Cannabis changes: Understanding dynamics of use and dependence

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Introduction
Cannabis is one of the oldest drugs in human history. Over the centuries, people have used it for a variety of purposes, for example, during rituals, as a medicine or as an expression of social protest (Bewley-Taylor, Blickman, & Jelsma, 2014; Grinspoon & Bakalar, 1997). Over time the main reasons for use have changed. Its role during rituals and as a form of protest has largely disappeared, but medical use of cannabis, however, has seen a significant revival, particularly as ‘medicinal marijuana’ in the United States (Bewley-Taylor et al., 2014). In addition to this historical development in societal meaning of cannabis use, there have been serious changes in national and local drug policies, including regions and periods with criminalization of production, possession and use and regions and periods with decriminalization or even full legalization in combination either very strong or weak enforcement strategies. While some decades ago cannabis users were often labelled as 'deviant', today scholars often define cannabis use as ‘recreational’ and cannabis users as 'normalised' (Parker, Aldridge, & Measham, 1998; Parker, 2005). Despite this general development, there is still a wide variation in the type of people that use cannabis and their patterns of use. For some people, cannabis use is only a single experiment or only takes place during a short period in their life (adolescence). Others continue their use of cannabis over a longer period, ranging from occasional and selective to frequent or even daily use. This book is about the latter group: frequent and daily users. Over a period of three years, we followed a group of frequent or daily cannabis users in the Netherlands. For some of them little changed in their cannabis use, but for most of them cannabis use was a highly dynamic phenomenon often coinciding with other changes in their life. In calling this book Cannabis Changes, we are indebted to Dan Waldorf, Craig Reinarman and Sheigla Murphy (1991). Their study was published more than 20 years ago, was about another drug (cocaine), and took place in a country with a different drug policy (United States). Nevertheless, there are similarities with our research, both in appreciation of qualitative methods as in unravelling the dynamic world of frequent drug users.

Short history of cannabis regulation and views on cannabis use
When at the beginning of the 20th century the first international drug conventions were established, opium and cocaine were the drugs in focus. In 1925, cannabis was incorporated in a revised international treaty, and from then on cannabis received more and more attention. Not because evidence had shown that cannabis use or dependence had become an objectively growing problem, but as a result of a moral crusade in the United States.
In political campaigns in the 1930s, marijuana was positioned as a problem of the greatest national concern. The drug was claimed to be predominantly used by ‘strangers’, such as ‘Negroes’, Hispanics and jazz musicians, and that its use would cause aggression and insanity (reefer madness), criminality and death (Gerber, 2004; Himmelstein, 1983). While barely used in most Western countries, in the Single Convention on Narcotic Drugs (1961) cannabis was scheduled in the category of the most dangerous substances, with a high potential for abuse and potentially severe dependence. The production, manufacture, export, import, trade of, possession and use, except for amounts necessary for medical or scientific research, became prohibited (Bewley-Taylor et al., 2014; Blom, 1998; Chatterjee, 1981). Despite the Single Convention, a few years later, in the late 1960s, its use quickly rose and spread from the US to European countries, including the Netherlands.

The first Dutch drug law (Opium Act) was established in 1919; production and trade of opium, all its derivatives and cocaine were prohibited. Marijuana and hashish were included in the Opium Act of 1928 – that still is the basis of the current Opium Act –, but only in 1953 the use and possession of marijuana became criminal offences (Blom, 1998). In the 1950s, cannabis use in the Netherlands was still a rare phenomenon, and the Opium Act made no distinction between types of prohibited substances (De Kort, 1995). From the late 1960s onwards, cannabis became increasingly popular. In 1976, a major change in the Opium Act law was introduced: a distinction was made between drugs with “unacceptable risks”, i.e. hard drugs (List I) and “hemp products”, i.e. soft drugs (List II). The maximum penalty for possession of soft drugs was lowered, while that for drug trade and possession of hard drugs became higher. Possession for personal use of cannabis by adults was decriminalized. Over the years, the 1976 Opium Act was further revised, including an extension of the lists and tougher punishments for organized drug trade. Along with the revision of the Opium Act in 1976, a ‘tolerance policy’ was implemented, including condoning the sale of cannabis to users in youth centres under certain conditions. In the years that followed, official guidelines to further regulate the condoned sale of cannabis were implemented (Blom, 1998).

