how – very practically – neuroscientific insights can have an impact on the assessment of criminal liability of addicted defendants. This, in sum, is a succinct answer to the research question. I will now address the main conclusions, but predominantly their subsequent recommendations, in more detail.

8.2 Addiction and neurolaw on a micro level

This section discusses the conclusions from an individual case perspective. The section is split in two parts, the first being about the conclusion that it is necessary to address addiction from a capacitarian perspective. Moreover, it was concluded that there are added benefits of distinguishing – where possible – between cognitive and volitional capacities. Based on these two main conclusions, I discuss potential consequences and recommendations. Part two addresses some more practical aspects of a capacitarian framework. The added benefits of BCN-scientific tools, methods or insights in the assessment of the defendant are discussed in more detail.

8.2.1 Addressing addiction from a capacitarian perspective

Based on the case file study (chapter 5), it was found that in individual cases, addiction is often discussed integrally with other relevant mental circumstances. Moreover, sometimes it is not discussed at all, despite the fact that there may be very severe impairments specifically caused by the addiction. Although this partly relates to a general difficulty in disentangling various conditions and capacities, it also seems to suggest a reluctance to mention addiction in general. As was further discussed in the interviews, this is either because it may have negative consequences, or because it seems redundant (due to prior fault arguments), or simply because there are other, less controversially relevant disorders present. Moreover, very often implicit prior fault-like statements were encountered, both in the case files as well as during the interviews. When this conclusion is evaluated in light of the legal framework, it becomes clear that the lack of clearly specified capacities goes hand-in-hand with unclear standards for non-accountability and *culpa in causa*. The

contents of such frameworks are discussed in more detail in section 8.4, but the (lack of) standard naturally affects the assessment of an individual defendant in individual cases. Based on these combined conclusions, one of my main recommendations, to start with, is to be more explicit about the defendant's capacities and impairments related to addiction.

A first concrete conclusion is that it seems to be more beneficial, for the defendant as well as for legal professionals and society, to focus on capacities when discussing the defendant's mental condition, and to refrain from using labels or categorisations when these are not relevant. Importantly, there are occasions in which diagnostic labels are useful or even necessary, for instance in the behavioural report and the very first question of assessing non-accountability, which requires the presence of a mental disorder. Moreover, treatment institutions and interventions also require a formal diagnosis before they can admit, finance and treat a patient. But also more fundamentally, distinctions between disorders and diagnostic labels are of course a core element in psychology and psychiatry. My suggestion is not to abolish them. Instead, these could be complemented by a more capacity-based approach, which shows itself to be better able to accommodate the questions asked by the law.

In fact, the call for a more individualised 'capacitarian' approach is not limited to my findings or to a criminal legal context either. This study's discussion of capacities is relatively limited to concrete effects on volitional and cognitive abilities, but the general discussion is much broader. There is an ongoing plea to focus on capacities – although it is not necessarily referred to as capacities, but also dimensions, degrees or spectra – and to revise the classic diagnostic structure based on categories.[904] What this essentially does, and what I also argue for in the case of addiction, is to shift the focus from labels or categories to a more individualised and holistic approach to impairment. In that sense, this development is similar to those encountered in personality disorders or autism spectrum disorders.[905] Albeit this larger discussion is outside the scope of my expertise, it goes to show that my conclusion is neither new nor innovative but ties into a more general demand. Also in conceptualising addiction, this remains a debate in which the benefits of categories (such as determining treatment facilities, submitting insurance claims, or deciding psychopharmacological treatment) are weighed against a dimensional approach (which

904 See, for instance: Brazil and others, 'Classification and treatment of antisocial individuals: From behavior to biocognition' (2018) 91 Neuroscience & Biobehavioral Reviews 259-277; Conway, Krueger and HiTOP Consortium Executive Board, 'Rethinking the diagnosis of mental disorders: Data-driven psychological dimensions, not categories, as a framework for mental-health research, treatment, and training' (2021) 30 Current Directions in Psychological Science 151-158.

905 Regarding the classification of personality disorders, see Porter and Risler, 'The new alternative DSM-5 model for personality disorders: Issues and controversies' (2013) 24 Research on Social Work Practice 50-56. Regarding autism, see McPartland, Reichow and Volkmar, 'Sensitivity and specificity of proposed DSM-5 diagnostic criteria for autism spectrum disorder' (2012) 51 Journal of the American Academy of Child Adolescent Psychiatry 368-383.

is, amongst others, superior in predicting treatment needs and clinical outcome).[906] The findings of this study add to this discussion by arguing that several legal questions would also benefit from using capacities as a primary conceptual framework.

Based on the case files as well as the interviews, I concluded that when asked, many professionals seem naturally to distinguish between cognitive and volitional capacities, thus incorporating this suggested approach. However, it often remains implicit: the qualitative data suggests that the defendant's impairment is discussed integrally, which would be good (given the earlier plea for the abolition of a diagnostic-focussed perspective), were it not that the addiction may become neglected due to other conditions. As the consequences of addiction can be severe, as well as legally relevant, as concluded in chapters 2 and 3, it is important that addiction is not overlooked in complex cases of comorbidity. This is important for two reasons. First and foremost, addiction is often additionally addressed in light of prior fault, contrary to less controversial conditions. That means that the specific nature of addiction, and the relation with the consequences of capacities, require an additional assessment, in which it is necessary that the volitional impairment that addiction can potentially result in is adequately emphasised. By distinguishing the two capacities, and thus acknowledging that the defendant may be fully aware of the circumstances and consequences, but was perhaps unable to control his behaviour, the defendant's mental states are more accurately described in a way that suits the concepts of accountability and *culpa in causa*. It ensures that the volitional impairment is not overlooked or disregarded. Second, by explicitly focusing on cognitive versus volitional capacities, the communication between different disciplines is improved. If the behavioural expert clearly addresses both, it facilitates the transfer of knowledge from one discipline to the other. Importantly, it can be very difficult to disentangle these two capacities from one another from a behavioural perspective and this may not always be possible. But when it is, the individual defendant would benefit greatly from a specific assessment. Not only in terms of adequately assessing accountability and prior fault, but also in the risk assessment and sentencing. These latter elements may be better suited to the needs of the defendant and by extension, also for society.

As a final note, the clarification of capacities goes hand in hand with the need for a clearer legal framework (for non-accountability and *culpa in causa*) as mentioned. If a (clearer) framework demands certain capacities, then this naturally leads to a more focused discussion of those required capacities. In their judgments, courts would need to explicitly fulfil the requirements or justify why they would be negated. In other words, this suggests that the following matters would need to be addressed when discussing the role of addiction on criminal liability. First, what is the (normative) framework for accountability and *culpa*

906 Helzer, Van Den Brink and Guth, 'Should there be both categorical and dimensional criteria for the substance use disorders in DSM-V?' (2006) 101 Addiction 17-22.

in causa; second, what does that mean for addiction and the impairments that this causes; and third, whether we have the practical tools to assess these impairments in individual cases. This last point will be discussed further.

8.2.2 Determining capacities in practice

A second conclusion relates to the assessment of these capacities. I concluded, in chapter 2, as well as in chapter 3 and 4, that methods and insights from the BCN-sciences may help specifying the capacities of the defendant. When incorporating capacities explicitly – which will be evidently more the case if these are incorporated explicitly in the legal framework/standard to begin with – and when attempting to distinguish between the two types of capacities, there may be additional benefits from the use of neuroscience. This is, in itself, not necessarily new. In this homicide case, for instance, a neurologist examined the defendant and identified the specific brain impairments caused by white matter lesions. He determined that this resulted in cognitive impairments for the defendant, resulting in a reduced ability to oversee the consequences of the defendant's actions.[907] Although this was a case of dementia, it clearly shows how neuroscientific methods may complement other forms of assessment to produce a better overview of the capacities of the defendant. Thus, it can be concluded that for addiction, additional assessment methods may be useful. However, assessing individuals' mental states with neuroscience was discussed to be problematic in the introductory chapter. Thus, a recommendation is for jurists to specify what information they need regarding cognitive and volitional capacities, by identifying the requirements of the law from a capacity perspective. Based on this, more concrete and tailor-made tests may provide an empirical basis to such assessments. As an example, factors related to the capacity for control (such as heightened impulsivity) can be empirically assessed with neuroscientific or neuropsychological tests.[908]

To discuss such an empirical assessment a little further, it could be useful to identify general capacities for control (such as general abilities for inhibition, e.g. measured with a go/no-go test)[909] and using this for an informed assessment can be made about the time of the offence, bearing the circumstances in mind. Such a general capacity is also relevant in assessing the defendant's diachronic control in relation to the *culpa in causa* assessment. Diachronic control is dependent on, for instance, internal factors such as the capacity to foresee future consequences (myopia for the future) or external factors such as availability

907 Court of First Instance Midden-Nederland, September 19th 2018, ECLI:NL:RBMNE:2018:4470.

908 See the overview in section 2.6.

909 Wright and others, 'Response inhibition and psychopathology: A meta-analysis of go/no-go task performance' (2014) 123 Journal of Abnormal Psychology 429.

or effectiveness of treatment.[910] Later, I discuss some doctrinal adjustments to this prior fault doctrine, but for now, it is relevant to mention that neuroscientific methods may also be informative. Behavioural tests combined with neuroscientific measures (blood flow, functional or structural scans)[911] can provide an overview of neurobiological impairment more generally.

Moreover, it is also relevant to use neuroscientific tools to better inform on the potential neurological impairments caused by addiction specifically. The behavioural consequences are often discussed (and, arguably, ought to be discussed more explicitly) but also concrete brain impairments can take a more central stage.[912] In the case file study, it seemed that impairments *specifically* caused by prolonged substance use were hardly elaborated on. A potential reason was that these impairments were not considered severe enough to lead to mitigation, or that there were other less controversial impairments to focus on. Yet in the interviews, it was mentioned that cases of severe brain damage such as with Korsakoff syndrome could be an important factor in determining liability. Although such impairments are not directly comparable to the less severe effects of addiction or substance abuse that occur in the majority of cases, it may nevertheless be helpful to try to establish whether there are serious brain-related impairments caused by substance abuse. These are then to be related to the behavioural capacities as mentioned before. Although the presence of brain damage *per se* is not sufficiently informative to the law,[913] it does provide additional evidence in the assessment of the defendant's capacities. It can also be indicative of severity, which is relevant if the law creates specific rules catering to the subgroup of severely addicted defendants. Of course, explaining a neuroscientific perspective to capacities may also have additional mitigating effects, as the vignette study suggests.

A third and final conclusion of this section relates to estimating the causal connections between the impaired capacities and the addiction. I concluded that an important element for non-accountability is the connection between disorder and offence.[914] Moreover, I previously argued that an adequate assessment of prior fault requires a more explicit explanation of underlying causes and mechanisms. This is necessary to address whether or not the intoxication or addiction was culpably caused.[915] Consequently, it is relevant to make the connection between addiction, intoxication and other comorbidities more explicit,

910 I discuss other factors in section 2.4.1.

911 Volkow, Koob and Baler, 'Biomarkers in substance use disorders'.

912 There is, naturally, more to the addiction than merely brains and behaviour. Several cognitive and affective functions are also impacted by addiction which add to a holistic explanation of the role of addiction in the life of the defendant. For the purpose of this thesis, i.e. the potential role of neuroscientific information, I specifically focus on those aspects.

