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## The connection between drug use and crime in Western Australia

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**The connection between drug use and crime in Western Australia**

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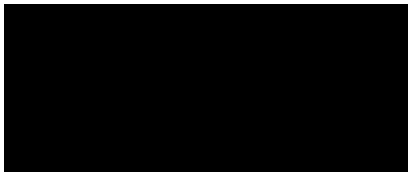
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School of Arts and Humanities

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Kathryn Riordan

### Abstract

Despite decades of research, there is no consensus as to the factors that explain the association between drug use and criminal behaviour. While the evolving sophistication in research methodology has identified factors that are associated with involvement in both drug use and crime, exploration of the idiosyncratic factors that contribute to initiation, maintenance and desistence in drug use and criminal behaviour over time, across culture and social context remains unknown. In this research a grounded theory approach was used to develop an explanatory model based on the reported experiences of 22 non-Aboriginal and 11 Aboriginal adult male offenders, incarcerated in Western Australian prisons all of who have a history of involvement in drug use and crime . Using thematic text analysis, two distinct models emerged from the two cultural groups. While both models depicted involvement in both drug use and crime as a lifestyle based within a bio-psycho-social framework, each pathway described a combination of person centred and context specific constructs as influential in the aetiology, persistence, desistence and re-engagement of the drugs-crime lifestyle. Specifically, each pathway differed with respect to the identified family, cultural and social factors that delay or influence early entry into the drugs-crime lifestyle, and those which continue to influence over the life course. The models were applied to case studies to compare and contrast the applicability of the pathway model to existing theories within the literature. The research showed that the connection between drug use and criminal behaviour comprises complex personal, cultural and social factors that underpin the drugs-crime lifestyle, rather than a simplistic causal model. Furthermore, existing theoretical models interact to partially account for

individual's experiences at discrete periods during their involvement in the drug-crime lifestyle. The bio-psycho-social model proposed found common underlying psychological vulnerabilities across the two cultural samples that contribute to involvement in the drug-crime lifestyle; however, disparate social, family, cultural and community factors influence the association across the life course. This complexity underscores the necessity for multi-faceted and systemic treatment modalities that involve family and culture, and the need for psycho-social support services that are linked to the treatment provided in custody for prisoners being re-integrated into the community.

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## Chapter One

### 1.1 Introduction

The correlation between drug use and crime is one of the most critically examined, reliably obtained, and accepted relationships within the criminological and social science research literature (Bennett & Holloway, 2006; Chaiken & Chaiken, 1982; 1990; McBride & Swartz, 1990; Sullivan & Hamilton, 2007; Welte, Zhang & Wieczorek, 2001). While researchers' have attempted to establish a causal link between drug use and criminal behaviour, evidence for a causal relationship has proved difficult to demonstrate (White & Gorman, 2000; Urbis Keys Young, 2004). Instead, after decades of research and inconsistent findings, researchers' have conceded that: (1) drug users are overrepresented in the population of arrestees, internationally; (2) high-frequency drug use appears to sustain criminal behaviour; and (3) that among those arrested for criminal behaviour, many attribute their involvement in crime to illicit substance misuse (Goldstein, 1985; Inciardi, 1986; McBride & Swartz, 1990; Speckart & Anglin, 1985). These findings indicate that if a causal relationship between drugs and crime does exist, causation would be best conceptualised as dynamic and reciprocal rather than unidirectional (Welte, Zhang & Wieczorek, 2001). That is, while substance use can increase the propensity towards crime, crime might also increase the propensity to use alcohol and other drugs. However, even the depiction of the drugs-crime relationship as a dynamic and reciprocal causal relationship neglects the influence of the cultural and socio-political context in which the relationship occurs, and intra and interpersonal factors likely shape fluctuations in drug use and involvement in crime, including periods of desistence in either or both behaviours (Everitt & Robinson, 2013; Robinson & Berridge, 2003; Zinberg, 1984).

Research undertaken to explore the association between drugs and crime beyond a direct causal relationship, has drawn upon a range of situational contexts, economic pressures, and psychopharmacological effects to explain the relationship (Prendergast, Huang & Hser, 2008; Tomlinson, Brown & Hoaken, 2016). Emerging out

of this large body of work are four dominant theoretical models: (1) crime causes drug use; (2) drug use causes crime; (3) the common cause model, in that both drug use and criminal behaviour are caused by a common set of factors; and (4) the coincidence model, in that the association between drug use and crime is spurious and coincidental.

Each of these four models deals to a large extent with only one facet of the drugs-crime relationship. Over time and with increasingly sophisticated research methodology and technology, factors that contribute to crime, drug use and involvement in both behaviours' has been recognised as being complex and dynamic (Bennett & Holloway, 2006; French, McGeary, Chitwood, McCoy, Inciardi, & McBride, 2000; Mocan & Corman, 1998; Sullivan & Hamilton, 2007; Tonry & Wilson, 1990; Welte, Zhang & Wieczorek, 2001). As such, these early models have been criticised for being deterministic, displaying a categorical understanding of drug use and overwhelmingly bio-pharmacologically focussed at the expense of ignoring context and human agency (Coomber, 2015; Sampson and Laub, 2005).

One of the first attempts at recognising the complexity of the drugs-crime relationship was Goldstein's (1985) tripartite framework. The tripartite framework brought together the economic motivation, systemic, and psychopharmacological models in such a way so as to highlight how the inherently violent context of the drug subculture, in addition to the effects of drug intoxication, and the economic pressure assumed to be associated with funding drug use can overlap to influence initiation and fluctuations in criminal involvement. However, like the models before it, the tripartite model was criticised for a lack of focus on social context, intrinsic psychological processes and the evolution of the drugs-crime relationship over time (Curtis & Wendel, 2007).

The research focus over the last few decades has therefore shifted away from the exploration of whether or not a relationship exists between drug use and crime, to documenting and understanding the pattern of involvement in drugs and crime separately and together across the lifespan. From this perspective, criminologists' have devoted considerable attention to examining the long-term patterns of involvement in

crime, commonly known as criminal careers (DeLisi & Piquero, 2011; Prendergast, Huang & Hser, 2008). The focus of study within the criminal careers paradigm is the dimensions of participation, frequency, specialisation, escalation, career length and desistance across the life course (DeLisi & Piquero, 2011). One of the central questions within the criminal careers paradigm therefore pertains to the aetiology of criminal propensity; that is the degree to which it is derived from person-specific constructs, involvement in social institutions, or a combination of the two (DeLisi & Piquero, 2011).

In advancing their general theory of crime, Gottfredson and Hirschi (1990) argued that stable traits related to poor development of self-control during childhood is crucial to understanding involvement in crime across the lifespan. The criminal careers paradigm on the other hand argue that irrespective of any childhood propensity towards criminal behaviour, persistence and desistance in criminal behaviour can be understood through the strength of social bonds developed over the life course (Laub & Sampson, 2003; Sampson & Laub, 1993; 2005; Pendergast et al., 2008). In particular, the development of social bonds in adulthood such as marriage, military service, and long-term employment are thought to change the trajectory of criminal involvement (Laub & Sampson, 2003; Sampson & Laub, 1993; 2005).

While the focus of the careers paradigm has been on crime involvement over time, Laub and Sampson (2003) have addressed the influence of alcohol on offending patterns over the life course, to suggest that the consumption of alcohol contributes to maintaining persistent offending, in addition to an episodic “zigzag” pattern of offending. Consistent with their focus on social bonds, the authors maintain that alcohol use has an indirect effect on crime by undermining the strength of the social bonds established (Laub & Sampson, 2003; Schroeder, Giordano, & Cernkovich, 2007). While the authors also recognise that substance use is likely connected to persistence in offending behaviour, they refute that illicit substance use exerts a unique contribution on crime involvement above and beyond that already described by alcohol (Schroeder, Giordano, & Cernkovich, 2007). Despite the increasing research interest in understanding the

nuances of offending careers, little research attention has been paid to the issue of race and ethnicity (DeLisi & Piquero, 2011). Much of the research to date has been conducted on white offenders, with few longitudinal studies comparing the criminal careers of different racial/ ethnic groups (DeLisi & Piquero, 2011). Within Australia, there is no local research describing the longitudinal pattern of involvement in crime for Aboriginal Australians.

Fundamental to research exploring the drugs-crime relationship are the evolving understandings and conceptualisations of what constitutes problematic drug use and the factors that contribute to the initiation, maintenance, and desistance from both behaviours. The concept of “addiction” has evolved from being understood as a categorical state, to being understood as a dimensional construct that is applicable to human behaviour beyond the use of drugs and alcohol (Bailey, 2005; Foddy and Savulescu, 2007; 2010; Orford, 2001; Weisheit, 1990; Zinberg, 1984). Underlying this paradigm shift within the professional nosology, are increasingly sophisticated research methodologies, shifts in the morals and values of the population, and associated socio-political policies that govern social behaviour and define the context within which research takes place. Over time, the drugs-crime relationships has been understood, shaped, and critiqued as a whole, from a thorough understanding of the constituent parts and how these parts interact.