In the course of the 1980s, so-called coffee shops (café-like outlets where selling hashish and marijuana to consumers is tolerated under specific conditions) as we know them today in the Netherlands became more common (De Kort, 1995). The number of coffee shops steeply increased, reaching a peak of about 1,500 in the mid 1990’s (Korf, 2002). In 1996, the regulations for the coffee shops were tightened, and from then on Dutch cannabis policy has become more strict, with additional measures against coffee shop-related nuisance, coffee shop tourism, cannabis-related crime,
domestic cultivation of ‘nederwiet’ (Dutch marijuana) and large-scale trafficking of cannabis (Adviescommissie Drugsbeleid., 2009; Emmett & Boers, 2008; Korf, 2011; Van Ooyen-Houben, Bieleman, & Korf, 2013; Van Ooyen-Houben, Bieleman, & Korf, 2014; Wouters, 2013). From the mid 1990’s onwards the number of coffee shops decreased from 1,500 to 846 in 1999 and 614 in 2013 (Bieleman & Nijkamp, 2013).

The rapid rise of cannabis use from the 1960s went along with a change in the general view on cannabis users: from being criminal or mentally ill through being rebellious and non-conformist to just recreational. This trend continued into the 1980s and 1990s (Korf, 1995).

Similar changes in the view on cannabis use and cannabis users have been taken place in other Western countries, where cannabis use is currently considered as normal and used for just for fun by most youngsters and stripped of delinquent and deviant associations. Cannabis use has become an accepted feature of mainstream adolescents and young adults in Western society and is said to be “normalised” (e.g. Duff & Erickson, 2014). Cannabis users are no longer seen as being part of a separated subculture of society, but as people coming from all levels of society, whose cannabis use is generally considered one of many leisure activities (Aldridge, Measham, & Williams, 2011). Particularly from an international perspective it is argued that in the Netherlands cannabis use is considered ‘normal’ because of the Dutch tolerance policy. However, this seems more an assumption than a fact. Rather, different cannabis policies might have created divergent images of cannabis users worldwide, yet these do not necessarily correspond to prevalence rates (e.g. EMCDDA, 2014; Reinarman, Cohen, & Kaal, 2004).

**Cannabis use nowadays**

Cannabis is the most widely used illicit drug in the world (UNODC, 2014). In the European Union alone an estimated 74 million adults have ever used cannabis and three million individuals are (almost) daily cannabis users (20 days or more in the last month), most of whom are aged 15–34 years (EMCDDA, 2014). While cannabis policies vary across Europe, cannabis is available and used in every country of the EU (Europol, 2013). Despite or because of the decriminalization and the policy of tolerance towards cannabis use in The Netherland, cannabis use (lifetime and last year prevalence) in the Netherlands is quite similar to that of many other European countries (EMCDDA, 2014) and lower than in the United States (UNODC, 2014).

There is a striking difference between the number of people who have used cannabis lifetime, last year, last month and (near-) daily. In the Netherlands, for example, according to the most recent general population survey, 25.7% of the population aged 15-64 years has ever used cannabis, 7.0% has used
cannabis in the last 12 months, and 4.2% has used cannabis in the last month (Van Rooij, Schoenmakers, & van de Mheen, 2011). Of the estimated 466,000 last month cannabis users, 30.2% or about 141,000 are current (almost) daily users (Van Laar et al., 2014). More men than women use cannabis. In the Netherlands, lifetime and last year cannabis use are about twice as high among males than females, whereas last month prevalence is about three times higher among men than women (6.3% vs. 2.0%, Van Laar et al., 2014). To conclude, about 25% of the Dutch population has tried cannabis at least once, many of them have discontinued their use after a shorter or longer period of time and only a very small group (1.3%) is a current frequent user. People use cannabis for different reasons. Like with all drugs, the effects of cannabis are an interplay of three factors: the drug (e.g. type and dose), the set (the user) and the setting (Zinberg, 1984). While acknowledging the wide variation in how individuals experience the effects of cannabis, some effects are quite common. Examples of frequently reported positive effects of cannabis use include: relaxation, happiness, sensory enhancement, thinking more deeply, laughter, stronger appetite, increased concentration and creativity. On the other hand, decreased memory function, dizziness, decreased concentration, dry mouth and fear are among the negative acute effects that are relatively often reported (CAM, 2008; EMCDDA, 2008; Niesink & van Laar, 2012; van den Brink, 2006). More important, on the longer term a minority of those who started using cannabis develops cannabis dependence. Frequent cannabis users are at a higher risk of developing dependence than infrequent cannabis users, yet ‘only’ 20-50% of the (near-) daily users are cannabis dependent (Coffey et al., 2002; EMCDDA, 2009; Swift, Hall, Didcott, & Reilly, 1998). Daily or nearly daily cannabis use and particularly cannabis dependence are associated with various mental health problems and impaired social functioning (Degenhardt et al., 2013; Fergusson & Boden, 2008; Hall, 2009; Martinotti et al., 2012; van der Pol, Liebregts, de Graaf, Have et al., 2013).