913 See the discussions on the psycholegal error in section 2.5.

914 De Hullu, *Materieel strafrecht: over algemene leerstukken van strafrechtelijke aansprakelijkheid naar Nederlands recht* 352.

915 See section 4.5.4.

whenever possible. This last addition is important, as it may be difficult in practice to do so. Nonetheless, the individual may be served by explaining the dynamics of the impaired capacities, as it may reduce the perception that such impairments were culpably caused.

To end this discussion on the micro level, I want to address an alternative way of looking and assessing capacities. As the exact mental states at the time of the offence will never be possible to determine, it may be time to look for practical solutions that would contribute to these findings to create a general assessment of impairment combined with circumstantial factors. In other words: for a normative and legal assessment of behaviour (which is what the law does), can we also incorporate other (external or objective) factors that inform us on the defendant's capacities, without the need for an exact, internal assessment of the mental state at the time of the offence? Especially for the capacity for control, it is relevant to look at different ways of assessing capacities. As mentioned often throughout this study, it is not always possible to distinguish between defendants who will not control their behaviour, versus those who cannot. Earlier this section, therefore, methods of empirical assessment (and potential improvements thereof) were mentioned. However, in addition to those, we can suggest additional circumstances that are indicative of not being able to control behaviour and being in control of the consequences of addiction.[916] This specific footnoted article, for instance, contains a long list of factors that influence the degree of personal responsibility in acquiring and maintaining addiction, and suggest that more factors lead to a higher degree of difficulty to control their behaviour. As opposed to internal mental states, these factors are relatively easy to assess and I have mentioned some of these before as well, such as availability of treatment and an adequate support network.[917] Thus, the accumulation of such factors leads to dimensions of autonomy/power over the addiction and related impairments. Although these do not inform directly on the amount of control (or other capacities) at the time of the offence, they offer complementary evidence in an overall assessment of whether the defendant *could have been* in control at all. It is worthwhile to expand the assessment of capacities to also include such circumstantial factors. However, further empirical studies need to validate such factors first. In section 8.4.2 of this chapter, I further elaborate on a more objective approach towards volitional impairment.

916 Committee on Addictions of the Group for the Advancement of Psychiatry, 'Responsibility and choice in addiction' (2002) 53 Psychiatric Services 707-713, see box 1.

917 For instance in section 4.6.

8.3 Addiction and neurolaw on a meso level

Also on this level, capacities play an important role. Although this paragraph overlaps somewhat with the previous section, it contains some conclusions on the general approach to addicted defendants. What can be concluded about addicted defendants as a group? The first major conclusion is, perhaps expectedly: do not address addicted individuals as a homogenous group (or addiction as a homogenous condition) when it comes to legal matters of accountability, *culpa in causa* or sentencing. These concepts address liability on a personal level and thus ought to be tailored to the capacities of each defendant. As the previous chapters concluded, any potential mitigating effects of addiction are often minimised by an indiscriminate application of *culpa in causa*. What the literature on addiction shows is that addiction has various degrees of severity and type of impairment. Consequently, negating prior fault or accepting full accountability of the defendant with the use of a generalised addiction-based statement does not do justice to the variety of different impairments.

Related to that is the recommendation to move beyond the classic addiction debate, and to stop discussing theories of addiction in an attempt to find the One True Model. This distracts us from the real addiction debate that matters for the law, as concluded in chapter 2, which is about the capacities that are impaired by prolonged substance use. From a legal perspective, such a debate is much more informative than the dispute between classifications. This general, capacity-based approach to the law was advocated before as well.[918] Thus, not only in an individual's assessment ought we to focus on capacities, but also in the (theoretical) debate on what the (behavioural) consequences of addiction are.

Another recommendation is that it seems relevant to discuss the addiction of the defendant, also by defence attorneys, who often appear hesitant to do so. Based on the vignette study, it is suggested that in itself, addiction is sufficient ground for a diminished degree of accountability as well as a reduced sentence. This would even be more pronounced when emphasising the neuroscientific effects: something that can also be done by the defence attorney. This was also remarked in the interviews, and a more proactive attitude towards their client's addiction may benefit the defence strategy. Specifically asking the behavioural expert to report on the required capacities for synchronic and diachronic control is relevant, as it supports a (potential) argument to critically assess the presence of prior fault. Of course, defence attorneys are bound by the demands of their clients and thus, there may be valid reasons why a defendant's addiction is not discussed. Moreover, as was also stressed by the interviewees, attorneys and their clients may prefer to steer away from behavioural reports if they fear TBS measures being imposed in certain cases.

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918 For instance by Vincent, but also Beukers, see: Vincent, 'Responsibility, dysfunction and capacity'; Beukers, 'Over de grenzen van de stoornis ("Mental Disorder in Criminal Law").

Nonetheless, especially because it is already a given factor in most situations, the defence attorney may as well attempt to use it to his client's benefit.

A last recommendation relates to the content of the discussion by the legal professionals (and to a lesser degree, by the experts) in cases of addicted defendants. Generally, the focus should be on liability for the concrete offence – and potentially, on culpable behaviour prior to committing the offence – but not on liability for being addicted. I recall the citation by one of the judges in the case file study: the defendant was "Ultimately responsible himself for the origins and the continuation of his addiction-related behaviour".[919] It is important that there is no sense of *Lebensführungsschuld* in the assessment of liability for the specific offence. Another important distinction is regarding the assessment of impairment related to addiction and related to intoxication. Sometimes, these two are conflated. In essence, the general conclusion is to be more specific when addiction, addiction-related impairment and addiction-related capacities are discussed, as they are different topics that require individualised approaches.

8.4 Addiction and neurolaw on macro level

Perhaps this category of implications is the most interesting one, as it delves into the adjustments of legal structures based on the research. Thus, these are rather doctrinal or normative conclusions on a macro level. I would like to discuss the default position. A conclusion of this study was that we presume all individuals to be in control of behaviour. Related to that is also the reasonable man standard and the compatibility of addiction with such standard. I argue that, if we accept that, we cannot base criminal liability on holding defendants responsible for being addicted, i.e. if *Lebensführungsschuld* should not be a ground for criminal liability, then we must be critical of this reasonable man standard as well as the default position that implies volitional capacities. A second major discussion concerns the framework and criteria for non-accountability and *culpa in causa*. I concluded that a clear and appropriate framework was lacking. Thus, I argue that these need to be made more specific and be made broader, and I offer some suggestions. Lastly, I aim to incite some critical thinking about alternative sanctions. This study concluded that some measures are not always effective, and that legal actors sometimes experience frustrations with the amount and incompatibility of special conditions and measures. Some aspects that are relevant here are drug courts as well as a critical perspective towards the current ISD (repeat offender) measure and special conditions.

919 This case was mentioned in section 5.2.6 and further discussed in section 5.3.5.

8.4.1 The default position

Based on the doctrinal research as well as the interviews, this study concluded that criminal law seems to posit a default position in which we presume every individual to be in control. In essence, this presumption seems to be an appropriate basis for liability. Yet this study also shows that there is a (small) subgroup in society that is not always capable of doing so. With the increase in neuroscientific research, it seems that individuals that are very severely addicted are perhaps not generally capable of conforming their behaviour to the law. It is important to emphasise that this relates to a small subgroup of severely addicted individuals: often people who started using drugs at a very young age, with genetic predispositions and/or many environmental circumstances that complicate the course of their addiction. Regarding this, we can draw a comparison with our knowledge and perspectives on juvenile and adolescent offenders. A similar development, in which neuroscience has played a role, led to the development of a separate legal structure to accommodate the specific characteristics of this subgroup. Now, what if a similar reasoning were to be applied to (severely) addicted individuals?

By recognising general characteristics across a subgroup in society (developmental difference in the case of adolescents), the law could accommodate this by creating a tailor-made standard that still allows criminal liability but is suited to these particular needs. Creating a specific 'addiction law' ('*verslavingsstrafrecht*'), to mirror the development of adolescent law, would be an interesting and controversial thought experiment. This would undoubtedly provoke some critical thinking about how addiction is approached in the law. The underlying premise of such an argument is that we do not blame the addict for being an addict, just as we do not blame an adolescent for being an adolescent. Of course, this scenario remains hypothetical, as it seems that the current law already has several methods to accommodate addiction (-related impairments) and that a separate legal approach is not necessary, unlike the situation with adolescents. However, it does illustrate that by expecting this (small) subgroup of individuals to conform to a standard they cannot conform to, society essentially seems to be punishing this group for being addicted. Rejecting *Lebensführungsschuld* in cases of very severe addiction, on the one hand, but upholding our default position of being in control, on the other hand, is in my opinion incompatible. If there are appropriate means to accommodate such impairments, such as (diminished degrees of) accountability that could encompass addiction, or a more specific prior fault framework, a strict default position can be justified. After all, that would mean that those who do not have the capacities to meet this standard, can still find ways for this to be recognised. Thus, critical reflection on our current frameworks (as I do below) can be relevant here. Moreover, how to identify such 'hard' cases of addiction also requires additional research, research that incorporates neuroscientific methods.

8.4.2 Specifying legal frameworks: accountability and culpa in causa

Regarding (degrees of) accountability, I can be brief. As was discussed before, non-accountability is usually considered an inappropriate consequence for addiction, although I concluded that it seems theoretically possible, especially when taking a neuroscientific perspective towards addiction. However, only for very severe cases of addiction, particularly which have led to additional disorders or which have developed into other progressive conditions (e.g. Korsakoff syndrome), may the excuse be relevant.[920] Nonetheless, one of the conclusions of this study is that a clearer framework for non-accountability ought to provide more clarity in this regard. The exact content of such a framework is beyond the scope of this research and was elaborately discussed by Bijlsma already.[921] The conclusion of this research is mainly that such a framework is necessary to consistently and fairly be able to assess the role of addiction in (complex) cases. The German system illustrates that a doctrinally sound assessment of such cases is not a utopian scenario.

On a similar note, one of the main conclusions of this study relates to the concept of *culpa in causa*. Aside from addressing the defendant's capacities more explicitly and requiring individualised assessments, as mentioned in the previous sections, I suggest four fundamental changes to this doctrine. First, my recommendation is to draft clearer criteria for the application of *culpa in causa*. As it currently stands, the case law is quite varied and based on the case file analyses, prior fault is often covertly discussed or implicitly assumed in between the lines. Specifying concrete requirements may ensure a more consistent, and a more overt application of the doctrine. What this would additionally result in is that legal professionals would maintain consistency in what they blame the defendant for: the behaviour at hand, or being addicted. As I have explained, being responsible for behaviour caused or influenced by addiction, and responsibility for being addicted, are two different questions and ought not to be conflated. Doing so would result in making addiction into an unacceptable status of offence.

Second, I recommend that the concept of foreseeability is a good starting point for more concrete requirements to determine whether the impairments at the time of the offence were culpably caused. In formalising such a requirement, the legislature has two matters to address. The first is whether to use an abstract or concrete interpretation of foreseeability. Should the defendant foresee the offence at hand, or at least the type of offence, or is foreseeability as to any unwanted consequences sufficient? I believe that the first is more appropriate, although the latter seems to be reflected in the case law more often. The second matter regarding foreseeability is whether to assess this subjectively

920 Which is also the German perspective, see Goldberg and Roef, 'Addiction, capacities and criminal responsibility – a comparative analysis' 223.