Another area of research inconsistency has been in the area of race and culture. Researchers have repeatedly identified context and culture as factors that influence and shape involvement in the drugs-crime relationship (Bennett & Halloway, 2006; Spohn, 2015; Welte, Zhang & Wiczorek, 2001). Indeed, race and culture has consistently been found to be one of the strongest correlates of involvement in deviant and criminal behaviour (De Li, 2005; Spohn, 2015). Racial differences in drug use and criminal behaviour are evident in large community based prevalence studies, arrestee data (Bennett & Edwards, 2016; Cooper et al., 2012; Fox & Rodriguez, 2014; Hunt 2006; Hunt et al., 2006; Kyle & Hansell, 2005; Rodriguez et al., 2005), and in all facets of the



criminal justice system internationally (Brame et al., 2014; Garlan, Spohn & Wodahl, 2008; Spohn, 2015; Steffensmeier, Jeffery and Kramer, 1998). In Western Australia, racial differences in drug use and criminal behaviour are particularly disparate between Aboriginal and non-Aboriginal people. Aboriginal people comprise 3.6% of the Western Australian population, yet 38% of the adult prison population identify as Aboriginal. The situation is worse for aboriginal youth who have been cited as being 52 times more likely when compared to their non-indigenous counterparts, to be detained in a youth detention facility (Amnesty, 2015). The significant over-representation of Aboriginal people in all facets of the criminal justice system is not unique to Western Australia, although the extent of the overrepresentation is only surpassed by one other jurisdiction, the Northern Territory (Amnesty, 2015). As the largest minority group within the criminal justice system, the factors that contribute to Aboriginal offenders' aetiology, continuation, and desistence from drug use and criminal behaviour warrant research attention.

### **Rationale for the study**

The complexity of the relationship between drug use and criminal behaviour has been found to be heavily influenced by a number of factors; social, political, geographical, individual, family, cultural and religious. As such, while numerous researchers have developed theories exploring facets of the association, no one theory of the drugs-crime relationship has been able to adequately account in entirety, for the association. It is possible that models and theories of the drugs-crime relationship are unique to the culture and population upon which they were formed, therefore limiting the generalizability of these theories. Indeed, DeLisi & Piquero, (2011) in their review of the career criminal literature have outlined the critical importance of understanding, comparing, and contrasting the offending patterns of different races and cultures over time to ascertain unique and common risk and protective factors to inform both theory and policy.

Given that an individual's involvement in both drug use and criminal behaviour is likely to be complex, socially driven and multifaceted, theories that are based on large

scale statistical associations might not adequately capture the intricate interactions of the individual within the bio-psycho-social environment in which they interact and make decisions. Existing theories tend to weight factors associated within the drugs-crime association equally. Further, theory development exploring the drugs and crime association have tended to focus on the development of the association, rather than exploring those factors that may sustain the association over time and across the developmental spectrum. From this perspective, the theories outlined above that have attempted to explain the association, have drawn upon a cross section of data and applied these models longitudinally with the inherent assumption that an individual's involvement with drugs and crime remain constant over time. However in essence, these models offer a somewhat stagnate perspective; that is, an explanation of the drugs-crime association for the sample at a given period of time within the certain geographical area that may or may not adequately explain the drugs-crime association within other settings or across the developmental spectrum.

Within the Australian context, little research attention has been given to the offenders'/ arrestees'/ drug users self-perceived nature of the drugs-crime relationship, and the extent to which the crimes that these individuals participate in can be attributed to economic, psychopharmacological, or other motivations (Payne & Gaffney, 2012). There is a dearth of research exploring and contrasting the factors associated with drug use and crime in aboriginal and non-aboriginal populations over time and within the Western Australian context. Given the limitations of studies drawing on large scale statistical associations to elucidate the idiosyncrasies of the drugs-crime association, in depth qualitative exploration of individual's own understanding, perspectives, experiences and journey of involvement in criminal behaviour and drug use, is likely to provide a greater depth of understanding as to what factors influence initiation, maintenance and desistence in both substance use and involvement in criminal behaviour over time. Deep exploration of the distinctive nature of individual's experiences in turn, is likely to contribute to the existing empirical research by refining

existing models through uncovering aspects of the theories previously unexamined or provide socially and culturally relevant understanding of how drug use and crime develops and is maintained within certain community settings.

From this perspective, in the current research I sought to understand the idiosyncratic dynamics of the drugs-crime relationship across time and culture, using a data-driven, grounded theory approach to explore the drug use and criminal involvement pattern in a sample of Aboriginal and non-aboriginal male offenders in Western Australia. The questions that this research sought to answer include; Can the existing theories and explanations that attempt to explain the drugs-crime relationship adequately explain the experiences of both Aboriginal and non-Aboriginal incarcerated male offenders in Western Australia? Are Aboriginal men's experiences within the drugs-crime relationship unique? What factors do Aboriginal and non-Aboriginal incarcerated male offenders identify as contributing to their involvement in and desistence from the drugs-crime relationship across time? Are the factors that contribute to initiation, maintenance and re-engagement in drug use and criminal behaviour consistent across time and across culture?

This thesis commences with an exploration of the research literature that has attempted to understand drug use and the evolution of drug use into addiction or dependency; followed by a review of the evolving theoretical models and frameworks that explain the drugs-crime relationship and an examination of racial disparities within the drug use pattern and criminal justice system involvement locally and internationally. Following this review, the two main qualitative studies will be presented. Both studies draw upon the same grounded theory methodology and seek to examine the narratives and experiences of a sample of incarcerated non- aboriginal men (Study One) and a second sample of incarcerated aboriginal men (Study Two). The resultant theoretical models are then followed by the presentation of two case studies (Study Three) that aim to illustrate how the emergent models apply on and individual level and the implications that these models have for psychological understating and practice.

## Chapter Two

### Theoretical Models of Addiction and Dependence

#### 2.1 Addiction vs Dependence; Evolving Drug Use Terminology

The concept of addiction has long been used to explain an increasing range of socially unacceptable behaviour (Bailey, 2005; Foddy and Savulescu, 2007; 2010; Orford, 2001; Weisheit, 1990; Zinberg, 1984). There have been numerous attempts to define addiction, all of which vary to some extent dependent upon where the term is used, by whom, in what period and in what context. As a discourse, addiction is about abundance. As a psychological concept, addiction has been considered to be a state, which is different from a normal state of being; however the components of the state remain unclear (Davies, 1992). From an economic perspective, to be addicted to the consumption of a good or service is determined by an increase in past consumption that leads to an increase in current consumption (Grossman, Chaloupka & Anderson, 1998). When used as part of the vernacular of the general public, addiction denotes the difficulties that someone might experience in attempting to cease doing some activity or consuming some sort of good (Adams & Kirkby, 2001). When applied to the use of drugs, addiction can be simply defined as the compulsive use of drugs despite negative consequences (Hyman, 2005, 2007; Orford, 2001; Robinson & Berridge, 2003). More specifically, Robinson and Berridge (2000) stated that the question of drug addiction “concerns, (a) the process by which drug taking in some individuals evolves into a compulsive pattern of drug-seeking and drug-taking behaviour that takes place at the expense of most other activities, and (b), the inability to cease drug taking, that is, the problem of relapse” (p. S91-S92).

Over time and across disciplines, the research literature remains divided as to how to define, describe and measure an individual’s interaction with and use of alcohol and other drugs. This is no more evident than in the professional nosology in the field of psychology and psychiatry. The psychiatric and psychological nosology no longer uses the term abuse or addiction, and there is no diagnostic label of addiction in the latest

Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM-V; American Psychiatric Association, 2013). This deliberate amendment away from the term “addiction” to “dependence” in the DSM-IV (American Psychiatric Association, 1994) was because the term “addiction” was perceived to be pejorative and therefore resulted in stigmatization of those with Substance Use Disorders (Erickson, 2008; O’Brien, Volkow & Li, 2006). Furthermore, it has been argued that the term “addiction” no longer carries scientific value. “Addiction”, as it is used within the vernacular of the general public, can describe many different forms of behaviours including drug use, drug abuse, and people’s repeated engagement in activities (such as eating chocolate, shopping, playing electronic devices etc.) to which there is no scientific evidence to support a change in the reward neuro-circuitry system (Erickson, 2008). Instead, the nosology has turned towards reframing addiction from a categorical state, to substance use disorder and dependence which denotes a more continuous variable (Edwards, 1986). The DSM-V devotes a chapter of the manual to “Substance Related and Addictive Disorders”. This latest version of the DSM has combined the previous categories of “substance abuse” and “substance dependence”, described in the DSM-IV-TR (2000) to the more generic, Substance Use Disorders. George, Koob and Vendruscolo (2014) argue that this reclassification and the removal of the term “abuse” is an indication of acceptance that addiction operates on a continuum from recreational use to severe Substance Use Disorder. Indeed the separation of intoxication from Substance Use disorders that range on a continuum from mild to severe and separate classifications for substance induced disorders, supports George et al’s argument. In the DSM-V, each substance is treated as a separate disorder (e.g. alcohol use disorder, stimulant use disorder etc.) and the manual also includes behavioural manifestations of dependence (e.g. Gambling Disorder). While each substance attracts its own diagnostic label, all of the substance use disorders draw upon similar overarching criteria for the diagnostic label to be considered applicable. The overarching criteria describe eleven signs or symptoms, of which, at least two to three symptoms must be experienced for a diagnosis of mild

Substance Use Disorder to be given. The areas described include tolerance; the experience of withdrawal effects; that the substance is taken or behaviour engaged in for a longer period or in greater amounts than intended; a persistent desire or unsuccessful attempts to control the substance use (or behaviour); that a great deal of time is taken trying to obtain the substance (or engaged in the behaviour); important social, occupational or recreational activities are given up due to the substance use (or involvement in the behaviour); and that the substance (or behaviour) is used despite knowledge of psychological or physical problems that are either caused or exacerbated by the substance.