In the past decade, treatment demand for (primarily) cannabis-related problems has strongly increased, both in the Netherlands and internationally (EMCDDA, 2014; Van Laar et al., 2014). It is unclear however what caused this increase: an increase in the prevalence of problematic cannabis use and dependence, improved accessibility of addiction care, or perhaps an increased willingness to seek help. However, still less than a third of all cannabis dependent persons seek professional treatment (Agosti & Levin, 2007; Cunningham, 2000; Van Laar et al., 2014).

Cannabis dependence is mostly defined according to the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). A DSM-IV diagnosis of cannabis dependence requires that someone meets three or more of the following seven criteria within in a period of 12 months: 1)
tolerance; 2) withdrawal syndrome or using cannabis to relieve or avoid withdrawal symptoms; 3) using larger amounts or for a longer period than intended; 4) persistent desire or unsuccessful efforts to cut down or control cannabis use; 5) spending much time obtaining cannabis, using, or recovering from the effects; 6) giving up important social, occupational, or recreational activities in favour of cannabis; and 7) continued using despite a physical or psychological problem caused or exacerbated by cannabis use (APA, 1994). Dependence with and without physiological dependence (tolerance and/or withdrawal) is differentiated in the DSM-IV. In a recent general population study in the Netherlands, there were about 776,000 last year cannabis users and 29,300 (3.8% of the users or 0.3% of population 18-64 years) were diagnosed as cannabis dependent (De Graaf, ten Have, & van Dorselaer, 2010).

It should be noted, however, that cannabis dependence is a highly debated concept. Some consider drug dependence as a chronic relapsing (brain) disease, whereas others state that it is a certain form of behaviour that is embedded in a social context and that it is well possible to recover from it (e.g. Carter & Hall, 2012; Hammer et al., 2013; Pickard, 2012). In addition, there are debates about the categorical nature of the problems and the border between normality and pathology (e.g. Khoury, Langer, & Pagnini, 2014). In this current study on the natural course of cannabis use and cannabis dependence we therefore investigate both dimensional changes in cannabis use patterns and categorical switches between the presence and absence of cannabis dependence.

**The course of cannabis use and dependence**

Knowledge about the natural course of frequent cannabis use and dependence is scarce. Much research on cannabis use is restricted to the initiation, rather than the continuation, persistence or desistance of frequent use. Consequently, since first use often occurs during adolescence, studies are mostly limited to this age group. In the Netherlands, the average age of first cannabis use is 19.6 years and current regular users are mostly young adults (mean age last-year users is almost 31 years) (Van Laar et al., 2014). More importantly, processes underlying the course of cannabis use and dependence have been barely identified.

To identify factors involved in transitions in frequent cannabis use and dependence, longitudinal studies are required. A few longitudinal studies have identified risk factors of cannabis dependence, including younger age of onset of cannabis use, use of substances other than cannabis, poverty, and quantity of use (Swift, Hall, & Copeland, 2000; von Sydow, Lieb, Pfister, Höfler, & Wittchen, 2002). Also cannabis use cessation, or recovery from dependence, has been explored. Factors that were identified in cross-
sectional studies include life changing events, self-control, increasing responsibilities and developing activities unrelated to cannabis use (Chauchard, Levin, Copersino, Heishman, & Gorelick, 2013; Ellingstad, Sobell, Sobell, Eickleberry, & Golden, 2006; Kwong, Howard, & Arcuri, 2010). However, most previous studies focused on irregular use, on quitters only, or investigated risk factors without taking the perception of the users into account (Rooke, Norberg, & Copeland, 2011; Terry, Wright, Terry, Wright, & Cochrane, 2007). However, a users’ perspective is deemed to unravel cause and effect and improve our understanding of the processes involved in changes in cannabis trajectories. Moreover, cross-sectional studies are unable to claim causality, and the few available prospective studies failed to include enough frequent or dependent users to specifically distinguish frequent from dependent users. Prospective studies have demonstrated associations of protective and risk factors with cannabis use and dependence and it is known that many individuals decrease and stop using. Nevertheless, they have yield different results regarding underlying mechanisms and directions. To conclude, until now it remains unknown why frequent young adult users increase, decrease or quit their cannabis use, why some develop dependence and others do not, and why some recover from dependence and others do not. In this book, we try to provide at least some answers to these questions.