921 Bijlsma, *Stoornis en strafuitsluiting: Op zoek naar een toetsingskader voor ontoerekenbaarheid.*

(factually) or objectively (normatively), i.e. whether the defendant did in fact foresee the (abstract or concrete) consequences, or whether he *should have* foreseen the consequences. These matters are for the Supreme Court to decide, who is ultimately in charge of clarifying the scope of the prior fault doctrine.[922]

As a third, I recommend to include more explicitly a volitional prong in the assessment of prior fault, just as there is a volitional prong in the excuse that *culpa in causa* attempts to negate.[923] By focusing on diachronic control, it is possible to get further information on whether or not the impairment at the time of the offence was culpably caused. Thus it may not be relevant to apply *culpa in causa*, not only if the defendant did not foresee the consequences, but also if the defendant was incapable of controlling the unravelling of events. What has been mentioned throughout this study, however, is the difficulty to distinguish the inability to control behaviour as opposed to an unwillingness to do so, i.e. the 'twilight and dusk' problem. Even though other studies often suggest that such distinction is impossible to verify, they do not justify or substantiate this claim.[924] For the sake of this argument, however, let us assume that it is indeed impossible to distinguish exactly between twilight and dusk. Does the law even require a conclusive, empirical distinction between a defendant who *could not* or *would not* control his or her behaviour?[925] Other legal questions requiring an insight into mental states cannot demand conclusive evidence either. As a result, Dutch criminal law objectifies certain legal matters. To provide an example, consider the assessment of the volitional prong in conditional intent: whether or not the defendant accepted the considerable chance of the harmful consequences. Such an assessment is also based on circumstantial factors and the absence of contra-indications.[926]

Importantly, entirely objective (normative) approaches, such as with intent, have also been criticised.[927] An entirely objective approach to volitional impairment would not be favourable, and I am merely suggesting that objective evidence of external circumstances

922 It is also possible that the legislature could clarifies this. For instance, Switzerland includes a prior fault clause in the article on insanity in the Swiss Criminal Code (SCC): the defence is denied "if the person could have avoided the state of mental incapacity or diminished incapacity and was, at that time, able to foresee the act he committed in that state" (§ 19 SCC)."

923 That is, for non-accountability: the other defences have not be studied extensively, and thus I do not provide further recommendations about those.

924 Corrado, 'The case for a purely volitional insanity defense'.

925 As the Dutch system (and the German system as well) allows a diminished accountability counterpart, as well as flexibility in sentencing, it seems less problematic to forego an exact distinction between twilight and dusk compared to a common law jurisdiction.

926 See section 3.4.

927 Also, a relatively open approach to non-accountability in the Netherlands, and the general possibility of a diminished accountability defence, explains a strict objectivist approach to intent. Thus, even though objective evidence can be used to determine intent, this does not necessarily mean that it is equally appropriate for other legal questions.

can be used as contra-indication in addition to more subjective evidence regarding the defendant's mental state. On a practical level, for instance, neuropsychological tests may be used to assess inhibition or impulsive traits, which may then be evaluated in light of all other circumstances to conclude whether or not there was a significant impairment of volitional capacities. This means that the concept itself remains subjective, only to be informed by objective factors. Moreover, by looking at Germany, it is clear that volitional impairment is also (partly) deduced from circumstances. If addiction causes the defendant to have compulsive cravings, and these cravings are directly related to the offence (i.e. stealing a purse to purchase drugs), this may be accepted as a diminished capacity defence.[928] It is necessary that the offence be a property offence to ensure this normative link. Fear of extreme withdrawal symptoms can in rare cases also qualify as volitional impairment.[929] This merely goes to show that it is not far-fetched to include some more objective evidence if that helps circumvent the problem of quantifying how much control exactly was lost at the time of committing the offence.

A fourth recommendation is related to the application of *culpa in causa* to cases of substance-induced psychoses. It is understandable that the law wants to address whether the psychosis was culpably caused or not. In such cases, I conclude that it is inappropriate to accept prior fault based solely on the fact that the psychosis was substance-induced, due to the interplay of factors and the problems in determining the causal connections. Here, assessing the applicability of *culpa in causa* based on the aforementioned suggestions is even more pertinent.

As was mentioned before, but once again emphasised, is the role of legal professionals in these recommendations. Legal professionals can play a large role in clarifying requirements and explicating capacities, by requesting reports on these from behavioural experts. Alternatively, behavioural experts can proactively inform legal professionals on the more specific capacities that are required for, for instance, *culpa in causa*. As there is already a standard set of questions for the behavioural experts, these could perhaps be expanded in cases where addiction or intoxication plays a role. Of course, the expert's assessment ought to remain within their own expertise: the normative conclusion would still be the domain of the court. In the valorisation addendum, I briefly discuss the possibilities for incorporating these remarks in the context of professional training and development.

928 Goldberg and Roef, 'Addiction, capacities and criminal responsibility – a comparative analysis'.

929 Pfister, 'Die Beurteilung der Schuldfähigkeit in der Rechtsprechung des Bundesgerichtshofs' (2019) 9 Neue Zeitschrift für Strafrecht - Rechtsprechungs Report 233-264.

8.4.3 *Appropriate and effective sanctioning*

A final conclusion focuses on current sanctioning methods: interviewees expressed their discontent with the way in which sanctions were sometimes employed in addicted cases. As was suggested by some of the interviewees, and also in the theoretical framework, the current ISD measure for repeat offenders is not very effective compared to regular sanctions. The idea seems similar to what we know about drug courts. Also developed as a way to combat the ineffectiveness of 'regular' criminal legal methods, these specific drug courts include restorative and community elements in its interventions. The courts aim to combine treatment, intensive supervision and regular court appearances.[930] Based on Mitchell and colleagues' meta-analysis, it seems that the average effect of a drug court intervention witnessed a drop in recidivism from 50 per cent to 38 per cent, for a up to three years.[931] Hence, slightly more positive than the recent findings on the ISD measure, albeit not much.

Moreover, for courts and prosecutors it is relevant to be aware of the difficulties that are experienced with special conditions, either with respect to conditional sentences or conditions for parole or early release. Due to the complex nature of addiction and comorbidities, but especially due to associated problems in other life domains (i.e. occupational, social, financial etc.) it is often difficult if not impossible to adhere to all requirements. To paraphrase one of the interviewees: we would be setting them up to fail. I conclude this section, therefore, with the recommendation to carefully consider which special conditions are imposed when the defendant is (heavily) addicted. Focusing on the second 'R' in the RNR principle, the responsivity to interventions ought to be taken into consideration when formulating the most appropriate sentence. This is, in turn, strongly influenced by the capacities of the defendant. Thus, a capacitarian approach may also be beneficial regarding sentencing.

8.5 General limitations to the conclusions

Before ending this chapter with some suggestions, it is important to emphasize some general limitations regarding these conclusions. Certain decisions regarding the scope of this research (see section 1.3) already influenced the limitations of the research. Focusing on Dutch law as a primary legal framework, for instance, inherently limits the scope, and thus the conclusions. Nonetheless, as explained before, this does not mean that the conclusions about addiction in criminal law are not valid in a more global context, only

930 Fulkerson, Keena and O'Brien, 'Understanding success and nonsuccess in the drug court' (2013) 57 International Journal of Offender Therapy and Comparative Criminology 1297-1316.

931 Mitchell and others, 'Assessing the effectiveness of drug courts on recidivism: A meta-analytic review of traditional and non-traditional drug courts' (2012) 40 Journal of Criminal Justice 60-71.

that the specific legal requirements to which it is applied may differ. Aside from these limitations that were inherent to the scope of the research, there are some general limitations. Importantly, the three empirical studies had their own strength and weaknesses that I will not repeat here.

First, the focus of this research was on the relevancy of addiction for criminal law, specifically *substantive* criminal law. Both the legal framework as well as the empirical studies addressed substantive legal matters, such as *mens rea*, (non-)accountability, *culpa in causa* and the various sanctioning possibilities. Yet in my conclusions, I have mentioned some elements that touch upon the procedural side of criminal law, such as the requirements for pre-trial detention or the imposition of certain measures. It is important to bear in mind that there was no thorough legal analysis of Dutch criminal procedure and that in the empirical studies, procedural criminal law was not included. As a consequence, such remarks are to be accepted with reservations and further research is warranted. They would make valuable additional research projects, especially the imposition of certain measures and their suitability for addicted defendants.

Second, the research questions focus on the possible influence or role of 'neuroscience' as if this were a singular concept. Although I explain in the introductory chapter that neuroscience consists of various techniques and theories, throughout the rest of the study, I often do not address the range of neuroscientific methods. Most often, neuroscience is reduced to brain imaging techniques and in the vignettes, the influence of neuroscience is conceptualised in a more general neuroscientific perspective rather than specific techniques. It is a point of attention that each aspect of neuroscience has its own strengths and limitations and that the conclusions about neuroscience in general ought to be interpreted circumspectly.

Third, there is a limitation in scope of perspectives discussed throughout the study. Other professional disciplines involved, such as parole officers or policy-makers, and their perspectives may not be adequately represented in this study. Especially regarding some of the recommendations, the executing parties (governmental officials in charge of policies) may have had relevant comments. The perspectives discussed were chosen purposefully in order to focus on substantive criminal law, which was the aim of this research. Thus, this is not so much a criticism of the current methodology but instead an aspect to bear in mind when reading the conclusions. Similarly, there was limited time and attention paid to the empirical assessment (from the BCN-sciences) of capacities. Some suggestions were made, for instance regarding the assessment of impulsivity in section 2.6, but a more extensive framework is definitely necessary to fully capture the relevancy of the BCN-sciences in addressing addiction.

8.6 Suggestions for further research

It is essential to continue research on neurolaw and addiction as a whole. Further evidence on the effects of sustained substance use on the brain and behaviour will remain relevant for the law. Consequently, as the law is ever-changing, the compatibility of these effects with legal practices will always be necessary to study. I do have a few more specific suggestions for further research, beyond such general remarks.

First, it would be very interesting to further delve into the underlying mechanisms of the neuroscience bias that is sometimes experienced. As there are mixed results regarding this phenomenon, it is necessary to find out when and how such biases are experienced. In the vignette study, I address some hypotheses about which process could underlie this, such as perceptions towards control and choice, that would be worthwhile to explore empirically. Moreover, also normatively, the discussion of control remains compelling. In what way can we conceptualise the concept of control in criminal law, and how can empirical results support this? This seems to be essential in combination with my previous conclusion that the capacity for control ought to take a more central role, for instance in *culpa in causa*.

A second, related suggestion is to do more empirical research into the difference between 'twilight and dusk', i.e. between an impulse not resisted and an irresistible impulse. Which circumstances (external and/or internal) contribute to a loss of control and is there a way to quantify this? Although a conclusive quantification is unlikely, perhaps such research can still lead to a recommendation under which circumstances a defendant can be considered incapable of exercising control.