The description of Substance Use Disorders adopted by the most recent DSM-V mirrors to a large extent that of the earlier version of the World Health Organisation's International Classification of Diseases, Version Ten (ICD-10; WHO, 2010). The ICD-10 describes a cluster of mental and behavioural disorders due to psychoactive substance use (F10-F19). This block of disorders distinguish between acute intoxication, harmful use, dependence syndrome, withdrawal state, withdrawal state with delirium, psychotic disorder, amnesic syndrome, residual and late onset psychotic disorder, other mental and behavioural disorders and unspecified mental and behavioural disorder as separate sub-categories (.0-.9 respectively) of diagnoses as they apply to separate classes of the substances used (F10-F18). Of importance to the current discussion, are the definitions of acute intoxication, defined as a condition that follows the administration of a psychoactive substance that results in disturbances in level of consciousness, cognition, perception, effect of behaviour or other psycho-physiological functions and responses. The disturbances must be directly related to the pharmacological effects of the substance and resolve over time; Harmful Use, defined as a pattern of psychoactive substance use that is causing damage to health; Dependence Syndrome, defined as a cluster of behavioural, cognitive, and physiological phenomena that develops after repeated substance use and that typically include a strong desire to take the drug, problems controlling use that persists despite negative consequences, increased

tolerance, high priority of drug use over other activities and sometimes withdrawal effects.

While both classification systems (ICD-10 and DSM-V) acknowledge substance use as a variable construct, the varying use of the terminology between the previous term of Addiction to Substance Use Disorder and a Dependence Syndrome contributed to confusion within the research literature about the distinction between drug addiction, drug dependence and physical dependence. To illustrate the confusion, dependence has been described in the research literature as both a symptom of addiction and the motivation for the repeated use of a substance (see Adams & Kirkby, 2001; Solomon, 1980). The ICD- 10 (World Health Organisation, 2010), adopts the view that addiction forms part of a Dependence Syndrome. Other researchers' stipulate that dependence and addiction are separate entities, whereby the presence of dependence does not explain addiction (Hyman, 2005), while others still maintain that both dependence and addiction are synonymous (Greenburg & Adler, 1974; Koob & Le Moal, 1997; McLellan, et al., 2000).

In an attempt to provide some clarity on the issue, O'Brien et al (2006) and others (Zinberg, 1984) argue that the term dependence has been traditionally used to describe physical dependence. Physical dependence relates to the biological adaptations that result in withdrawal symptoms when the individual ceases to use any drug (illicit or otherwise) that affects the central nervous system. However, O'Brien et al stated that the physiological adaptations that are associated with drug withdrawal are distinct from those associated with addiction. Physiological adaptations associated with "addiction" refer to an inability to control the intense urges to take drugs despite negative consequences. Therefore, O'Brien et al argue that clinicians have inevitably become confused about the difference between "dependence", the term that the DSM and ICD-10 has previously used to describe "addiction", and "dependence" as a normal physiological adaptation to repeated dosing of medication.

Similarly, while the research literature has grappled with definitional clarity about what constitutes addiction and dependency, there has been an equally vague understanding of what differentiates drug use and drug abuse (Zinberg, 1984). Early researchers' in the field initially defined all drug using behaviour as abuse, with the belief that physiological addiction was an inevitable outcome of all drug use (Zinberg, 1984). Overtime, with continued research and varying community acceptance or acknowledgment of drug use, DSM-V and ICD-10 have likewise acknowledged variations of drug use. Substance Use Disorders in DSM-V and ICD-10 classifications of intoxication to dependency is underpinned by an acceptance that drug use can occur in the absence of "abuse" and without an inevitable evolution towards "addiction" or "dependency".

The concept of controlled drug use is not new, yet remains somewhat controversial due to the entanglement that illicit drug use in particular, has with morality, social policy and criminal behaviour. Zinberg (1984) highlighted in his early research exploring controlled drug use, that the term drug abuse is a vague value laden term that reflects the prevailing cultural morals, rather than a term that can be operationalised and reliably measured. The intricate relationship between morality, social policy and drug use will be explored in more detail later in this chapter (see page 31). Of importance to the current discussion is that more recent research has sought to define what constitutes controlled drug use, in what cultural context and how controlled use can be a legitimate treatment goal, rather than abstinence (see Harling, 2007).

One means through which researchers' have attempted to differentiate between recreational or controlled drug use and drug dependency is to explore the psychological motivation of how drug use impacts on tasks of daily living and the level of focus the individual places on drug use (Simpson, 2003). Gilman (1992) differentiated recreational users as those for who drug use was an adjunct to fun, rather than occupying an organising force in their life. Similarly, Plant and Plant (1992) characterised recreational drug users as those who use drugs as part of a hedonistic lifestyle that rejects straight or



conventional values. As Simpson (2003) highlights, the term recreational use has been used to define drug use that has become part of an individual's lifestyle even if that use only occurs on an occasional basis. Indeed, it has been argued that the recreational use of drug transverses culture, class, gender, race, age and geography (Simpson, 2003, see also Parker, Measham & Aldridge, 1995; Parker et al., 1998; redhead, Wynne & O'Connor, 1998). However, while differentiating recreational substance use from dependency or more recently, a substance use disorder acknowledges the variability in people use of substances, Simpson (2003) argued that the literature remains fixed on two categories of use. To clarify, he stated that if an individual is not classified as drug dependent (or as fulfilling the category for a substance use disorder); they are assumed to be a recreational drug user. Therefore, the term recreational drug user encompasses an enormous variety of patterns of use, with a large array of substances across any number of social, cultural and situational contexts.

In an attempt to provide some specificity to the variety of substance use patterns, Simpson (2003) proposed a fivefold schema that explores an individual's regularity of drug use; amount or degree of substances used; type of drug chosen for use; style of administration and the centrality or value the individual places on their drug use within their lifestyle. From this schema, Simpson argued that drug use can be categorised into three groups; dependent use, persistent use and recreational use (p. 309). Drawing upon the fivefold schema of drug using behaviour, Simpson discusses the common and unique factors attributable to each category of use, hypothesising that recreational drug users form the largest group of substance users, followed by persistent users and finally, dependent users. The defining features of the persistent drug users category is that drug use occurs at greater frequency than that of the recreational user, due in part to the individual reporting greater amount of time spent in unstructured activity, rather than the experience of withdrawal symptoms. The frequency of drug use in this category may occur on a daily basis, with use fluctuating greatly in response to drug availability and financial resources, while the type of drug used tended to be restricted to a single class

of drugs. Additionally, the route of administration was more commonly found to be inhalation or ingestion rather than intravenous use, which may be perceived by the user as being too extreme (Simpson, 2003). Importantly, Simpson's conceptualisation of drug use acknowledges categorical overlap, such that there is recognition that users may fluctuate over time between recreational use, persistent use and dependent use.

By broadening the diagnostic category to Substance Related and Addictive Disorders in DSM-V, American Psychiatric Association appear to have subscribed to the view of many researchers' (e.g. Miller & Brown, 1991; Shaffer et al., 2004; ) that an addictive disorder can encompass behaviours in the absence of substance ingestion. The acceptance of addictive behaviours (a term that encompass behaviours such as eating, gambling, sexual behaviour, shopping etc.) within the professional nosology may suggest, as proposed by Shaffer et al (2004) that "addiction should be understood as a syndrome with multiple opportunistic expressions" (p.367). Indeed, the view that Substance Use Disorders should be understood in a similar manner to that of other benign or less value laden human behaviours is well supported within the research literature. Miller and Brown (1991) argue that like all behaviours, addictive behaviours are "first and foremost behaviours that respond to a complex array of determinants" (p. 10). The point to be made by Miller and Brown is that by classifying drug and alcohol addiction as similar to other more universally experienced behaviours, then the moral loading and mystique surrounding drug addiction is removed and a more rational approach to drug policy and treatment may ensue.

Given the conceptual and definitional ambiguity evident within the research literature and the overwhelming tendency to oscillate between using the term addiction and dependence to describe the same phenomena, in reviewing the research literature below, addiction and dependence will likewise be used interchangeably.

## **2.2 Theories of addiction**

In an attempt to offer an explanation for how drug use evolves into drug addiction, the research literature outlines various physiological, psychological and

combined explanations (Adams & Kirkby, 2001; Drummond, 2001). Those theories that seek to explain addiction in primarily physiological terms do so by outlining both the common effects (direct and indirect) that virtually all addictive drugs have on structures deep within the brain (Adams & Kirkby, 2001; Leshner, 1997), and the idiosyncratic changes to brain chemistry and biology that are unique to various classes or types of drugs. While a comprehensive review of the literature that outlines the neurobiological basis of drug addiction is beyond the scope of this paper, it is important to outline the neurobiological pathway identified by researchers that most, if not all psychoactive drugs follow (Adams & Kirkby, 2001; Leshner, 1997).