**Aim and theoretical perspectives**

Evidently, there is a lack of knowledge on the natural course and mechanisms underlying changes in cannabis use and transitions in cannabis dependence. More research is needed to better understand these dynamics and mechanisms. Therefore, the aim of this study is to better understand the natural course of frequent cannabis use and cannabis dependence, particularly the processes and mechanisms associated with changes in the patterns of use and dependence, and to contribute to the theory of change in these kinds of phenomena. Moreover, insights in the extent to which frequent users experience cannabis-related problems in their daily lives, and how they handle and possibly overcome them, can contribute to the international debate on the normalisation of cannabis use. In order to obtain a better insight into the dynamics of cannabis use and cannabis dependence, young adult frequent users might be the most interesting group. Frequent users are at increased risk for cannabis-related problems, including cannabis dependence, but not every frequent cannabis user is (or becomes) cannabis dependent. Young adults are chosen because the initiation phase of cannabis use has generally passed and this is the period in life that cannabis use either continues or declines and/or stops. Moreover, this phase of life is characterized by many significant life changing
events in various domains, such as leaving the parental home, finishing school our study, finding a job, falling in love, settling down with a partner or marry, etcetera. This makes young adults a specifically interesting group to study, and led us to formulate the following research question: *What are the processes and mechanisms underlying transitions in the natural course of frequent cannabis use and cannabis dependence, and how can these be understood?*

In order to describe and understand the processes leading to changes in cannabis use and cannabis dependence, various theoretical notions from social science will be used, criminology in particular.

**Life course theory**

In criminology, the life course perspective focuses on the development over time of careers in delinquency and crime, and explores which factors play a (causal) role in processes of initiation, persistence and desistance. This approach identifies the importance of timing during an individuals' lifetime. Transitions such as changes in relationships, education and work are considered potential turning points in explaining desistance from deviance (Elder, 1998; Laub & Sampson, 1993). Turning points are preceded by life events. While they could (objectively) be categorized as positive or negative events, their (subjective) meaning depends on how the person evaluates them since similar events can have different meanings for different people (Laub & Sampson, 1993). Life events leading to a lasting change over time in an individual’s life course are considered turning points, and can thus only be identified retrospectively (Teruya & Hser, 2010; Wheaton & Gotlib, 1997). In life course theory, changes in deviance over the life course are explained within the context of age and maturation: most deviant behaviours peak in adolescence and young adulthood and then decline (Laub & Sampson, 2003; 1993). Although life course theory has been developed to describe and explain criminal careers, we argue that it can also offer a solid framework to the study of the natural course of cannabis use and cannabis dependence, since it is expected that largely similar processes are involved (cf. Laub & Sampson, 2001).

**Social environment**

During childhood, parents are generally most influential; adolescence marks a decline in parental influence as peers, and also partners in emerging adulthood, become the most important reference group in the private domain for behaviour, including drug use (Arnett, 2005; Erikson, 1980). Drug use, both initiation and continuation, is often a social activity that occurs together with other users (Fountain & Korf, 2007). Some classical studies have shown that cannabis use is learned through association and in interaction
with other users (Becker, 1963), and the social settings in which that occurs include rituals that prevent uncontrolled use and dependence (Zinberg, 1984). An old saying goes “birds of a feather flock together”; deviant young people would be more likely to associate with deviant peers (Glueck & Glueck, 1950).