As a third, I believe it would be worthwhile to conduct more thorough comparative legal research into the efficacy and structure of drug courts and mental health courts. As several jurisdictions have now had such courts for some years, and several meta-analyses discuss their effectiveness,[932] these findings can be applied in a legal comparison with the Dutch system. In what way would this differ from our current practices, such as the IDS measure, and how would such courts be structured within the structures of Dutch law? Such research may be relevant in the evaluation of practical approaches to addiction in criminal law.

From a theoretical perspective, more normative and ethical research ought to be conducted concerning my suggestions regarding the default position that the law holds, and the development of 'addiction law'. A fourth suggestion is thus to create a framework in which the potential benefits and drawbacks are better discussed. Comparative analysis with the current adolescent law, but also taking potential effects of stigmatisation into

932 Ibid.

account due to separating addicted defendants from general criminal legal practices, may provide a better insight into the feasibility and fairness of such a system.

Fifth, as mentioned briefly in section 3.6, it would be very interesting to conduct an empirical study on the court decisions for addicted defendants who are addicted, versus those who are not. Especially when their capacities seem to be the same (and liability can be established), it would be relevant to know whether the addiction itself has negative consequences. In such a case, this would provide further evidence towards a *Lebensführungsschuld*. As similar vignette-based framework would be useful in this regard, in which an identical hypothetical case would be presented, containing a healthy defendant as well as an addicted defendant, and potentially also an addicted defendant with other comorbidities.

Sixth, my conclusions and suggestions about the requirements for *culpa in causa* ought to be imbedded in a wider societal framework as well. In section 4.4 I speculate on the role of Dutch drug policy in the approach to voluntary substance use. A relevant framework to examine, in order to better understand the current rationale to prior fault and the societal demands that such a policy needs to reflect. Thus, further discussion of the appropriateness and justifications of *culpa in causa* would require such broader framework.

Finally, a more general recommendation is to hold expert meetings in order to bridge disciplines and bridge academics and practitioners. For instance with focus groups, topics such as a *culpa in causa* framework, or discussions of how to address volitional impairment normatively and empirically, can be reviewed. I realise that professional and expert perspectives have tremendous value in crystalising ideas, but these may be even more effective once different perspectives are immediately put together rather than being integrated afterwards by the researcher. I address this further in the valorisation addendum.

Postface

Researching a complex and interdisciplinary topic is exciting, but also trying at times. Some general experiences, and subsequent advice, may be helpful for future researchers embarking on similar research projects. I want to use this opportunity to reflect on some of these – sometimes personal – struggles.

As a first, I wish to reflect on the relationship between theory and practice. Several times throughout this thesis the discussions overtly shifted from 'law in the books' to the 'law in action'. Several theoretical problems were outlined, evaluated and criticised, especially in the first four chapters. Think, for instance, about the potential dangers of over-valuing neuroscientific evidence; about the controversies on the addiction debate, and the arguments to stop using labels altogether in this discussion and focus on capacities instead; or on the inconsistencies in *culpa in causa* in cases of complex comorbidities. These were serious problems. I thoroughly dissected them, as I expected that 'the practice' would equally struggle with these dilemmas and I thought I needed to adequately assess this. This turned out not to be the case. In fact, many of the theoretical problems were non-existent in legal practice, for instance the scientific addiction debate, which none of my legal interviewees had actively heard of in legal practice. Neuroscientific evidence was hardly used and such complex cases as those that I problematise in the prior fault chapter hardly seem to exist. This does not render the theoretical discussion redundant, not at all, such discussions should always remain at the heart of academic research. But at times trying to explain the findings – for instance the finding that attorneys rarely discuss their client's addiction – through previous research or theories was unsatisfactory because the explanation could simply be that those particular clients were not interested in having their substance use discussed. Instead of a seemingly complex theoretical question, i.e. what legal or psychological processes prevent the attorney from discussing their client's addiction, this may just be the output of a much simpler reality. It is good to be reminded to sometimes stop over-explaining certain findings with complex theoretical analyses, and rather keeping the (occasional) modesty of a practical explanation in mind.

Secondly, I had the opportunity to reflect on the use of empirical legal research. This is an increasingly popular topic, as many universities have built either their curricula or their research programme around this theme. At the start of this PhD trajectory, I had anticipated the vignette study as the centrepiece of this thesis. It felt like adding an experimental study was the epitome of doing interdisciplinary research and that this study would be able to provide long-sought answers to the influence of neuroscientific information. As a social scientist myself, I would be able to inform the law about essential underlying behavioural processes. Luckily, this perception has changed, and now it feels

inappropriate to think this way. Although the study was very relevant, very informative, and very enjoyable to carry out, it did not provide that many answers itself. In the end, it provided this thesis with one (important) element within a balanced project, which strongly required the previously created normative framework. It shows that an empirical study in the context of the law is only relevant when adequately embodied in a theoretical, legal framework in order to be able to relate empirical findings to a non-empirical setting.

What is more, I came to the conclusion that mirroring real-life legal questions in an empirical design is really difficult. The options were to either minimise any confounding factors, and create a design in which all elements had to be kept equal (apart from the variable that you want to examine) or to give in to the reliability and validity of the design. Moreover, the variable to be tested had to be quantified as well. How do you quantify or categorise a normative concept? The currently used method of the vignettes and the case file study is well designed, but can only reveal so much about the workings of legal decision-making and concrete 'effects' of neuroscience. Thus, doing this research has made me more aware of the difficulties in conceptualising complex legal problems in methods that were created for social-scientific problems. Not to say that such research is not important or relevant – it definitely is – but rather to ensure that we do not expect wonders. Based on anecdotal evidence (N = 1) social scientific studies related to the law sometimes dismiss these nuances. Whenever I see that, I recognise my former self.

Annex I: Impact & Valorisation

Especially for such a societally relevant matter as addiction, it is relevant to reflect upon the (potential) impact that this thesis may have on a social or economic level. This annex briefly outlines the ways in which this research contributes to such processes.

Aside from theory-building on the role and influence of addiction on criminal law, and the added benefits of neuroscience, there is a large, practical relevance. This already became apparent in the first chapter, in which I discussed the Tolbert case. There, these differences in perspectives on addiction – as portrayed by the experts – had clear practical implications for the defendant. Thus, it is clear that this study is relevant for the addicted defendant. It nuances the approach towards addiction in various legal questions (such as accountability and sentencing) and advocated for a more individualised approach. If these findings make their way into legal practice, defendants can benefit from this, for instance in cases of complicated comorbidities in which *culpa in causa* may not immediately apply. Even though this is likely relevant only for a subgroup of severely addicted or severely comorbid defendants, it is an important development in valuing the specific characteristics of the defendant and the addiction. Moreover, defendants can benefit from the recommendation to be hesitant with regard to special conditions, for instance in granting parole or in conditional sentences. Furthermore, individual defendants may benefit in general from a more nuanced perspective towards addiction in criminal law, in which the personal capacities of the individual are central.

The other side of the same coin concerns legal professionals (judges, prosecutors and attorneys), who are dealing with addicted defendants on a daily basis and are confronted with the various behavioural consequences of addiction. They need to be able to determine how to incorporate the defendant's addiction into their assessment. To them, this thesis is not so much a theoretical exercise but rather a valuable tool to navigate the various legal questions. The research can guide them towards appropriate uses of neuroscientific tools and information, and provide background into addiction-related problems that they often encounter. Additionally, for experts reporting on addiction, this thesis provides a clear overview of relevant legal questions which they can elaborate on in their reports. Moreover, it contains insights into the effects experts have in their choice of words and type of explanation. To both legal and behavioural practitioners, this thesis bridges the gap between what the law wants to know about the defendant's mind and behaviour, and how the social sciences and neurosciences can inform the law. Similarly, neuroscientists asked to address legal cases from their expertise, or report on legal matters, are better equipped to do so. The meaning of each legal question, and the answers that neuroscientific tools can provide

(or maybe even more importantly, which answers they cannot provide) can guide them in such assessments.

Societal relevancy can be found in the added benefit of neuroscience on a collective level. Hopefully, the insights of this thesis can help shape the general perception towards addiction in criminal law, in which there is a nuanced standing towards the assessment of blameworthiness as well as the sanctioning. Addiction should not immediately be perceived as a negative or aggravating condition. Moreover, I strongly advocate a capacitarian approach in criminal law, not only towards addiction but also for other (mental) disorders. This will lead to tailored conclusions. As a consequence, it is highly likely that sentences are better suited to the risks, needs and responsivity of the defendant which maximises the chances of the intervention being effective. Effective interventions, in turn, lead to less recidivism, which naturally is a desirable outcome for society as a whole.

What is more, several times throughout this thesis I hypothesised whether the societal perspective of addiction may influence legal perspectives, for instance, as was suggested due to some implicit prior fault-like arguments. If this is the case, and an underlying moral model still remains prominently present, this may improve based on new perspectives towards addiction as provided in this thesis. Addiction does not need to become entirely exculpatory, and choice perspectives can still remain, without having an underlying moral disapproval.

As mentioned, there are a few target groups for whom this research is relevant. Mentioned already were legal professionals, i.e. attorneys, judges and prosecutors, as well as behavioural experts who write behavioural reports for the courts. They may be informed about the implications of neuroscience in the law in the case of addicted defendants. This thesis may help put more nuance to their judgments and general approach to addiction. Other target groups that received less attention are policy- and law- makers as well as educational services. To start with the first, this thesis has concluded that, for instance, the current sanctioning of addicted offenders may be suboptimal in terms of efficiency as well as fairness. Suggestions for the ISD measure as well as the potential for drug courts were discussed. This is interesting for those in charge of creating or amending policies.

Secondly, knowledge about neurolaw and awareness about its (potential) implications has been extensively discussed throughout this thesis. Thus, the research can be used for educational purposes as well. Especially for professional training, e.g. post-academic trainings including training to become an attorney or a judge, this would be relevant. Based on the collected literature and the findings, a training programme could be established on the topic of neurolaw and addiction. An interesting party is thus the creators of such programmes. Additionally, university programmes may wish to create more interdisciplinary courses, minors, or degrees. A good example is the interfaculty minor

'Human and Legal Decision-Making' at this university.[933] The topic of addiction in the context of criminal liability offers an excellent theme to bring several faculties together in a joint project.

The practical recommendations for legal professionals can be conveyed in two ways. First, a comprehensive handbook based on the current research may be provided in which the ways to accommodate addiction in all legal questions is outlined. Moreover, the suggested improvements, such as reducing the amount and complexity of special conditions, or the benefits of the capacity approach, can be addressed there. Second, visits to the post-academic research institutions can be used to provide guest lectures or training sessions on the topic. This may eventually result in the creation of specific courses, although a one-off session would already be interesting. Institutes such as SSR (*Studiecentrum Rechtspleging*) provide post-academic training and would be an interesting partner. During the research itself, I already discussed the possibility to come back when the results were out and they expressed their interest in something like that. Similarly, when approaching the Dutch public prosecution office to request their participation in the vignette study, many of the team leaders that I spoke with expressed their interest in hearing about the results. Thus, this seems to be a viable option. Lastly, it may be relevant to join symposia or conferences for practitioners to address the findings and thus reach a large group. These plans will be developed in the course of the next year, after defending this thesis.