The neurobiological pathway has been found to include the mesolimbic dopamine system that comprises the ventral tegmental area that connects the limbic cortex with the mid brain and the nucleus accumbens (Adams & Kirkby, 2001; Leshner, 1997; McLellan, Lewis, O'Brien & Klebber, 2000). These same areas of the brain (often referred to as the reward neuro-circuitry system; Koob & Le Moal, 1997) are thought to be responsible for the acquisition of naturally occurring rewards/ reinforcement and to exert motivational control over behaviour (Foddy & Savulescu, 2007; 2010; Kelley & Berridge, 2002; McLellan, et al., 2000; Robinson & Berridge, 2003). Therefore, those drugs that are considered to be abusable (i.e. those that induce euphoria, cravings and potential dependence) are thought to elicit a dual effect on the brain, both excitatory and inhibitory (Fishbein, 1998). Abusable drugs excite the rewards pathways of the brain (mesolimbic area) inducing a pleasurable experience, while at the same time inhibiting the neural systems of the brain responsible for the perception of pain (Fishbein, 1998). Such drug induced neurobiological changes to this brain system are thought to be critical in the transition from drug use to drug addiction (Robinson & Berridge, 2003). Specifically, psychoactive drugs are thought to exert pharmacologic effects that cause the release of the neurotransmitter dopamine (Hyman, 2007). Under normal circumstances, dopamine is released when an individual experiences a reward that is new, better than expected or is unpredicted in a particular environment (Hyman, 2007). When an individual

experiences the environment as they would expect and experiences nothing new or exciting, dopamine is not released. This is the biological basis to reward/ reinforcement learning and these are thought to be the mechanisms by which an individual is motivated to pursue survival behaviours and natural rewards (Hyman, 2007). Hyman hypothesised that psychoactive drugs usurp these reward mechanisms by short circuiting the naturally occurring controls on dopamine release. This occurs due to the drug pharmacologically increasing the amount of synaptic dopamine. With repeated drug use, neural circuits are thought to “overlearn” on largely distorted amounts of dopamine, thus resulting in the drug user always experiences the environment as highly rewarding (Hyman, 2007). Therefore, any cues that are predictive of drug use, become highly valued and are able to increase motivation to perform goal directed behaviour aimed at securing the individual’s drug of choice (Hyman, 2005; 2007; Koob & Volkow, 2009).

Hyman (2007) proposed that the pharmacologic effects of increased dopamine in the pre frontal cortex contribute to drugs becoming overvalued in comparison to other personal and/ or rational goals. Behaviourally, this produces a myopic focus that Hyman stated is the result of fundamental changes to synaptic weight and structure. The changes to the synaptic structure are thought to result in diminished cognitive control, in as much as cue-initiated drug seeking behaviour can become extremely difficult to suppress and if suppressed, could result in cravings (Hyman, 2007; Tiffany 1990). It is the biological change in the synaptic structure and weight which underlie memory that Hyman hypothesised holds the key to understanding how drug related cues can motivate a relapse after extended periods of abstinence. Hyman maintains that synaptic changes to the memory system are among the longest-lived changes in biology. This means that drug induced alterations to the memory system are likely to remain influential for an extended period of time, if not life. It is these neural changes and adaptations that are thought to be critical in the transition from casual drug user to compulsive drug use or addiction (Robinson & Berridge, 2003). With compulsive use or dependency, the neural pathways are thought to be overwhelmed with dopamine, which results in a decrease in

post-synaptic receptors to counter the dopamine levels induced by the drug use (Kennett, Matthews, & Snoek, 2013) . This process contributes to substance tolerance, such that, more of the substance is required to exert the same effect on the altered neural pathways. A by-product of the neural changes associated with substance tolerance, is a higher tolerance for other rewarding behaviours that occur naturally, such as sex, food, and social connection (Kennett, Matthews & Snoek, 2013; Koob and Volkow, 2010). As a consequence, the pleasure derived out of these naturally rewarding activities is also thought to diminish.

While there is some consensus amongst researchers' that drug use at some level results in changes to various brain systems (Foddy & Savulescu, 2007; 2010), it is not clear the quantity needed of any given drug to result in sustained biological changes, how long these changes are likely to last or any reliable findings in relation to the behavioural manifestations of these changes in the short or long term (McLellan, et al., 2000). For example, Koob and Volkow (2010) drew upon the neural changes to the reward neuro-circuitry pathway with sustained drug use to describe a "motivational withdrawal syndrome" (p.27). This syndrome is described as a negative affective state (anhedonia) that occurs after substance abstinence due to the fluctuating changes in the dopamine levels and dopamine receptors over time and with sustained drug use. The authors hypothesised that this affective state could last from several months to years, yet not all drug dependent individuals report experiencing such a state. Further, with such variation in the amount of time that an individual may experience this motivational withdrawal syndrome, it is difficult to generalise and explain across substances and populations. While examples such as these highlight the ingenuity and complexity of research exploring addiction, they also demonstrate the level of ambiguity and uncertainty in attempting to explain what psychological functions are altered due to drug induced neurobiological changes to the brain. Further still, explanations are lacking with respect to how drug induced neuro-biological changes alter psychological function and behaviour to cause, maintain and re-ignite drug dependence (Robinson & Berridge,

2003). As Kennett et al., (2013) point out, the science behind the neurobiology of addiction is far from settled. As such, biology alone cannot adequately account in entirety, for an individual's initiation into drug use, harmful misuse and evolution into dependency.

### **2.3 Psychological theories of addiction**

Psychological theories of addiction have attempted to address the question of what psychological functions are responsible or at least play an active role in initial drug use, and the transition from drug use to drug addiction. As such, psychological theories of addiction have included negative and positive reward based models, aberrant learning based models, and motivational distortion theories (Adams & Kirkby, 2001; Robinson & Berridge, 2003). Despite the obvious psychological focus, it is important to note that most, if not all psychological theories of drug addiction have a physiological component. That is, psychological theories make the common assumption that the transition from drug use to addiction is caused in part, by drug induced changes in the brain that in some way results in altered psychological functioning (Orford, 2001; Robinson & Berridge, 2003).

#### *Negative and positive reward based models*

Early attempts to explain drug addiction centre on the premise that those who initially seek to use drugs, do so out of hedonistic goals and motivations to experience pleasure (Foddy & Savulescu, 2007; 2010; Hyman 2007; Orford, 2001; Robinson & Berridge, 2000; 2003). Compulsive use and drug dependency were therefore thought to be maintained either out of a desire to re-establish the pleasurable experience (positive reinforcement) or to avoid the unpleasant consequence of substance withdrawal (negative reinforcement; Adams & Kirkby, 2000; Robinson & Berridge, 2000). The biological assumption therefore, is that at a neurological level, drug use is thought to disrupt homeostasis within the brain's reward system (Koob et al., 1997; Koob, 2003a; 2003b; 2006). With repeated drug use, homeostatic neuro-adaptations occur that are thought to lead to the experience of tolerance, dependence and withdrawal symptoms

upon drug cessation (Robinson & Berridge, 2003). One early theory that drew upon the notion of the strength of negative reinforcement and the biological notion of homeostasis is the opponent process theory of addiction (Solomon & Corbit, 1973, Solomon, 1980). This theory maintained that the ingestion of a psychoactive drug creates a pleasurable “a-process” in the brain neuro-reward system; the decay of the drug then triggers the opponent and negative “b-process”. It is the b-process that was hypothesised to return homeostasis and restore the brain back to normal functioning (Robinson & Burrige, 2003). With continued drug use, the b-process strengthens in magnitude and duration. Thus, overtime, it was hypothesised that the opponent b-process regulated the individual’s behaviour towards a substance, which in turn, results in dependency (Adams & Kirkby, 2000). With prolonged abstinence from the drug, the b-processes are thought to decay. Once the b-processes return to normal the person can be considered no longer drug dependent (Robinson & Burrige, 2003).

There is little doubt that at some level or at some time, drug users will take a drug out of the desire for a pleasurable experience or in an effort to avoid an unpleasant state or circumstance (Robinson & Burrige, 2003). Likewise, there is little debate that the desire to avoid experiencing withdrawal symptoms may create a powerful source of motivation for some users. However, opponents of the negative reinforcement models of addiction have highlighted that such theories have failed to account for some drugs that are known to have a high addictive potential, but to which withdrawal states do not accompany (Hyman, 2007). For example, substances such as cocaine and methamphetamines are thought to be highly addictive, but are thought to lack many of the physical withdrawal symptoms that are evident in other drugs of dependency (Hyman, 2007; Leshner, 1997). Conversely, Robinson and Berridge (2000) asserted that there are drugs, such as tricyclic antidepressants, that produce tolerance and withdrawal symptoms, but do not support compulsive patterns of use. Other researchers’ assert that withdrawal symptoms are not as powerful a source of motivation as initially thought (Stewart & Wise, 1992). In laboratory experiments using heroin or

cocaine dependent mice, Stewart and Wise (1992) found that the activation of the a-process (pleasure) was far more effective at motivating the mouse to pursue drug use than re-instating a b-process or withdrawal state. When related to human beings, this finding appears to be counter intuitive to both the opponent process theory and to anecdotal evidence provided by drug users that confirm the power of withdrawal symptoms in motivating their drug seeking behaviour (Robinson & Berridge, 2003). However, research has consistently found that drug craving is often elicited by drug administration and other euphorogenic effects, at the precise time when withdrawal effects should be at their weakest (Robinson & Berridge, 2000). Furthermore, Hyman (2005; 2007) argued that negative reinforcement or withdrawal avoidance theories, have failed to account for the persistence of relapse risk after substantial periods of detoxification, long after withdrawal symptoms have subsided and despite incentives to avoid resuming drug use. It would therefore appear that withdrawal symptoms in and of themselves are not sufficiently strong or reliable enough to serve as the principal explanation for relapse or maintenance of addiction (Robinson & Berridge, 2000; 2003).