As will be shown in Chapter 3, the role of parents in adolescent drug use has been extensively studied, and also the role of peers and partners has received much attention. However, while young adulthood is a phase often associated with cannabis use progression and dependence, most studies are limited to adolescence. Generally, mechanisms regarding the role of social relationships in drug use are grouped into selection and socialization. According to the selection model, people select peers and/or partners who are similar in behaviour to themselves, for example frequent cannabis use. In contrast, socialization refers to the process of peers influencing each other’s behaviour in interaction: people adopt the beliefs and behaviour of friends over time. In criminology, Sutherland’s (1947) differential association theory is probably the most well known classical theory of socialization. There is support for both models and they seem to occur alternately or simultaneously (Rhule-Louie & McMahon, 2007). Some studies found different effects for males and females, but results regarding gender differences are inconsistent. Moreover, the behaviour of the romantic partner is often overlooked, or assumed to be pro-social, while the particular influence on someone’s drug use depends on the partner’s drug use (Rhule-Louie & McMahon, 2007). Taken together, empirical evidence has shown that social relationships are important in cannabis careers. However, the role of social relationships in the natural course of cannabis use in young adults and in particular the underlying mechanisms, needs more attention.

Normalisation of cannabis
In the late 1960’s and early 1970’s, when cannabis use was introduced on a large scale, it was associated with subcultural preferences, as part of political opposition and cultural non-conformism (Pedersen, 2009). According to normalisation perspective, cannabis use today has become an accepted form of behaviour among mainstream adolescents and young adults who live rather conventional lives, and recreational use is no longer a subcultural phenomenon (Duff & Erickson, 2014). Cannabis use, including frequent use, is predominantly understood as a leisure time activity, with most cannabis users carefully choosing when and where to use: often in private settings, with peers and/or partners (Hathaway, 2003; Reinarman & Cohen, 2007). In brief, the process of normalised cannabis use is characterized by an increased demand and supply, as well as increased levels of social and cultural acceptability for recreational use (Parker, 2005). In addition, users would no
longer belong to a delinquent or deviant sub culture, but have rather conventional lifestyles (Duff et al., 2012; Hathaway, 1997; Pearson, 2001). Despite empirical support from several Western countries, the normalisation thesis also received a lot of criticism. According to the critics, the concept of normalisation relies on a too simplistic distinction between recreational and problematic use, and adult users would still experience stigma (Hathaway, Comeau, & Erickson, 2011; Shildrick, 2002). Moreover, how does normalisation relate to frequent cannabis use, or cannabis dependence? Recently, the normalisation thesis has been revisited, based on a follow-up of the original sample of Parker and colleagues (Aldridge et al., 2011; 1998). This study affirmed their previous normalisation thesis: as participants aged, they continued using drugs, but assimilated their use to their responsibilities such as jobs and children. However, these participants were not often frequent cannabis users, and alcohol was the most commonly used drug. Thus, while the normalisation thesis offers an interesting starting point to explore frequent and dependent cannabis use in relation to leisure and delinquency, some areas remain rather concealed.

**Desistance, agency and identity**

The natural course of cannabis use and dependence show similarities with the course of criminal behaviour: both behaviours generally peak in adolescence and young adulthood and then gradually decline (Johnston, O'Malley, & Bachman, 2001; Van Laar et al., 2014). Despite this similarity in process, until now little exchange of knowledge between these two areas of research has occurred.

It is increasingly recognized that desistance from crime is a process comprising an interplay between structural factors (social institutions, e.g. marriage, employment) and individual factors (subjective meaning, identity and personal agency), as well as biological ageing and psychological maturation (Farrall, Sharpe, Hunter, & Calverley, 2011; Maruna, 2001; McNeill, 2009). Life events such as an ended relationship, a new job or a holiday, can act as a trigger for the decision to change, yet they will only be influential if a person considers them as meaningful and desirable (Lloyd & Serin, 2012). Strategies and a realistic, feasible plan for identity change have been linked to successful desistance (Maruna, 2001; Paternoster & Bushway, 2009). While predictive factors of cannabis use cessation have been identified in previous studies, most studies focused on irregular use or quitters only. Moreover, most studies on predictors failed to take into account the personal perceptions of the social events that were studied (Rooke et al., 2011; Terry et al., 2007). In contrast, studies on desistance from crime have gained important insights from the inclusion of personal perceptions of social events, yet these perspectives have been rarely applied to drug use. We therefore
believe that a great opportunity is missed here. In the current study, persisters (those who from baseline onwards reported a persistent desire but unsuccessful attempts to quit) and desisters (those who quit using cannabis during follow-up) of frequent cannabis use will be compared and portrayed, cross-sectional and longitudinal. The focus is mainly on concepts that have been shown to be important in desistance studies, such as the role of the perception of life events, agency, identity change, and strategies.