It would also be very valuable to bridge disciplines in an expert meeting, where small groups of professionals from various background come together to discuss the interdisciplinary topics that were addressed in this thesis. A framework for *culpa in causa*, how to address capacities in a way that is legally appropriate, whether or not sanctioning is adequately tailored to the needs of addicted defendants: such discussions require different backgrounds and expertise. For mutual understanding, but also for more effective changes (potentially) in the law, it would be useful to involve such groups.

933 An explanation about the contents can be found on this website: https://www.maastrichtuniversity.nl/sites/default/files/minor_human_and_legal_decision-making.pdf, last accessed on 05 May 2021.

Annex II: Summary (ENG)

It is evident that addiction puts a strain on the criminal justice system. Legal actors are confronted with addicted defendants on a daily basis and need to incorporate the addiction, as with other psychological factors, in their judgments about the defendant's liability. In doing so, the law is informed on the nature of the defendant's addiction by these other disciplines, most notably psychology and the behavioural sciences. But not only the field of psychology studies the concept of addiction: over the years, addiction has also been receiving increasing attention from neuroscientific scholars who have approached addiction as originating from and sustained by brain processes. Intuitively, these neuroscientific findings are relevant for the law, as they inform us about the capacities of the defendant and thus their liability for the offences they committed. Yet it is highly important to ensure that the answers that the neurosciences offer are actually compatible with the legal questions asked. Thus, this thesis aims to build bridges between several disciplines in the context of addiction. What does each discipline supply or demand in the context of addiction, and how may that be relevant for each other? The central research question is consequently: How may addiction influence the criminal liability of addicted offenders and in what manner may the neuroscientific perspective of addiction inform and affect this?

In essence, this thesis is divided into two main parts with a distinctly different purpose. The first part consists of an introductory chapter, outlining the general context of the neurolaw discipline, followed by three theoretical and normative frameworks. These frameworks explain the psychological and legal playing fields. The second part contains three empirical chapters. By moving away from theory and addressing addiction in practice, I add original data to the body of research on the role of addiction in criminal law. In the final chapter, I reflect upon the starting point: building bridges between the disciplines by combining theory and practice. Below I provide an overview of the contents of each chapter.

Theoretical and normative frameworks: chapters 1, 2, 3 and 4

Neurolaw is the term used to describe a vast academic discipline that is concerned with human cognition and behaviour relevant to the law, for instance lie detection, memory, moral reasoning, impulsivity, pain and addiction, amongst others. A neurolaw perspective towards addiction can be divided into roughly three purposes: micro (individual), meso (group/collective) and macro (structural). On an micro level, the neurosciences may be helpful in determining the capacities of an addicted individual facing legal consequences. For instance, courts may wish to assess brain damage with the help of diagnostic

neuroscientific methods such as brain scans. Neuropsychological tests are also relevant to address cognitive capacities such as impulse control or attention. It is important to be aware, however, of the relevancy of such methods for legal questions. After all, the law does not need to know about impulsivity in isolation, but needs to relate this to normative concepts of intent or blameworthiness. As the later chapters explain, these terms do not have direct psychological or neurological markers, although such capacities can help inform making assessments. On a more general, meso level, neuroscientific findings can help establish why addicted behaviour is so hard to resist and what consequences addiction generally has on capacities. Although such information needs to be cautiously applied in individual cases, it is useful to guide general perceptions about addiction. Lastly, neuroscience can have an impact on addicted offenders on a structural level, relating to doctrines or policies. General findings could result in a change in the interpretation of the law, or result in alternative legal doctrines altogether. For instance, in Australia what are called 'drug courts' have been established, aimed specifically at the needs of addicted offenders. In the Netherlands, we have seen similar policy changes based on neuroscience in the area of adolescent criminal law.

It is clear that neurolaw has much potential to inform on the role of addiction in criminal law. Why, though, is there so much ambiguity about the role of addiction at all? In chapter 2, I explain the addiction debate and the controversies surrounding the conceptualisation of addiction. At the heart of the addiction debate are two models: the brain disease model and the choice model of addiction. Both attempt to explain why people become addicted, and perhaps more importantly, why they remain so. The brain disease model explains addiction as a chronic, relapsing brain disease and reports on findings related to disrupted dopamine pathways and ensuing impairment related (mostly) to control. These findings are based on neuroscientific and genetic research on laboratory animals and humans. The choice model, on the other hand, uses epidemiological studies and first-person experiences to substantiate the claim that addiction is a disorder of choice. Accordingly, it focuses on the *voluntary* nature of the (addiction) conduct to show that addiction is neither involuntary nor uncontrollable. It does so by looking at remission rates as well as reasons and correlatives associated with remission. Although seemingly opposing, there are some common grounds as well, and this chapter elaborates on those. As neither this thesis nor other scholarly output in the near future will be able to end the addiction debate, it seems best to focus on the commonalities. Lastly, chapter 2 considers whether addiction can be called a disease, a disorder, or something else entirely. It is reiterated that not the label, but rather the ensuing capacities or impairment is what is relevant for the law.

After the discussion on the nature of addiction, chapter 3 discusses the legal framework, and provides an overview of the different legal questions in which addiction can play a role. First, the tripartite structure of (Dutch) criminal law is explained. Mirroring our

German neighbours, the criminal justice system is structured along the lines of: (1) fulfilling the objective and subjective offence requirements; (2) assessing the unlawfulness of the offence; and (3) addressing the blameworthiness of the defendant. As this structure is new to non-lawyers or common law based readers, the Dutch system is extensively introduced and briefly compared to the bipartite structure of common law. This latter comparison is also relevant to put each element into a more global perspective. Then, each element is assessed separately to analyse when and how addiction can be relevant. This shows that, theoretically, addiction can most adequately be incorporated in the sentence or measure, which includes the assessment of diminished accountability. Part of sanctioning is also the use of risk assessment and special conditions, both in theory very capable of catering to the needs of an addicted defendant. Chapter 3 focuses specifically on the concept of non-accountability. Non-accountability is the Dutch insanity defence equivalent, and thus a relevant discussion as it deals with a mental impairments as potential excusatory grounds. The Dutch non-accountability excuse has a high standard in which, theoretically, both cognitive and volitional impairments can be the basis of the excuse. In practice, however, the focus is predominantly on cognitive impairments. Moreover, as *all* insight into the consequences need to be lost before the defence is accepted, this standard is not easily met by cases of addiction. The co-occurrence of addiction with other mental impairments, such as a psychosis, does result in interesting dilemmas, which are discussed further.

Such conventional approaches to criminal liability focus on the behaviour and the state of mind at the time of the offence. Fulfilling the definition of offence, and the absence of a defence, results in criminal liability. As mentioned, addiction can have an impact on this assessment, albeit to a limited extent. Yet even if this is the case, does it matter how the addiction (or intoxication) came about? Should the law incorporate prior fault in the assessment of addiction or intoxication? This is the core of chapter 4. The general justification for prior fault rules, *culpa in causa* in the Netherlands, is clear: if one culpably creates the conditions of their own defence, they should not be allowed to rely upon this defence. This would result in unwanted (societal) consequences. Imagine the defendant claiming that due to his intoxication, he did not have the rational or volitional capacities for liability at the time of the offence. Based on the structure of criminal law as discussed before, this would mean that the defendant should not be held liable, or to a reduced extent. In such cases, *culpa in causa* straightforwardly prevents exculpation, and rightfully so. Nonetheless, applying the same reasoning to addiction becomes more complicated. If the defendant claims impairment due to addiction, the question arises whether these impairments were caused culpably. This is a question closely related to the addiction debate, as it seems to question whether addiction is caused culpably and whether one is responsible for continuing the use of substances. I address these complicated matters by first providing an overview of the various academic perspectives on prior fault. This shows that there is no clear consensus on the scope of *culpa in causa*. In general, it seems that addiction and

intoxication are both easily subjected to prior fault, and as long as the substance use was voluntary.

Matters become even more complicated when the defendant additionally suffers from a psychosis caused by or exacerbated by substance use. Often these psychoses are unexpected and thus the question arises whether this is still negligent behaviour: after all, the consequences were unforeseen to the defendant. Two landmark cases, the *culpa in causa case* and the *cannabis psychosis case* are both used to outline four critical remarks on the use of *culpa in causa*. Based on these and additional case law it seems that the harmful consequences do not need to be foreseen in order to consider the prior behaviour culpable. The standard seems to be negligence, rendering a doctrine that mirrors abstract endangerment. I criticise this perspective further by discussing four themes. First, the argument that *culpa in causa* is justified because otherwise criminals would have a 'get out of jail free card' for committing an offence, and that this would have socially unacceptable consequences. I argue that this focuses too much on social acceptability rather than the circumstances at the time of the offence as a basis for liability, and that the social acceptability is an undefined and changing concept. Second, I dissect the notion of 'voluntariness' of using substances in the context of addiction, and argue that the legal standard for voluntariness is too quickly assumed and does not take into account the potential impairments caused by addiction. Third, the often-mentioned requirements of 'knowingly and willingly' is dissected and discussed. Although these requirements seem to mirror those of intent and non-accountability, case law suggests that is interpreted differently. Instead of clear, cognitive awareness, negligence seems to suffice. Volitional capacities do not seem to be as relevant either, rendering the use of 'knowingly and willingly' somewhat inaccurate as well as confusing. Lastly, I discuss the difficulty in determining the causal pathways in prior fault. If a psychosis is negated as an excuse when it is substance-induced, would it matter why these substances were taken in the first place? By using some thought experiments, I point out the causal difficulties that are presumed in the prior fault doctrine.

Empirical studies: chapters 5, 6 and 7

As discussed, there are in principle several doctrinal possibilities in which addition may play a role, despite being impeded by the prior fault doctrine. However, the question remains to what extent these possibilities are employed in practice. The empirical study of chapter 5 uses the data of 70 case files in order to address the manifestation of addiction in Dutch criminal law. Behavioural expert reports, court hearings and closing arguments from both the prosecutor and the attorney were combined to create an overview of the aspects in which addiction was discussed, and how this was done. Some interesting findings

show that surprisingly few attorneys discuss their client's addiction despite the opportunity and relevancy to do so. Moreover, it shows that prior fault plays a major role in these, although more often from a colloquial perspective. Oftentimes, passing remarks are made about the supposed culpability in sustaining the addiction. I discuss the implications of this in the context of *Lebensführungsschuld* and the important distinction between diachronic and synchronic control. Chapter 5 also reflects on the marginal use of neuroscientific methods and evidence in the reports, and suggests some ways to increase this. Finally, the question is raised whether these implicit notions of prior fault or the choice model in general have an effect on how legal professionals perceive the defendants and their liability.

Based on these findings, chapter 6 contains an experimental study to address the exact consequences of different ways of conceptualising addiction. It seemed, based on the case file study, that addiction is predominantly perceived as a choice, or at least that the behavioural impairments of addiction are culpably caused. With the use of vignettes, i.e. a hypothetical criminal case, I test the assumption that a neuroscientific perspective towards addiction would result in lower perceptions of accountability as opposed to a choice-centred perspective. It is clear that these two perspectives mirror the addiction debate. In this hypothetical case, an addicted offender commits either a violent offence or a property crime. Aside from this elementary difference, all circumstances are equal. After an explanation of the offence, the participants are presented with an excerpt from a behavioural report by a psychologist. In this report, the psychologist explains the addiction based on the DSM-5 symptoms, before diverging into either a neuroscientific explanation of these symptoms or an emphasis on the defendant's choice to sustain his substance use. Thus, the set-up is a 2 (offence type: violent vs. property) x 2 (addiction explanation: neuroscientific vs. choice) design.