Positive reinforcement models of drug addiction place emphasis on the pleasurable or euphoric states that psychoactive drugs produce (Robinson & Berridge, 2000). A simplistic explanation of the positive or hedonic reinforcement model is that the motivation to take drugs is directly attributable to the ability of the drug to induce a euphoric state (Robinson & Berridge, 2000). As stated by Foddy and Savulescu (2007) "addiction is merely a form of pleasure seeking" (p. 29). The pleasure or hedonistic explanation of addiction is encapsulated in the appetitive theory of addiction (Adams & Kirkby, 2001). The appetitive theory of addiction reasons that the drug induced euphoria is so pleasant that it becomes progressively more important to the individual than other aspects of the person's life such as their health, family relationships, vocational pursuits etc. (Adams & Kirkby, 2001; Holman, 1994). In essence, the weight and priority that the individual gives their pursuit of drug induced pleasure outweighs the pleasure derived from other previously enjoyed sources (Hyman, 2007). Hyman proposed that individuals



can obtain pleasure from four different sources; natural activity (engagement with nature), social activity (involvement with people), psychological activity (engagement with one's own consciousness) or biological activity (direct activation of biological pathways that generate pleasure). Drug consumption constitutes a biological pathway of pleasure, in that psychoactive drugs act directly on the brain to change the neurochemistry and therefore produce pleasure. However, the process by which drugs change the biochemistry of the body is not straight forward. It is likely that an interaction occurs with other sources of pleasure that can potentially heighten or deaden the drug induced euphoria. For example, Edwards (1986) stated that drug induced changes in the individual's personality, such as raised self-efficacy, a reduction in inhibition and the deadening of sensation, can be experienced as a psychological form of pleasure and therefore also contribute to the development of dependency. From a purely hedonistic or pleasure seeking perspective, the problem of addiction is more about the problem of the place and kinds of pleasure that should be sought (Foddy & Savulescu, 2007). Therefore, according to Foddy and Savulescu, to state that someone is addicted to some form of pleasure is to make a normative judgement that the individual has given that source of pleasure too much weight.

Addiction models that make use of positive reinforcement appear to make logical sense, in that, one would expect an individual to continue to engage in an activity that they find pleasurable. However, research has found that despite dramatic increases occurring in the amount of the drug used in the early stages of addiction, subjective accounts of the hedonistic pleasure derived out of a given dose of a drug is not reported to increase with repeated use (Robinson & Berridge, 2000). Furthermore, over time, one would expect that if the drug user craved drugs in proportion to the amount of pleasure that the drug can produce, then craving late in the drug use career should be of a similar magnitude to that experienced after the initial use (Robinson & Berridge, 2000). Research does not support this view. Instead, research has found that individual's will work for very low doses of morphine or cocaine that produce no subjective pleasure at all

(Fischman, 1989; Lamb et al., 1991). Such findings have led some researchers' (Fischman, 1989; Lamb et al., 1991) to claim that subjective states of euphoria are poorly correlated with drug taking. Therefore, it could be argued that a single process (reinforcement) is too simplistic to explain the complex behaviour of addiction.

A more complex psychological explanation is offered by Loeben and Stohr (2007), who hypothesised that it is both the appetitive and aversive states that motivate drug use and maintain addiction. These authors proposed that drug users initially use drugs for the positive or hedonistic rewards, however over time and with continued drug use, this motivation shifts to negative reinforcement or the avoidance of withdrawal states. Anecdotally, this explanation makes intuitive sense and may fit with clinical evidence provided by those considered drug dependent.

Despite the empirical and anecdotal support that positive and negative reinforcement processes have been attributed in influencing drug use behaviour, what may be more important to the development of drug dependency is the capacity of drugs to invoke a change in an individual's subjective state or reality, not the apparent appetitive or aversive quality of that state (Mello & Mendelson, 1997).

#### *Aberrant learning theories of addiction*

Learning theorists propose that drug use and drug dependency are behaviours that can be learned in ways that are no different to any other behaviour (Miller & Brown, 1991). Therefore, the development of addictive behaviours can be conceptualised as a long and complex learning and decisional process in individuals who exhibit varying preparedness for addiction (Miller & Brown, 1991). McLellan et al. (2000) stated that while drug induced somatic complaints (withdrawal symptoms) have been found to last several days and cognitive impairments have been found to last several months; it is the learned aspects of tolerance to the drug that appear to be altered indefinitely. Aberrant learning theories attempt to explain how learning plays an active role in addiction by proposing that drugs produce abnormally strong or aberrant associations involved in reward learning (Robinson & Berridge, 2003). These associations are thought to be

more powerful than naturally occurring reward associations (Robinson & Berridge, 2003). The research literature exploring learning in drug use behaviour remains divided as to whether explicit or implicit learning provides the most parsimonious explanation for drug addiction. Explicit learning provides an uncomplicated explanation; the drug user undergoes a process of declarative learning whereby the individual learns at a conscious level the causal relationship between their actions (obtaining drugs) and an outcome (drug injection/ingestion and euphoria; Robinson & Berridge, 2003). This explanation also accounts for the influence of environmental cues by hypothesising that drug users consciously learn the relationship between certain environmental cues and the expected rewards (Robinson & Berridge, 2003). These two processes are thought to produce abnormally strong learning that distort memory or expectations. This may result in the production of vivid or intrusive conscious memories of the hedonistic drug experience or a distortion of declarative memories about the drug experience that are overly optimistic, which in turn, may result in erroneous predictions about the consequences of drug use (Robinson & Berridge, 2003).

Implicit learning theories explain the pathway from drug use to drug addiction by asserting that drugs cause pathologically strong implicit learning through unconscious learning processes (Tiffany, 1990; Robinson & Berridge, 2003). Basically stated, implicit theories propose that drug use evolves to become an over learned habit that is so automatic that it becomes compulsive (Robinson & Berridge, 2003). These theories place drug use in the same realm as other behaviours in procedural memory, such as driving, teeth brushing and shoe tying that are performed automatically with little conscious cognition involved. While implicit learning models may provide a clear explanation for the drug user's behaviour when using the drug, they offer little to explain the motivation behind the varied behaviour executed by drug addicts in pursuit of various drugs (Robinson & Berridge, 2003).

Everitt and Robins (2013) have continued to make advancements on the biological basis of psychological learning theories of addiction. In their earlier work,

Everitt and Robbins (Robbins and Everitt, 1999; Everitt & Robbins, 2005) hypothesised that drug addiction could be conceptualised as the conclusion of a series of transitions from initial voluntary drug use that is experienced as highly rewarding, to a behaviour that develops into a stimulus-response habit, progressing ultimately into a compulsive behaviour that is difficult to cease. Everitt and Robbins maintain that the “transition from voluntary to habitual and progressively compulsive drug use is the result of dynamic shifts in the neural loci of control” (p. 1947). In testing their hypothesis, Everitt and Robbins have conducted a series of laboratory experiments with rats drawing upon classic pavlovian pairing of conditioned stimulus and drug (cocaine) to increasing the complexity of the learning environment to include intermittent punishment.

Through a series of research studies over time (Everitt & Robbins, 2000; Everitt et al., 2001; Everitt & Robbins, 2005; Everitt et al., 2008; Robbins & Everitt, 1999), Robbins and Everitt have hypothesised that drug dependency is the result of shifts in neural control within the brain; namely the ventral and dorsal striatum, in addition to a decrease in prefrontal cortical control. In their review of the literature, Everitt and Robbins claimed that there is clear and consistent evidence to suggest that there is a demonstrable shift in the brain region involved in the early acquisition or involvement in drug use (i.e. behaviour that is goal directed), versus those brain regions involved in the maintenance of habitual drug use and, more importantly, drug seeking. Everitt and Robbins claim that, consistent the findings of other researchers' (e.g. Olmstead et al, 2001; Zapata et al., 2010), they have been able to establish that drug seeking behaviour becomes habitual, after such behaviour is induced and later maintained by substance related conditioned stimuli in the drug user's environment. Such drug seeking behaviour has been found to persist despite the psychopharmacological value of the drug decreasing due to the effects of drug tolerance. Therefore, Everitt and Robbins (2013) argue that behavioural control over drug seeking behaviour over time becomes transferred to a “dorsal striatal S-R habit mechanism” (p. 1950), similar to the automatism of other overlearned behaviours. It is not however, the automatism of the

drug taking behaviour that is at the heart of Everitt and Robbins model of compulsive cocaine seeking, but rather the compulsive nature of the conditioned stimulus to evoked drug seeking behaviour at the expense of other naturally occurring reinforcement, despite drug use being associated with threats to physical and mental health (negative reinforcement), and the inherent danger present in the environments in which drugs are sought and obtained. In attempting to refine their model to account for variations in drug seeking behaviour, Everitt and Robbins demonstrated in more recent animal laboratory experiments that it is the degree of cocaine exposure, rather than the amount of conditioning through the pavlovian pairings of conditioned stimuli and drug that is critical to the development of a proclivity for cocaine seeking when punishment was introduced to the experimental studies. When generalised to human's such research suggests that perhaps it is the longevity or chronicity of exposure to the psycho-pharmacological effects of the illicit substance that may influence ongoing drug seeking behaviour, rather than the learning that occurs between the conditioned stimulus and reinforcement derived from the drug. From a neurological perspective then, Everitt and Robbins, like others, have proposed that the compulsive element observed in drug dependency may be derived as a direct or indirect consequence of the toxic effects that illicit drugs have on the prefrontal cortical process. Thus, perhaps being indicative of impairment of the top-down control and a shift in behavioural control away from the pre-frontal cortex to the striatum (Everitt & Robbins, 2013; Olausson et al., 2007).