Research questions
In light of these theoretical perspectives and gaps in previous research, the central question is translated into the following research questions.

1) What is the natural course in cannabis use and cannabis dependence in young adult frequent cannabis users?
2) How do cannabis use characteristics and cannabis dependence play a role in social networks of frequent cannabis users?
3) What is the role of social relationships in frequent cannabis use and cannabis dependence trajectories and what is the (relative) contribution of selection and socialization?
4) What is the role of study and work in frequent cannabis use and cannabis dependence trajectories?
5) What is the role of leisure and delinquency in frequent cannabis use and cannabis dependence trajectories and what does that tell us about the normalisation of cannabis use in young adults?
6) What are processes underlying desistance from frequent cannabis use, more specifically the role of perceived life events, identity change, agency, and strategies?

The focus of the questions 2-6 is on how young adult frequent cannabis users experience these various aspects in affecting their use and the development of cannabis (non) dependence, and vice versa. The research questions will be investigated by exploring different life domains in-depth and they will be translated into more specific aims in each chapter.

Methods and approach
The CanDep study
In order to investigate the natural course of frequent cannabis use and cannabis dependence, we conducted a longitudinal study combining quantitative and qualitative methods (van der Pol, 2014; van der Pol et al., 2011). Briefly, together with my co-researcher Peggy van der Pol and three research assistants, 600 frequent cannabis users (≥3 days per week for 12 months, aged 18-30 years) were recruited and interviewed. In the
Netherlands, coffee shops make it relatively easy to gain access and to recognize frequent cannabis users. The vast majority of users who buy their own cannabis do so in coffee shops, particularly in urban areas (Wouters & Korf, 2009). Those who acquire their cannabis in other ways or only make a short visit to coffee shops are harder to access. Therefore, snowballs were initiated in coffee shops, assuming that subsequent referral chains would emerge that would also include non- and less frequent coffee shop visitors. They were all interviewed and based on their answers to the Composite International Diagnostic Interview (CIDI 3.0: Kessler & Ustun, 2004) they were classified as either non-dependent frequent cannabis users (cohort I; N=348) or dependent frequent cannabis users (cohort II; N=252). Participants were re-interviewed after 1.5 (first follow-up) and 3 years (second follow-up). After the first follow-up interview, 48 participants were randomly selected based on their transition status in cannabis dependence to participate in a qualitative sub study, which for most part forms the basis for this book. They were interviewed in-depth twice shortly after the standardized follow-up interviews, with an intermediate period of 1.5 years with the aim to gain comprehensive insights on the processes involved in this 3-year natural course of cannabis use. A qualitative methodology was chosen to explore the processes and mechanisms underlying dynamics in frequent cannabis use and dependence, for several reasons.

Qualitative methodology
A major advantage of quantitative general population surveys is that they can generate statistically representative data, not only on prevalence rates and numbers of users, but for example also on the discontinuation rates of cannabis use and the remission rates of cannabis dependence. Such studies are important to estimate prevalence rates, protective and risk factors and bring evidence that most people who try cannabis do not progress to frequent use and dependence. However, these general population studies commonly include only small numbers of frequent or dependent users. A solution for this problem is the use of targeted samples. However, general population surveys generally have another problem. They can identify so called ‘objective’ risk and protective factors for the onset, continuation and cessation of cannabis dependence, but they are not able to uncover the mechanisms beyond the numbers, because they fail to take into account personal meaning and are thus not suitable to uncover subjective causal processes (Terry et al., 2007).
In contrast, qualitative research provides in-depth insights and clarifications that can better capture the dynamic and complex processes and mechanisms involved in the life course than quantitative research. A users (subjective) perspective is deemed to improve our understanding of the processes and
the context involved with changes in life course and cannabis use and dependence. Moreover, although information is often reported about cannabis users, users rarely get the chance to speak for themselves. In this study, various aspects of cannabis dependence are explored from a qualitative perspective, such as the centrality of cannabis in users’ lives and whether and why frequent users react differently in their use of cannabis to similar life events. Their ‘subjective’ meaning, their construction of reality, their attribution to their life course and events, form the foundation for this book. Their narratives are theoretically and analytically interpreted and abstracted to find patterns and mechanisms.