Two samples participated in this study, namely public prosecutors (N = 106) and master's students in criminal law (N = 171) in the Netherlands. These two samples are analysed separately, but are also compared to address differences between professional perspectives (representing the law in action) and a theoretical perspective (representing the law in the books). The main dependent variable was the participant's opinion on the (degree of) accountability. In addition, various other variables were explored, such a suggested sentence length, perceptions of risk of recidivism, and various addiction-related variables such as perceived severity of addiction and impairment in control. The findings highlight that the way in which addiction is described has a significant impact on an accountability assessment: those who received a neuroscientific explanation of addiction considered the defendant less accountable as opposed to the choice-centred explanation. This has great implications for the way that experts may construct their reports, but also on the awareness for professionals on implicit biases. Aside from this main finding, the exploratory analyses suggest that professionals and students have significantly different

perceptions towards some of the variables. This has general implications for the interpretation of experimental research involving student bodies as a substitute for legal professionals. Finally, chapter 6 outlines several hypotheses that could explain the mitigating effect of the neuroscientific explanation of addiction to be used in future research.

This significant effect of addiction explanation on accountability is, of course, highly relevant for legal actors. It is interesting to involve these groups personally in the discussion, and address these findings in light of their experiences with addiction in the law. Moreover, to create a final bridge between theory-building, experimental data and practice, it is necessary to have a discussion with practitioners. They are best equipped to signal which information is useful in legal practice, but also which practicalities or elements I have yet overlooked. In the final empirical chapter, chapter 7, I therefore interviewed 10 professionals experienced with addiction in criminal cases, from the same four professions that took a central role in the case file analysis. With two judges, three prosecutors, three defence attorneys and two behavioural experts, I conducted semi-structured interviews on several themes, such as the nature of addiction, the relevancy for non-accountability and *culpa in causa*. Some of the major findings include that there is a large gap between theory and practice, for instance regarding the addiction debate. There is little to no discussion on how addiction ought to be conceptualised in practice. Moreover, the differences in attitude between professionals was explored, and most agreed that judges were very lenient in providing opportunities for the defendant and had sympathy for their personal situation, more so than prosecutors. Related to *culpa in causa*, it stood out that most interviewees did not discuss any concrete requirements for the application of *culpa in causa*, with the exception of the behavioural experts. It seems that the intricacies that played a prominent role in chapters 4 and 5 are replaced by pragmatism: the interviewees seemed to focus on the situation and circumstances as a whole, rather than concrete capacities.

The concluding chapter

In the concluding chapter, chapter 8, all elements are combined to answer the main research question: 'How may the neuroscientific perspective of addiction inform and affect the approach to the criminal liability of addicted offenders?' In brief, the neuroscientific perspective of addiction is shown to be relevant for addressing addiction in several ways. First, the neuroscientific perspective can inform courts of the capacities of the addicted defendant: based on general research, which suggests that severe addiction can lead to profound impairments (most notably control-related capacities) it becomes apparent that addiction in severe cases may have legally relevant consequences. However, generalised findings do not directly inform an *individual* of their responsibility, and for individual cases, individual assessments are necessary. Neuroscience may also be informative here.

With the addition of neuroscientific methods to the existing diagnostic tools (currently, neuropsychological testing seems mostly relevant, but this may be expanded in the future), courts may get a more accurate picture of the defendant's capacities and impairments caused by prolonged substance use. Second, aside from informing on general and individual capacities, neuroscientific research regarding the nature of addiction may also affect legal doctrines. To name two examples discussed in this book, the current framework of *culpa in causa*, as well as indiscriminate applications of this framework, can be criticised for not reflecting our current scientific knowledge of the impairments caused by addiction. Also, if the non-accountability excuse would accept volitional incapacity as a requirement, then (highly severe and potentially very rare) cases of addiction ought not to be excluded. Both accountability and prior fault would, in any event benefit from developing a clearer framework (based on, or at least including) a capacitarian approach.

Finally, we can conclude that the neuroscientific perspective of addiction also affects our decision-making. The vignette study shows that the degree of accountability is judged as lower when prosecutors and law students received a neuroscientific explanation of addiction, as opposed to a choice-centred explanation. This indicates that although neuroscience may play an important explicit role in capacities and legal doctrines, we must also be aware of the more implicit effect it has on our perceptions of liability. This, in brief, is a succinct answer to the research question. In chapter 8, I further reflect on these conclusions and provide several recommendations based on these conclusions. I also make some suggestions for further research.

Annex III: Samenvatting (NL)

Verslaving is alomtegenwoordig in de strafrechtketen. Juristen hebben hierdoor vrijwel dagelijks te maken met een verslaafde verdachte en dienen daarom, eventueel met behulp van een gedragsdeskundige, een inschatting te maken van de invloed van verslaving op verantwoordelijkheid. Echter is de precieze conceptualisatie van verslaving al een eeuwenoud discussiepunt. Waar eerdere modellen de keuzevrijheid van het individu benadrukten, is er in de afgelopen decennia meer ruimte ontstaan voor een neurowetenschappelijke visie op verslaving, waarin een prominente rol voor de hersenen – en hersenschade – is weggelegd. Deze ontwikkeling lijkt rechtstreeks relevant voor het strafrecht: kennis over het functioneren van het brein kan immers resulteren in nuttige informatie over het gedrag en capaciteiten van de verdachte. Echter is het noodzakelijk om de koppeling te blijven maken tussen de juridische vraagstukken welke een casus met een verslaafde verdachte oplevert, en de antwoorden die neurowetenschappelijke informatie daarop kan bieden. Deze dissertatie beoogt de neurowetenschappelijke en juridische disciplines met elkaar te verbinden op het gebied van verslavingsproblematiek. De centrale vraag in dit onderzoek is dan ook: Op welke wijze werkt de verslaving van verslaafde daders door in hun strafrechtelijke aansprakelijkheid, en welke rol is hierin weggelegd voor een neurowetenschappelijk perspectief op verslaving?

Dit resulteert – grofweg – in een tweedeling van het boek dat voor u ligt. Allereerst zullen er kaders worden geschetst, theoretisch en normatief, aangaande de huidige conceptualisatie van verslaving in het strafrecht. Dit omvat een korte introductie tot de discipline genaamd 'neurorecht' (hoofdstuk 1), een overzicht van verslavingsmodellen en hun relevantie (hoofdstuk 2), een uiteenzetting van de Nederlandse strafrechtelijke concepten waarbij verslaving een rol kan spelen (hoofdstuk 3) en een analyse van het huidige eigen-schuld-principe, 'culpa in causa' (hoofdstuk 4). Vervolgens worden theoretische kaders ingevuld vanuit een meer empirische invalshoek. Zo komt in hoofdstuk 5 een dossieranalyse van 70 verslavingszaken aan bod. Vervolgens zet ik de resultaten van een vignettenonderzoek onder Officieren van Justitie en masterstudenten strafrecht uiteen (hoofdstuk 6) alsmede een select aantal interviews met professionals op het gebied van verslaving in het strafrecht (hoofdstuk 7). Deze dissertatie wordt afgesloten met een analyse van knelpunten en suggesties voor verbeteringen, waarbij ik probeer het eerder gestelde doel te volbrengen: het samenbrengen van twee, ogenschijnlijk contraire, disciplines. Hieronder vat ik elk hoofdstuk kort samen.

Theoretische en normatieve kaders: hoofdstukken 1, 2, 3 en 4

Neurorecht is de innovatieve en jonge wetenschappelijke discipline welke poogt de invloed en toepassing van neurowetenschappelijke kennis en methoden op het recht te onderzoeken. Hierbij kunt u bijvoorbeeld denken aan leugendetectie, pijn, moraliteit, geheugen, vrije wil en verslaving. Naar verslaving kijken vanuit een neurorechtelijk perspectief kan op drie verschillende niveaus: micro (individueel), meso (groep/collectief) en macro (structureel). Microniveau behelst onder andere de rol van neurowetenschappelijke methoden om de capaciteiten van een verslaafde verdachte beter in te schatten, zoals bijvoorbeeld zijn mate van executief functioneren in de vorm van aandachtspanne of impulsiviteit. Denk hierbij aan de toegevoegde waarde van neuropsychologische testen of hersenscans bovenop de gebruikelijke (veelal klassiek psychologische) testbatterijen. Wat hierbij essentieel is, is de vertaalslag tussen de testuitkomsten en de juridische vraagstukken die ze pogen te beantwoorden. Immers vraagt het recht niet rechtstreeks om de mate van impulsiviteit, maar om een beoordeling van juridische concepten als opzet, schuld, voorbedachte raad of toerekenbaarheid: daarbij is mate van impulsiviteit informatief, maar niet één op één toepasbaar. Op mesoniveau kan neurowetenschappelijke kennis over verslaving, zoals over de algemene gevolgen van middelengebruik op de hersenen en gedrag, informatief zijn in strafzaken. Door dit soort onderzoek ontstaat er meer begrip of zijn er meer verklaringen mogelijk voor de situatie van de verslaafde verdachte. Tot slot is macroniveau van belang. Hierbij worden huidige juridische structuren, bijvoorbeeld het beoordelingskader voor culpa in causa, geëvalueerd in het licht van kennis vergaard vanuit de neurowetenschappen. Is de huidige aanpak verenigbaar met alle kennis van nu? In tegenstelling tot de micro- en mesodiscussie, omvat dit dus niet meer de verdachten zelf (op individueel- of groepsniveau) maar verplaatst de discussie zich naar beleid en doctrines.

Het moge duidelijk zijn dat de neurowetenschappen op meerdere manieren een rol kunnen spelen in het strafrecht. Echter is de relevantie van de focus op verslavingsproblematiek nog niet verduidelijkt. Daarom staat de conceptualisatie van verslaving centraal in het tweede hoofdstuk. Allereerst wordt er gepoogd een neutrale definitie van verslaving te creëren voor het resterende deel van het proefschrift. Ook worden de ontwikkeling en de gevolgen van (langdurige) middelengebruik belicht. Daarna sta ik stil bij de twee voornaamste tegenpolen in het zogeheten 'verslavingsdebat': het keuzemodel en het hersenziektemodel. Zoals de namen suggereren, spelen keuzevrijheid en wilsbekwaamheid een grote rol in het keuzemodel, tegenover de focus op chronische en onomkeerbare gevolgen in de hersenen in het hersenziektemodel. De redenen voor hun dominantie in het debat, alsmede de verschillen in hun visie op de rol en invloed van verslaving op gedrag, worden in dit hoofdstuk uiteengezet. Eén van de conclusies hierbij is dat het aanhangen van een specifiek model geen invloed hoeft te hebben op de

beoordeling van juridische vraagstukken. Vaak lijkt het hersenziektemodel geassocieerd te worden met een gebrek aan vrije wil, maar dit is een denkfout. Voor het recht tellen enkel de verdachte zijn capaciteiten – of de afwezigheid daarvan – en niet het label van een bepaald verslavingsmodel. Dit hoofdstuk probeert dan ook niet een eeuwenoude discussie te beslechten, maar biedt concrete oplossingen voor het beoordelen van capaciteiten bij een verslaafde verdachte op een juridisch relevante manier. De modellen lijken hierin prima een middenweg te kunnen vinden.