#### *Motivational theories of addiction*

Motivational theories of addiction seek to explain the difference between the individual drug users affective reaction of "liking" the effects of the illicit substance (positive reinforcement) and the motivational salience (wanting) to continue use (Berridge et al., 2009). Consistent with the research of Everitt and Robbins (2001; 2005; 2013) outlined, motivational theories of addiction assume that different regions of the brain are involved in the initial use and experience of drug use and ongoing drug seeking and use. Behaviourally, the motivational distortion theory states that repetitive behaviour

or use of a drug has the ability to modify a person's underlying motivational system leading to dependency (West, 1992). West has suggested that changes to the motivational system could imply a causal link between stimuli as action cues and the ensuing action.

A more intricate exploration of the neurobiological basis of the motivational system is outlined in the incentive sensitisation theory of drug addiction. The incentive sensitisation theory attempts to explain the gap in explanation left by the opponent process model. It has been argued that the opponent process model failed to account for the development of dependency on stimulant based drugs such as cocaine, which do not result in the same withdrawal and tolerance symptoms commonly associated with barbiturates, alcohol and opiate use (Rose & Walters, 2012). The incentive sensitisation theory therefore focuses on how drug cues trigger excessive incentive motivation for drugs at a neurobiological level, leading to drug seeking, drug taking and relapse (Robinson & Berridge, 2000; 2003; Berridge et al, 2009). Therefore, the incentive sensitisation theory combines physiological and psychological aspects of drug use and drug seeking behaviour to explain drug addiction. Specifically, how the interconnected regions of the reward circuitry, motivational, emotional and memory systems interact to produce addiction (McLellan et al., 2000). In contrast to the reinforcement models of addiction, this model asserts that the pleasure derived out of drug taking becomes less important during the transition from drug use to drug dependency (Robinson & Berridge, 2003). Instead, drug dependence is thought to result in enduring biological changes to the reward circuitry systems that are thought to mediate a basic incentive-motivational function (Robinson & Berridge, 2003). At a biological level, Robinson and Berridge draw upon the role of the neurotransmitter dopamine within the mid brain and prefrontal cortex. Elevations in the levels of dopamine within these regions of the brain are thought to function as a "neurochemical marker of motivational salience; it tells the brain to do something important" (Rose & Walters, 2012; p.13). Such elevations in dopamine are thought to have the same effect irrespective of whether such elevations occur naturally

or are drug induced. Therefore, in the case of drug use, with repeated and sustained elevations in dopamine, structural changes called neural sensitisation occur. Neural sensitisation is thought to result psychologically to incentive salience to drug related representations, which in turn, results in pathological wanting to take the drug independent of the subjective experience of pleasure (Robinson & Berridge, 2003; Rose & Walters, 2012). Robinson and Berridge contend that incentive salience can result in both implicit and explicit wanting. Such that, during the early stages of drug use, explicit motivational factors are obvious to the user; that is, there is a conscious connection between the positive affect change that results from drug use (i.e. euphoria; positive reinforcement or avoidance of negative affective states; negative reinforcement) and the motivation or urge to use more of the substance (Berridge et al., 2009; Rose & Walters, 2012). However as drug use continues, the motivational factors involved in ongoing drug use become more implicit, that is beyond the conscious awareness of the user (Rose & Walters, 2012). This means that not only can the individual experience the pleasure of the reward (drug) but also learns the signals for that reward and acts in anticipation to receive that reward (McLellan et al., 2000).

Consistent with the pavlovian conditioning described above in the research of Everitt & Robbins (2013), repeated pairing of signals (e.g. drug using friend, bar, place of drug use etc; i.e. conditioned stimulus) or even emotional states with drug use can contribute to rapid and entrenched learning or conditioning (McLellan et al., 2000). Of course, the degree of sensitivity that the brain has to the influence of this effect varies across individuals, resulting in differing susceptibility to the development of drug dependency (Rose & Walters, 2012). However for those susceptible to dependency, Berridge et al (2009), consistent with others, have found that once the brain becomes sensitised to the drug reward effects that the value assigned to the drug increases over time. This means that even small quantities of the drug produce a high reward value and an urge to use; the opposite of the tolerance effect (Rose & Walters, 2012). Therefore, incentive sensitisation is thought to be at the heart of drug use relapse. Research has

demonstrated that people previously considered drug dependent and who have abstained from drug use for a prolonged period of time, produce significant and conditioned physiological reaction and psychological drug cravings when exposed to a previously conditioned signal of drug use (McLellan et al., 2000).

Research conceptualisations of how drug dependence is maintained and endures over time have explored the notion of drug craving and more specifically, the link between affect and drug craving (Leshner, 1997; Schlauch et al., 2013). Drug cravings can be conceptualised as a cue elicited desire to use drugs (Sayette et al., 2000; Tiffany, 1990; Tiffany & Conklin, 2000) and are thought to develop through a repeated conditioning process whereby positively and/ or negatively rewarding drug effects are paired with drug related cues (Schlauch et al., 2013). Numerous theories (as described above) have drawn upon the role that positive and negative affective states play prior to drug use, during acute intoxication and later during withdrawal to motivate and maintain drug use. However, few explore the influence of ambivalence about drug use. Feelings of ambivalence about drug use can be defined as the simultaneous desire to use and not use illicit drugs (Schlauch et al., 2013) and has been central to many authors conceptualisation of substance use disorders (Heather, 1998; Orford, 2001). The role of ambivalence in the study of drug craving has been encapsulated in Breiner et al. (1999)'s Ambivalence Conceptualisation of Craving (AMC). The AMC highlights the importance of the competing approach inclinations (i.e. drug craving/ desire) and avoidance desire (i.e. desire to desist from use) as two dimensions of reactivity that act to maintain the drug dependent individual's substance use. The AMC proposed that approach and avoidance inclinations may be activated reciprocally, however they are also thought to be independent and can be activated simultaneously. Simultaneous activation may induce varying motivational states that differ as a function of the individual's state of sobriety and/ or intoxication (Schlauch et al., 2013). The importance of avoidance inclinations in the study of drug use behaviour has made a number of important findings; avoidance has been demonstrated to moderate approach inclinations



on alcohol consumption (Schlauch et al., 2013); may be more predictive of relapse in those who are alcohol dependent when compared to approach inclinations to cease use (Stritzke et al., 2007); and has been found to distinguish between those subgroups of smokers who are attempting to cease use (i.e. high approach, high avoidance inclinations) and those who are not trying to quit (i.e. high approach inclination, low avoidance; Stritzke et al., 2004). When taking into consideration motivational theories of substance misuse, avoidance inclinations are important, as this would suggest that despite an individual experiencing external or internal cues that trigger an urge to use or relapse, individual users are able to resist, however this resistance takes cognitive effort (Schlauch et al., 2013; Tiffany., 1990). As such, the AMC does not view drug use as an inevitable result when an urge or approach inclination is activated, but rather, the decision to use illicit substances is the result of competing desires and control. Where the avoidance inclinations are strong, drug use is less likely (Schlauch et al., 2013).

Orford (2001) attempted to capture the various facets of the development and maintenance of addiction in his integrated “social-behavioural-cognitive-moral model” of excessive appetites (addiction; p. 344). Orford extended the concept of appetitive activities beyond the ingestion of substances to include activities such as gambling, sex and eating. He contends that people’s involvement and attachment to these activities can become so excessive that these behaviours’ can adversely affect their lives and therefore “addiction” develops (p.344). Orford proposed a dynamic view of addiction. He suggested that the degree to which an individual is involved in behaviours of excess is dependent upon a range of interacting determinants that evolve and change over time, both within and across individuals. Determinants such as personality, development, culture and social reference groups, including social acceptance, socioeconomic status, availability and opportunity of the drug or behaviour, all influence the development of excessive interest. Other determinants worthy of consideration in the development of excessive appetites are those behaviours that inhibit excess; that is, those barriers to use or engagement in the excessive behaviour. Many of the barriers to use or

involvement in excessive behaviours span across the same facets of an individual's life as those that encourage and maintain excess.

Orford (2001) suggested that the development of excessive appetites and the ongoing involvement in excessive behaviour is multi-faceted; that is, in his integrated model, he draws upon many fundamental principles of the psychological models of addiction already described above. He acknowledged the role of operant learning, positive and negative reinforcement, craving, coping and emotional regulation, the development of associations between environmental, social cues and appetitive behaviours, in addition to the abundant opportunities that exist for the development of behaviour enhancing expectancies, attributions, fantasies and images about the excessive behaviour. Orford contended that a strong attachment (addiction) develops to an excessive behaviour when an individual's inclination is strong, availability (of substance or behaviour) is high and restraints are relatively weak. The key to Orford's integrated theory is that addiction or excess is a personally, socially and culturally constructed concept. While Orford acknowledged the role that biology and neurological changes might play from a psychopharmacological perspective in the development of an excessive appetite, he argued that his model is not akin to the biological or disease model of addiction, that no "genetic signature" can be identified that adequately explains excessive behaviour (p. 344), but rather that addiction or excess is essentially psychological in nature. Therefore, Orford maintained that the psychological processes described as part of his integrated model is sufficient to explain the development of attachments to excessive appetites. That is, excessive behaviour is formed when an individual's control over behaviour is eroded, voluntariness declines and resolution to change is undermined despite the adverse effects that the behaviour might have on the individual's life and functioning.