**In-depth interviews**

Most interviews took place at the participant’s home, the rest at the Bonger Institute or in a café. Interviews lasted around two to three hours. The in-depth interviews were quite different from the standardized interviews. Although a topic list was used to guide the interviews, there was much more room for an open conversation, and the absence of the laptop created a more informal setting, denuded from an official interview atmosphere. This could also have an effect on the participant’s comfort and openness to talk about him/herself, as some seemed to feel more at ease and to have a greater readiness to talk during the in-depth interviews than during the standardized interviews. All interviews started with an informal non-interview related chat before the ‘official’ interview started.

Interviewees were generally warm, friendly and very willing to cooperate. There was a great diversity in individuals, lifestyles and housing. Some houses were very clean and organized, nicely decorated and attention was clearly paid to it, others were messy or unclean, because the inhabitant was barely at home or simply did not really care about it. Sometimes, individuals’ lifestyle and cannabis use seemed reflected in their homes. For example, participants who carefully planned their one joint at the end of the day, after work and when daily tasks were finished, often had an organized and clean house, while homes of participants who lived a quite unstructured life, including cannabis use during the day, were often rather chaotic. In a rare case a pile of clothes, magazines and towels had to be removed before being able to sit down, while at the other extreme an interviewee had bought freshly baked cookies especially for the interview. Interestingly, sometimes changes in cannabis use over time seemed to parallel changes in interviewees’ homes. Nonetheless, these observations were not used as a validation or indicator in the analyses.
Outline
In the following chapters, the central theme of this book is converted into more specific themes.

Chapter 2 starts with the social environment of frequent cannabis users at baseline. More specifically, the focus is on the fieldwork of the study and the strategy that was used to include participants (respondent-driven sampling, RDS). It was explored whether participants recruited via their social network differ from participants recruited in coffee shops. Moreover, the chapter dug deeper into the chains of participants that arose by RDS, i.e. their social networks, and their binding factors, including the extent to which cannabis use characteristics played a part.

In Chapter 3, social relationships are again the focus. While Chapter 2 focused on all 599 participants of the CanDep Study, Chapters 3-6 concentrate on the 48 interviewees who participated in the longitudinal qualitative sub study. Here, we will turn our perspective to the role of parents, peers and partners in cannabis use and cannabis dependence trajectories. While they have received much attention in adolescent studies, most are limited to the initiation phase, and studies yield different results. Therefore, these issues are investigated in this chapter.

In Chapter 4, the focus is shifted away from the social environment onto the life domain of study, work and other daily pursuits. Previous studies suggest the presence of a reciprocal relationship between (changes in) occupational activities and (changes in) drug use and dependence. However, little is known about the mechanisms responsible for these changes. In this chapter, the meaning and role of education and work in cannabis use are explored, and the relationship between (perceived) life events and changes in these domains and changes in cannabis use and dependence trajectories will be analysed.

Leisure is the main topic in Chapter 5. If cannabis use is indeed normalised and has become one of many leisure activities of young people, does this also apply to frequent cannabis use? And is cannabis use, or frequent cannabis use, socially accepted in the wider society? The Netherlands, with its liberal cannabis policy and easily available cannabis through coffee shops, provides an interesting opportunity to explore the extent to which cannabis is stripped of cultural and deviant connotations, and whether the normalisation also applies to frequent cannabis use. Departing from the normalisation thesis, this chapter is focused on how frequent cannabis users spend their leisure and whether they live conventional lives, away from delinquent or otherwise deviant subcultures. Moreover, different cannabis dependence trajectories are distinguished and we explore whether leisure activities and the centrality of cannabis use in leisure can explain transitions in cannabis dependence.
In Chapter 6 the perspective from these mainly contextual or social influences is shifted to the more individual influences. More specifically, attention is paid to the role of personal factors in the desistance from frequent cannabis use. In this chapter, persisters and desisters in frequent cannabis use are compared and portrayed, cross-sectional and longitudinal mainly focusing on aspects/concepts that have been shown to be important in criminal desistance studies, such as the role of perceived life events, identity change, agency, and strategies. Finally, in Chapter 7 the findings of all chapters congregate in the discussion and conclusion.