Logischerwijs brengt dat de lezer naar het volgende hoofdstuk, waarin de criteria voor strafrechtelijke aansprakelijkheid één voor één uiteen worden gezet. Het Nederlandse systeem wordt vanaf de basis uitgelegd en gespiegeld aan zowel onze Oosterburen als de Engelsen, om het geheel in een bredere, rechtsvergelijkende context te plaatsen. Vervolgens behandel ik de verschillende elementen in het tripartite rechtssysteem in de volgorde van artikel 350 Sv, waarbij enkel de aspecten die mogelijkerwijs door verslaving worden beïnvloed, worden besproken. Concreet leidt dat tot een uiteenzetting van de vereisten voor voorbedachte raad, opzet en schuld, toerekenbaarheid en verminderde gradaties daarvan, sancties en risicotaxatie. Hieruit blijkt dat verslaving het meest toepasbaar is binnen het kader van de (verminderde) toerekenbaarheid en de uitgebreide mogelijkheden van het Nederlandse sanctiepalet. Ontoerekeningsvatbaarheid wordt daarom uitgebreid behandeld in dit hoofdstuk, zowel inhoudelijk als vanuit rechtsvergelijkend perspectief, om de mogelijkheden voor een verslavingsgerelateerde schulduitsluitingsgrond uitgebreid te kunnen bespreken. Hierin concludeer ik dat in een uitzonderlijk, extreem, en waarschijnlijk slechts theoretisch geval, verslaving niet a priori kan worden uitgesloten als grond voor ontoerekeningsvatbaarheid.

Wat al deze conventionele toepassingen van verslaving in het strafrecht in de weg staat, is de notie van anterieure verwijtbaarheid. Culpa in causa doet exculperende effecten teniet, indien de verdachte een eigen aandeel had in het veroorzaken van de strafuitsluitende omstandigheid. Met andere woorden: indien men zelf schuld draagt in het creëren van een bepaalde omstandigheid, zoals een gevaarlijke situatie door uitlokking, of een psychose door vrijwillig en verboden middelengebruik, dan mag het individu geen beroep meer doen op een strafuitsluitingsgrond zoals noodweer of ontoerekeningsvatbaarheid. Dit is uiteraard relevant in de context van intoxicatie en verslaving. Culpa in causa is redelijk en lijkt ook noodzakelijk om te voorkomen dat elke dader die onder invloed van middelen een delict pleegt een vrijbrief heeft om onder zijn straf uit te komen. Echter zijn veel situaties niet zo zwart-wit en compliceert een aantal factoren de beoordeling van culpa in causa. Dit hoofdstuk staat dan ook stil bij de betekenis van 'culpa' in de context van anterieure verwijtbaarheid, door eerst het huidige beoordelingskader in kaart te brengen. Hieruit blijkt direct dat er geen eenduidige criteria zijn waarop een dader wordt beoordeeld in een potentiële culpa in causa zaak. Tevens wordt intoxicatie vaak als proxy gebruikt voor culpa in causa zonder duidelijke afweging van alle relevante factoren: het wordt gebruikt als een

'quick fix'. Ook blijkt dat verantwoordelijkheid voor een delict en verantwoordelijkheid voor verslaving an sich vaak als onderling inwisselbaar worden gezien. Ook dit is een denkfout in het Nederlandse daadstrafrecht: een dergelijke redenering ziet de verantwoordelijkheid voor het hebben van een stoornis als een Lebensführungsschuld, een algemene levensstijlschuld.

Dat wil niet zeggen dat verslaving de verdachte vrijwaart van alle verantwoordelijkheid – integendeel – maar stelt enkel dat de beoordeling dient te liggen bij het al dan niet hebben van voldoende capaciteiten voor strafrechtelijke aansprakelijkheid. Daarom schetst dit hoofdstuk ook een beoordelingskader waarbij het uitgangspunt ligt bij het expliciteren van bepaalde capaciteiten, zowel cognitief maar vooral ook volitioneel, en het toevoegen van een concrete voorzienbaarheidseis. Ook hier biedt een rechtsvergelijkend perspectief extra diepgang. Tot slot sta ik stil bij de complexe samenhang tussen stoornissen zoals (middelen-geïnduceerde) psychoses en verslaving. Het in kaart brengen van de chronologie van het ontstaan van de verschillende stoornissen blijkt van belang voor het consistent kunnen toepassen van het zojuist geschetste culpa in causa-kader.

Met deze inhoudelijke discussie over de meeste normatieve kwestie van dit proefschrift, namelijk het vaststellen van anterieure verwijtbaarheid, wordt het eerste deel afgesloten. De dissertatie wordt vervolgd met een meer praktische analyse van verslaving in het strafrecht, vaak aangeduid als 'the law in action', waarbij ook een concretere rol is weggelegd voor neurowetenschappelijke invloeden.

Empirische deelonderzoeken: hoofdstukken 5, 6, en 7

Na de analyse van alle relevante concepten in het Nederlandse strafrechtstelsel voor verslaving, rijst de vraag in welke mate verslaving ook daadwerkelijk in die context wordt besproken of toegepast. In tegenstelling tot een klassiek jurisprudentieonderzoek, waarbij veelal alleen de vonnissen worden geanalyseerd, is er voor dit hoofdstuk gekeken naar het volledige strafdossier om zo de rol van verslaving specifieker in kaart te brengen. Met een systematische analyse, zowel kwantitatief als kwalitatief, worden 70 strafzaken doorgelicht waarbij de dader aan een verslaving leed. Uit de dossiers worden alle beschikbare pleitnota's, requisitoirs, processen verbaal van de zittingen, vonnissen en de aanwezige gedragsdeskundigerapportages meegenomen. De zaken zijn tevens geselecteerd op de aanwezigheid van één of meer gedragsrapportages. Uit de kwantitatieve analyses blijkt dat, zoals verwacht, verslaving primair in de gedragsrapportages aan bod komt en door de juristen voornamelijk wordt besproken in de context van verminderde toerekeningsvatbaarheid en de strafmaat. Ook valt op dat advocaten de verslaving van hun cliënt zeer zelden aan bod laten komen. Uit de kwalitatieve analyse blijkt onder meer dat de deskundigen wisselend over de verslaving rapporteren en dat achter de culpa in

causa-redeneringen vaak een notie van Lebensführungsschuld schuilgaat. Ik bespreek de implicaties hiervan en benadruk het belang van het onderscheid tussen diachronische en synchronische controle. Tevens wijs ik de lezer erop dat impliciete noties van eigen schuld in rapportages of requisitoiren, welke meermaals naar voren kwamen, wellicht de rechter (onbewust) beïnvloeden in haar oordeel over de aansprakelijkheid van de verdachte.

Met die laatste conclusie in het achterhoofd volgt hoofdstuk 6, waarin een experimenteel vignettenonderzoek naar juridische besluitvorming centraal staat. Hiermee onderzoek ik wat de invloed is van een keuzemodelvisie versus een hersenziektemodelvisie op verslaving op de beslissing over toerekenbaarheid, en of deze invloed anders is bij een gewelddelict vergeleken met een vermogensdelict. Ook worden er exploratieve analyses gedaan om de mogelijke invloed te bespreken van deze verschillende verslavingsvisies op sancties, risico-taxatie en enkele gepercipieerde gedragskenmerken. Onder een steekproef van 106 Officieren van Justitie en 171 masterstudenten strafrecht worden (2x2) vier versies van het vignet verspreid: verslavingsvisie (keuze versus hersenziekte) x type delict (geweld versus vermogen). De twee verschillende steekproeven representeren de 'law in the books', namelijk de studenten, en de 'law in action', vanuit de Officieren.

In het vignet staat de strafzaak van verslaafde dader André E. centraal, waarbij een korte delictomschrijving en enkele kenmerken worden verschaft, gevolgd door een excerpt uit een rapportage van een gedragsdeskundige. Uit de resultaten van dit vignettenonderzoek blijkt dat een hersenziektevisie op verslaving, gekenmerkt door de toevoeging van neurowetenschappelijke informatie in het rapportage-excerpt, gepaard gaat met een significant lagere inschatting van de toerekeningsvatbaarheid. Dit heeft overduidelijk relevante gevolgen voor de manier waarop deskundigen hun rapporten kunnen construeren, alsmede voor actoren in de strafrechtpraktijk. Tevens bleek dat de studentensteekproef en de Officierensteekproef regelmatig van elkaar afweken in hun oordeel, wat implicaties heeft voor de interpretatie van experimenteel onderzoek met studenten als doelgroep in plaats van professionals. Het significante effect van de verslavingsvisie op toerekenbaarheid wordt uiteraard verder besproken in dit hoofdstuk, evenals mogelijk oorzaken en vervolgvragen die dit oproept.

De vorige paragrafen beschrijven een ontwikkeling waarbij het theoretische kader langzaamaan ingevuld werd door data uit de praktijk in hoofdstuk 5, vervolgt door het onderzoek naar praktische consequenties van verslaving en de verslavingsmodellen op juridische besluitvorming in hoofdstuk 6. Dat laat echter nog één perspectief van de 'law in action' onderbelicht, namelijk dat van de dagelijkse praktijk. In hoofdstuk zeven voer ik daarom gesprekken met tien individuen die in hun werk zeer regelmatig met verslaving in het strafrecht te maken krijgen. Hierbij poogde ik de vier voornaamste rollen in beeld te krijgen: rechters, Officieren van Justitie, strafrechtadvocaten en gedragsdeskundigen. Vanuit hun expertise geeft dit hoofdstuk meer duiding aan de eerder getrokken conclusies, en komen nog enkele onderbelichte aspecten aan bod. Culpa in causa wordt uitgebreid

besproken, evenals toerekeningsvatbaarheid, en in beide gevallen bleef een concreet beoordelingskader uit. Hierin is wellicht nog een prominentere rol van de gedragsdeskundige weggelegd. Uit de analyse van de interviews blijkt tevens dat er nog een groot gat zit tussen theorie en praktijk wanneer het gaat om verslaving en neurowetenschappelijke kennis daaromtrent. Dit bewijst nogmaals het belang van verbinding tussen de disciplines, maar ook het belang van een adequate terugkoppeling naar de strafrechtpraktijk. Deze conclusie is de aanleiding voor het afsluitende hoofdstuk, waarin wordt getracht alles samen te brengen en een coherente, alomvattende discussie te voeren.