#### **2.4 Addiction, volition and self-control**

Irrespective of whether addiction is classified as a neuropsychiatric disorder (Leschner, 1997; McCellan et al., 2000), a psychological phenomenon, moral condition,

a pleasure seeking preference (Walsh, Johnson & Bolen 2012; Veins, 2007) or some combination of these explanations, mainstream understanding of addiction are underpinned by the assumption that to be “addicted” to a substance interferes with, or in extreme cases, removes the person’s capacity for voluntary behaviour in respect to the substance (Davies, 1992; Hyman, 2007; Levine, 1978; Loeben & Stoher, 2007; Miller & Brown, 1991; Orford, 2001; Walsh, Johnson & Bolen, 2012; Veins, 2007). If it is to be accepted that volition refers to the ability to and act of making a conscious choice as defined in the Merriam-Webster Dictionary (2014), then the focus on volition becomes evident in the tendency of definitions of drug addiction to focus on the compulsive features as the hallmark to describing the phenomena (Hyman, 2007).

Views on the issue of drug use and volition in the research literature are diverse and vigorously debated. On the one hand, it has been argued that by virtue of the acute and chronic biological changes that occur to the brain with drug and alcohol ingestion and addiction, that users volition becomes dramatically compromised (Onaivi, Todd & Martin, 1989). While on the other hand, authors such as Foddy and Savulescu (2007; 2010) assert that alcohol and other drug (AOD) addiction is nothing more than a pleasure oriented desire that can be controlled insomuch as any healthy person can control a strong pleasure oriented desire. Szasz (1985, 1988) also emphasized free personal choice as the essence of drug use, and Drew (1989) observed that the research literature has “produced a psycho-bio-social model of drug dependence that excludes the essence of human existence- options, freedom to choose and the centrality of the value system” (p. 8). Therefore the research literature remains divided; is it the inability to make certain choices (impaired volition) that differentiates those who are addicted from those who are considered “normal” (Davies, 1992) or do those who are addicted to alcohol and other drugs retain their ability to make conscious decisions in the same manner as any other “normal” person?

The argument over drug use and volition has wide repercussions and is inevitably intertwined with political discourse and social policy. As Powell (2007) outlines, if addicts

are believed to choose freely to use their drug of choice, then perhaps society should not be compelled to provide “corrective action” (p. 14). However, if it is the case that addicts are limited in their decision making capacity, then society has a responsibility to intervene to protect, prevent and rehabilitate (Powell, 2007). If an even more liberal stance is adopted, drug users could be viewed as being absolved from any responsibility for their drug use due to social disadvantage, which could potentially mean that the individual had few viable alternatives (Powell, 2007).

Much of the debate surrounding drug use and volition describes volition in categorical terms. As Orford (2001) highlighted, to view involvement in appetitive behaviour or addiction as either devoid of volition or a completely free choice behaviour is a gross oversimplification. Indeed, Morse (2007) points out that freedom of choice and behavioural control comes in degrees. In support of this view, Husack (2004) and Powell (2007) contend that the question should be more about where a specific person falls on the continuum of free choice at a particular time and given a particular choice, rather than a simple categorical statement that drug users lack volition. Degrees of volitional control are evident most notably in the fluctuations between sobriety and intoxication observed and reported by those who are drug dependent. Miller and Brown (1991) argue that impairment of volitional control is most likely to occur when a certain level of intoxication is reached. The authors acknowledged that it is unlikely that an absolute loss of volitional control is experienced; rather it is more probable that self-regulatory processes are progressively impaired as intoxication levels increase (Miller & Brown, 1991). But can the same be said for when the drug dependent individual is sober?

It is during periods of sobriety or in a state of substance withdrawal that the compulsive features of addiction are thought to influence volition. The research literature provides examples of behavioural control exhibited by those who are drug dependent while sober, as being indicative of intact volition. For example, ALCOHOL AND OTHER DRUGS dependent individuals intentionally plan and choose to perform drug seeking behaviour to satisfy their desire for the substance. Those who are drug dependent also

demonstrate flexibility in adapting to their environment through the modification of drug seeking behaviour in response to externally imposed forces, such as laws, increases in drug prices and environmental conditions, rather than performing robotic or impulsive behaviours (Hymans, 2007; Miller & Brown, 1991; Veins, 2007). At a biological level, Perring (2002) points out that drugs are thought to directly affect the rewards systems and not the planning or motor control systems. As such Perring maintains that it is nonsensical to assume that drug adaptations within the brain control the drug seeking process; a view supported by Foddy and Savulescu (2010).

Morse (2004; 2007) draws upon the notion of the dimensional nature of volition to propose an alternative theory; the irrationality theory. The irrationality theory attempts to explain the link between addiction and addiction related behaviour, including crime. While Morse does not attempt to establish causation, he proposed that at times, the desire to consume a substance may be so intense and insistent that it significantly compromises the individual's competence for rational reflection. Morse points out that at the height of craving, the intensity and salience of the craving makes it difficult for the drug dependent individual to think of anything else or to employ self-management techniques such as distraction or to focus on reasons not to engage in drug use. Therefore, Morse proposed that some fundamental components of rationality are compromised and as such, the individual may not have the capacity to recognise and adequately weigh up all alternative options. Here again Morse alludes to the notion of behavioural control and the ability of alcohol and other drugs to impair an individual's ability to exert control over their behaviour. The research literature therefore, remains divided as to whether examples of behavioural control provide evidence for intact volition or whether the underlying compulsion that drives drug users behaviour provides evidence for impaired volition. While behavioural control is proposed to be indicative of volitional control, it may not be indicative of self-control. When faced with the decision of whether to pursue the use drugs or not presents the time when the concepts of volition and self-control become intertwined and at times, confused.

While volition refers to the ability and act of making a conscious choice, self-control is defined in the Merriam-Webster dictionary (2014), as the restraint that an individual exercises over their own impulses, emotions or desires. Like that of volition, self-control has been conceptualised as a continuous variable; a personality trait that is evident in all individuals in varying degrees (Saunders & Allsop, 1991). As such, self-control (sometimes referred to as self-regulation) can be understood as a subclass of behaviours that are proposed to develop throughout infancy and childhood (Miller & Brown, 1991). Kopp (1982) stated that self-control becomes distinct from self-regulation once language develops in a child. The ability to use and understand language allows a child to internalise verbal instructions and use self-instructions to prompt and guide their own behaviour. Once an individual reaches adolescence, it is thought that the level of self-control remains relatively stable across the lifespan (De Li, 2005).

The developmental conceptualisation of self-control makes it conceivable that individual variations in self-control are possible (De Li, 2005). This assumption led Gottfredson and Hirschi (1990) to conclude in their general theory of crime, that self-control can explain a range of deviant and criminal behaviours including drug use and associated behavioural problems. More specifically, Gottfredson and Hirschi proposed that those who evidence low self-control are more likely to be engaged in deviant and criminal behaviour, while those who exhibit high self-control are less likely to engage in such behaviour. Therefore, self-control is thought to operate as an underlying factor that is a persistent influence on an individual's behavioural repertoire, only to be modified by the opportunity to engage in deviant behaviour (De Li, 2005). This means that not all people who possess low self-control will exhibit deviant behaviour and engage in drug use. Rather, when presented with the opportunity to engage in deviant behaviour, an individual with low self-control is more likely when compared to someone with high self-control, to participate.

The ability and capacity to enact self-control or self-regulatory behaviour is largely determined by an individual's past (childhood) and current social environment

(Saunders & Allsop, 1991). Miller and Brown (1991) have drawn upon the notion of self-control as a developmental task to propose that the failure to fully develop certain self-regulatory skills provides a useful framework for understanding drug dependence and addiction more generally. Miller and Brown conceptualise the development of drug addiction in much the same way as any other behaviour; that addictive behaviours involve normal processes of learning, motivation and cognition (Appel, 1986; Miller & Brown, 1991). Like all other behaviours, addictive behaviours respond to a wide variety of environmental, social, cognitive and conditioning processes (Miller & Brown, 1991). Miller and Brown have drawn heavily on the work of Kanfer (1970; 1986), who distinguished between automatic and controlled processing. Kanfer (1987) defined automatic processing as being that which requires little dedicated attention, while controlled processing requires attention and becomes evident when learning a new behaviour, or attempting to modify an existing behaviour. Bearing in mind these cognitive processes, Miller and Brown hypothesised that drug use becomes an automatic behaviour. Drug addiction may therefore emerge out of a failure to learn alternative and comparable automatic behaviours to that of drug use. The persistence of addictive behaviours in those dependent upon alcohol and other drugs can therefore be conceptualised as a failure to enact controlled processing despite the negative consequences of the automatic behaviour (i.e. drug ingestion; Miller & Brown, 1991).

In order to recognise the need to shift from automatic to controlled processing of information, it is hypothesised that information input is required to cue the process of self-regulation (Miller & Brown, 1991). In the normal process of self-regulation, information input and the recognition that change may be required signals the first of seven steps in Kanfer's (1970) model of self-regulation. These steps include; self-evaluation or the comparison of internal information against an internal goal or norm, instigation to change, search for effective and feasible alternatives, planning, implementation and plan evaluation (Kanfer, 1970; Miller & Brown, 1991). This behavioural sequence is thought to be cyclical, whereby continual self-monitoring is

thought to take place to evaluate whether the goal has been achieved. Where a goal has not been achieved, self-regulation is likely to continue, however if after a certain amount of time self-regulation has not resulted in the desired goal being achieved, then self-efficacy is thought to be adversely affected, and the plan abolished (Miller & Brown, 1991). Where a goal is abandoned, the individual is left with a significant discrepancy between their desired goal and current status, with no perceived efficacious behavioural change option (Miller & Brown, 1991). In such a case, the problem begins to be re-evaluated, so that the individual might modify their original goal, engage in defensive strategies, and attempt to reduce cognitive dissonance or adjust their self-esteem to deal with the failure to achieve their goal.