Het concluderende hoofdstuk

Allereerst sta ik in het afsluitende hoofdstuk nogmaals stil bij de onderzoeksvraag, waarop dit keer een voorzichtig antwoord kan worden gegeven. Op welke wijze werkt de verslaving van verslaafde daders door in hun strafrechtelijke aansprakelijkheid, en welke rol is hierin weggelegd voor een neurowetenschappelijk perspectief op verslaving? Om dit te beantwoorden kunnen we opnieuw gebruikmaken van het onderscheid tussen micro-, meso- en macroperspectieven. Zo blijkt dat in individuele zaken (microniveau) verslaving vooral in bepaalde juridische vraagstukken consequent wordt besproken, zoals in de strafmaat, terwijl dit ook op andere plekken mogelijk en passend is, zoals bij voorbedachte rade. Aangaande de rol van de neurowetenschappen kan gesteld worden dat neurowetenschappelijke methoden kunnen bijdragen aan het inschatten van de capaciteiten van de verdachte. Hierbij kan men denken aan een explicietere beoordeling van controle-gerelateerde capaciteiten bij culpa in causa en toerekeningsvatbaarheid. Op mesoniveau is zichtbaar dat verslaafde verdachten als groep nog regelmatig worden bejegend vanuit een (impliciete) eigen-keuze-perspectief, waarbij de verantwoordelijkheid voor de verslaving vaak in één adem wordt genoemd met de verantwoordelijkheid voor het delict. Meer neurowetenschappelijk onderzoek naar de aangetaste capaciteiten door verslaving, zoals rondom impulsiviteit, is noodzakelijk om de focus te richten op de verantwoordelijkheid voor het delict zelf. Het feit dat niet de capaciteiten, maar de stoornis zelf regelmatig rechtstreeks wordt geassocieerd met verantwoordelijkheid, blijkt ook uit het vignettenexperiment. Juridische besluitvorming wordt beïnvloed door de uitleg van de verslaving, los van de daadwerkelijke gedragsmatige gevolgen. Dit benadrukt het belang van de focus op capaciteiten. Op macroniveau is eenzelfde conclusie ook sterk zichtbaar. In dit achtste hoofdstuk pleit ik meermaals voor een capaciteit-georiënteerde benadering van verslaving in het strafrecht. Dit uit zich in het verduidelijken – en tot op zekere hoogte aanpassen – van beoordelingskaders, namelijk het het verwerken van een volitionele eis in zowel ontoerekeningsvatbaarheid als culpa in causa, en in een mogelijke explicietere

rol van de gedragsdeskundige. In het resterende deel van het hoofdstuk ga ik verder in op de implicaties en aanbevelingen die hieruit voortvloeien.

Annex IV: Vignette Materials (NL)

Introductie & informed consent
Voor u ligt een verzoek tot deelname aan een onderzoek (genaamd: 'verslaving in het strafrecht') vanuit de Universiteit van Maastricht. Naar schatting zal uw deelname hieraan tussen de tien en vijftien minuten duren. De opzet van dit onderzoek is als volgt. U krijgt een hypothetische zaak te lezen waarin een delict en een dader worden omschreven. Na het lezen van de casus worden u enkele vragen gesteld waarbij er drie onderwerpen aan bod komen: toerekeningsvatbaarheid, sanctionering en casus-inhoudelijke elementen. In het beantwoorden van deze vragen zijn er geen goede of foute antwoorden. Het onderzoek is vooral gericht op uw mening, inschatting en intuïtie als jurist, alsof u daadwerkelijk oordeelt over de desbetreffende zaak. Daarbij is de casus volledig fictief: indien u gelijkenissen lijkt te zien met echte zaken is dat een toevalligheid. Het onderzoek zal dan ook niet worden gebruikt om conclusies te trekken over specifieke echte zaken.

Het spreekt voor zich dat de geringe hoeveelheid tekst en informatie in deze casus niet overeenkomt met de werkelijkheid en dat voor een gewogen juridisch oordeel over dergelijke thema's meer informatie nodig is. Echter, u wordt gevraagd om aan de hand van de gegeven feiten toch een keuze te maken, hoe lastig het ook mag zijn. In het verwerken en analyseren van de uitkomsten zal uiteraard rekening worden gehouden met de beperkingen die dit oplevert.

De onderzoekers hebben een geheimhoudingsverklaring getekend en u hoeft geen gegevens te verstrekken die u mogelijk kunnen identificeren en linken aan de ingevulde vragen. In het verwerken van de uitkomsten, en de verslaglegging die daarop volgt, zal uw identiteit nooit af te leiden zijn. Tevens is het onderzoek volledig vrijwillig: indien u tijdens het invullen van de vragen niet meer wenst deel te nemen bent u te allen tijde vrij om te stoppen. Voor vragen over dit onderzoek kunt u contact opnemen met de onderzoeker, Anna Goldberg, via het e-mailadres anna.goldberg@maastrichtuniversity.nl. De resultaten van het onderzoek zullen worden gepubliceerd in een proefschrift en wetenschappelijke artikelen en zullen te zijner tijd ook worden verspreid via hetzelfde medium waarvan u deze huidige documenten hebt ontvangen.

Hartelijk dank voor uw tijd en inzet om deel te nemen aan dit onderzoek!

De casus: gewelddelict
De 35-jarige man André Evers wordt op 5 juli 2019 omstreeks 22:30 opgepakt door de Arnhemse politie op verdenking van zware mishandeling jegens slachtoffer Dion Hermans. Het slachtoffer botste tegen Evers aan op straat, waarna Evers een mes trok en zwaaiende en stekende bewegingen naar het slachtoffer maakte. Bij het afweren van de aanval werd het slachtoffer ernstig verwond in zijn benen en armen. Omstanders belden hierop een ambulance, die Hermans meenam naar het ziekenhuis, en de politie, die Evers ter plaatse aanhield en meenam naar het bureau. Volgens de diverse getuigenverklaringen en de slachtofferverklaring van Hermans was Evers zeer opvliegend en agressief. Evers heeft bekend het slachtoffer te hebben aangevallen naar aanleiding van het, in zijn ervaring, provocerende gedrag van het slachtoffer.

Wanneer de zaak voor de rechter wordt gebracht, wordt Evers zware mishandeling met steekwapen ten laste gelegd (artikel 302 Sr). In de justitiële documentatie van Evers zijn twee eerdere veroordelingen te vinden: eenmaal voor het verstoren van de openbare orde en eenmaal voor eenvoudige mishandeling. Er is een Pro Justitia-rapportage opgemaakt over Evers, waaruit blijkt dat Evers al jarenlang verslaafd is aan cocaïne en dat eerdere behandelingen niet zijn aangeslagen. Ten tijde van het delict was Evers niet onder invloed van enig verdovend middel. Er bestaat geen twijfel over dat Evers de dader is van het feit en de Officier van Justitie eist 30 maanden gevangenisstraf voor het delict, conform de strafvorderingsrichtlijnen.

Het volgende is een excerpt uit de Pro Justitia rapportage ten aanzien van de verdachte.
[hieronder: het excerpt, gevarieerd op de variabele 'verslavingsuitleg']

De casus: vermogensdelict
De 35-jarige man André Evers wordt op 5 juli 2019 omstreeks 22:30 opgepakt door de Arnhemse politie op verdenking van zware mishandeling jegens slachtoffer Dion Hermans. Het slachtoffer botste tegen Evers aan op straat, waarna Evers een mes trok en zwaaiende en stekende bewegingen naar het slachtoffer maakte. Bij het afweren van de aanval werd het slachtoffer ernstig verwond in zijn benen en armen. Omstanders belden hierop een ambulance, die Hermans meenam naar het ziekenhuis, en de politie, die Evers ter plaatse aanhield en meenam naar het bureau. Volgens de diverse getuigenverklaringen en de slachtofferverklaring van Hermans was Evers zeer opvliegend en agressief. Evers heeft bekend het slachtoffer te hebben aangevallen naar aanleiding van het, in zijn ervaring, provocerende gedrag van het slachtoffer.

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twee eerdere veroordelingen te vinden: eenmaal voor het verstoren van de openbare orde en eenmaal voor eenvoudige mishandeling. Er is een Pro Justitia-rapportage opgemaakt over Evers, waaruit blijkt dat Evers al jarenlang verslaafd is aan cocaïne en dat eerdere behandelingen niet zijn aangeslagen. Ten tijde van het delict was Evers niet onder invloed van enig verdovend middel. Er bestaat geen twijfel over dat Evers de dader is van het feit en de Officier van Justitie eist 30 maanden gevangenisstraf voor het delict, conform de strafvorderingsrichtlijnen.

Het volgende is een excerpt uit de Pro Justitia rapportage ten aanzien van de verdachte.
[hieronder: het excerpt, gevarieerd op de variabele 'verslavingsuitleg']

Het excerpt: neurowetenschappelijke uitleg

[hierboven: de casus, gevarieerd op de variabele 'type delict']
Drs. B.A. Scholten (psycholoog) komt in haar rapport ten aanzien van de verdachte tot de volgende bevindingen – hier kort weergegeven: "Betrokkene lijdt aan een ziekelijke stoornis in de zin van cocaïneafhankelijkheid. Deze was tevens aanwezig ten tijde van het begaan van het tenlastegelegde feit. Middelenafhankelijkheid zoals omschreven in de DSM-5 kenmerkt zich door o.a. een sterk verlangen om het middel te gebruiken, blijvend gebruik van het middel ondanks grote relationele en professionele gevolgen, mislukte pogingen om te minderen of te stoppen, en craving (zucht naar middelen) indien het middel niet voorhanden is. Recent neurowetenschappelijk onderzoek wijst uit dat middelenafhankelijkheid gerelateerd is aan afwijkingen in het voorste deel van de hersenen (de prefrontale cortex). Dergelijke hersenschade kan onomkeerbare gevolgen hebben en zou onder andere kunnen resulteren in problemen met aandacht en lange-termijn planning, compulsief drugsgebruik, en impulsieve gedragingen. Derhalve valt de stoornis van betrokkene ook aan te merken als een hersenziekte van chronische aard. Betrokkene was ten tijde van het delict niet onder invloed, maar ervoer wel craving naar het gebruik van cocaïne wat leidde tot onrust en agitatie. Het is waarschijnlijk dat de hersenschade heeft geleid tot verminderde impulscontrole waardoor betrokkenes keuzevrijheid werd ingeperkt.

Het excerpt: keuze-uitleg
[hierboven: de casus, gevarieerd op de variabele 'type delict']

Drs. B.A. Scholten (psycholoog) komt in haar rapport ten aanzien van de verdachte tot de volgende bevindingen – hier kort weergegeven: "Betrokkene lijdt aan een ziekelijke stoornis in de zin van cocaïneafhankelijkheid. Deze was tevens aanwezig ten tijde van het begaan van het tenlastengelegde feit. Middelenafhankelijkheid zoals omschreven in de DSM-5 kenmerkt zich door o.a. een sterk verlangen om het middel te gebruiken, blijvend gebruik

van het middel ondanks grote relationele en professionele gevolgen, mislukte pogingen om te minderen of te stoppen, en craving (zucht naar middelen) indien het middel niet voorhanden is. Betrokkene geeft aan ten tijde van het delict niet onder invloed te zijn geweest van cocaïne, maar wel craving te ervaren naar het gebruik ervan. Betrokkenes verslaving is een stoornis die de zijn actuele gedragskeuzes doorlopend beïnvloedt. Echter, betrokkene heeft regelmatig voor de keuze gestaan om het middelengebruik te staken, en heeft tevens zoveel behandeling gehad, dat hij op de hoogte is of zou moeten zijn van zijn impulsdoorbraken ten gevolge van craving. Deze craving en de daarmee gepaard gaande gevoelens van onrust en agitatie, waarvan sprake was ten tijde van het tenlastegelegde, waren derhalve voorzienbaar voor betrokkene. Betrokkene kan daarom worden verweten hier niet de juiste stappen in te zetten, zoals zich aan de situatie te onttrekken of hulp te zoeken toen hij merkte dat er craving optrad."

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