The degree to which individuals are resilient against such unravelling of the self-regulation process may be important in understanding resilience against drug addiction. In their literature review, Miller and Brown identified six key regulatory processes that research has documented to be impaired in those who are drug dependent; first, delay of gratification, or a dominant focus on gratifying short term goals at the expense of long-term detriment to self, society or both (Miller, 1980). Second, subjective personal control or impaired control, this relates to the finding that drugs users experience subjective cravings and loss of control that are mediated by cognitive factors such as expectations, situational cues and conditioning (Childress, McLellan & O'Brien, 1986; Miller & Brown, 1991). Third, self-monitoring deficits or internal (interoceptive) cue insensitivity; this relates to the ability of the drug user to attend to internal cues or feedback about the level of intoxication after ingestion of a drug (Miller & Brown, 1991). Fourth, deficits in the regulation of arousal; this self-regulation deficit is thought to be associated with a dysfunction of the frontal lobes which is thought to result in the drug user to be impaired in their ability to learn appropriate and consistent labels for internal states. This in turn, might result in the drug user not attending to or relying upon internal states for relevant information. Fifth, impaired planning ability, also thought to be associated with frontal lobe and prefrontal cortex damage as a result of drug use that impairs the ability to plan,



guide and monitor behaviour. Sixth, impaired learning patterns have been found in neuropsychological data of alcoholics and other drug users (Miller & Brown, 1991). Miller and Brown do not contend that all drug users' exhibit deficits in all the areas described, but rather, individual characteristics that compromise the ability to perform one or more of the steps of specific self-regulation processes could contribute to self-regulation failure and therefore dyscontrol. In turn, this dyscontrol is thought to increase the likelihood and severity of addictive behaviours (Miller & Brown, 1991).

In summary, self-regulation or self-control deficits can be viewed as risk factors for the development and maintenance of addictive behaviours by undermining the behavioural processes that are necessary to exhibit self-control. Impaired self-control and self-regulatory skills can likewise be viewed as risk factors for the development of violent and criminal behaviour (Miller & Brown, 1991). Miller and Brown contend that rather than assuming that drugs cause criminal behaviour, another hypothesis could be that those who exhibit drug addiction/dependency and also engage in criminal and violent behaviour may represent a subpopulation of individuals whose problems are related to impaired self-regulation.

Critics of the self-control or "Willpower View" of addiction (Foddy and Savulescu, 2010; p. 2) argue that similar to the disease model of addiction, the self-control view makes the assumption that addictive behaviours are caused by drug-induced changes in the behavioural functioning of the drug user. As such, similar to the disease model of addiction, the self-control view makes the assumption that the drug user's capacity for autonomous behaviour is compromised (Foddy and Savulescu, 2010). However, the dimensional conceptualisation of self-control means that all people are thought to possess some level of self-control. Therefore, researchers' have concluded that those who are drug dependent are not automatons; they can exert some self-control and therefore should not be completely absolved of responsibility for self-control (Hyman, 2007; Loeber & Stoeberl, 2007). Furthermore, Morse (2004) observed that those who use substances will not seek and use drugs in most cases, if they have a good enough

reason not to. However, what constitute a “good enough reason” is highly variable across and within individuals and situations. Therefore the onus for self-control and restraint falls on the individual drug user (Saunders & Allsop, 1991). Herein lies the problem, while all people may possess some degree of self-control, not all individuals possess the desire to exhibit self-control or restraint in relation to their drug use. Further, drug users possess unique internal standards or boundaries that guide their drug use (Saunders & Allsop, 1991). For example, Saunders and Allsop (1991) outlined research conducted by Chick and Duffy (1979) with a sample of Scottish drinkers who were found to not set themselves boundaries when they set out to drink alcohol. Rather, the participants spoke of going out to drink until they had “had enough”, which could mean one drink or could have meant gross intoxication. Therefore, as Saunders and Allsop stated, “in essence self-control starts with the decision to be controlled” (p. 288).

The decision to be controlled involves a process of setting internal boundaries and standards. It is at this juncture that self-control, morals and social standards interact. From a macro level, society sets certain expectations about how an individual should behave. These behavioural expectations are meant to be internalised as a child and evolve throughout the maturation process to involve increasingly greater amounts of self-regulation and moral condemnation for failure to adhere to social standards of the culture in which the individual is a part. Behavioural standards are variable across time, environment, culture, religion and spiritual beliefs. Within any one society, an individual’s religious, cultural or spiritual beliefs and practices can be at odds with the behavioural standards that are set down by law and within the social mainstream. Such is the case with drug use. For example, while Australian law dictates that alcohol consumption is illegal under the age of 18, certain religious ceremonies will include the consumption of wine prior to this age. Likewise, while alcohol intoxication is frowned upon by some facets of mainstream Australian society, milestone achievements, such as leaving high school, sporting grand finals and certain birthday celebrations are marked by the expectation of alcohol intoxication. The social and cultural environment are considered

so influential on an individual's behaviour that Saunders and Allsop (1991) contend that the study of self-control, self-regulation and self-restraint must be focussed on the relationship between the individual, their social milieu and the macro-environment. The authors have commented that the label of self-control encourages an explicit individual focus on the study of self-control, which has at times led to the omission of social factors (Saunders & Allsop, 1991). Therefore, it follows that external and situational factors play a role in determining drug use behaviour (Orford, 2001; Saunders & Allsop, 1991).

## **2.5 Morality and addiction**

Intertwined with the debate regarding volition and self-control, is the underlying moral condemnation for those who use drugs and are considered drug dependent. Traditional views of addiction have led to the denunciation of individuals who have admitted to their drug addiction and the consensus that drug "addicts" can be considered morally infirm (Bailey, 2005; Leshner, 1997; Walters, 1992; Kennett, Matthews & Snoek, 2013). The demonising of drug use can be considered a social construction, whereby the dominant view of the drug dependent person as immoral, dangerous or evil, stems largely from the illicit (unlawful) nature of the drug rather than the properties of the drug or its effects on the user (Elliott & Chapman, 2000; Zinberg, 1984). Indeed, Foddy and Savulescu (2010) outlined what they termed the "lay view" of addiction that is heavily influenced by morality, socio-political factors and the dominant Caucasian American culture. This lay view states that "people use drugs because they are morally corrupt hedonists who value pleasure above all else and rely on others to handle their ensuing health and survival difficulties" (p. 3). Therefore, moral models of addiction condemn the individual drug user as exhibiting behaviour and choices that reflect poorly on them as people (Kennett, Matthews, & Snoek, 2013).

The origins of this moral view can be traced back through time. Historically, the types of drugs that are now considered illicit were widely used and easily obtained. McBride and Swartz (1990) provide the example of mail order catalogues that were available in the United States in 1897 which featured advertisements for medicines that

contained opiates and barbiturates, while other consumer journals contained advertisements for a complete hypodermic kit that included syringes, needles and vials. The demonisation of drug use evolved with changing social attitudes towards immigration and social change. Certain cultures were believed to be responsible for the widespread use of illicit drugs and therefore both the drugs and the cultures that were thought to use were perceived as evil (McBride & Swartz, 1990). Some authors maintain that certain drugs such as opium became illegal in countries such as Australia, out of a racist desire to exclude immigrants and the social changes that occurred as a result of the merging of different races and cultures (Inciardi, 1977; McBride & Swartz, 1990). Public fear that heavy use of certain drugs can destroy the human character (Wilson, 1990) and have devastating effects on society as a whole led to the beginning of the drug addict stereotype; a depiction of someone who is out of control, immoral and violent. This stereotype has its roots in the belief that certain drugs are so powerfully reinforcing that many users will devote their lives to seeking the pleasure or oblivion that the drug incites at the expense of ordinary human virtues such as temperance, fidelity, duty and sympathy (Wilson, 1990; Foddy & Savulescu, 2010). Therefore the dignity, productivity and autonomy of many users, already impaired by other problems, are destroyed by drug use (Wilson, 1990).

In the United States, it was with the passage of the Harrison Act in 1914 that the moral condemnation for those who used illicit drugs transformed into a potential criminal label for every user (Inciardi, 1977). The interpretation of the Harrison Act (1914) meant that the possession of illicit drugs became a criminal offence, thus, they became available only through non-legal means, effectively creating a "black market" (Inciardi, 1977). Consequently, the drug addict stereotype was reinforced; those who possessed illicit drugs were labelled "criminal", and therefore certainly immoral. From these early beginnings, the drug addict stereotype remains evident today, reinforced by the media and social policy alike. While the stereotype has remained relatively constant, the type

of drug that the violent drug addict is thought to use has changed throughout time and across geographical location.

In the United States the stereotype of the violent drug addict was originally associated with heroin use in poor inner city suburbs (McBride & Swartz, 1990). However, this image has evolved to be associated most commonly with the use of crack cocaine, while the social factors of the poor inner city suburban areas remain consistent (McBride & Swartz, 1990). In Australia, heroin and more recently, methyl-amphetamine are the drugs most often associated with the violent drug addict stereotype. In an attempt to investigate this stereotype, Elliott and Chapman (2000) explored how the Australian print media portrayed heroin users when presenting debates about a proposed heroin prescription trial in the Australian Capital Territory in 1997. From their qualitative analysis, Elliott and Chapman found that the print media often made use of a dichotomy between “decent law abiding citizens” as opposed to the portrayal of heroin users as immoral, unlike us, non-productive members of society who were selfish and irresponsible. When discussing treatment options available to drug dependent individuals, Elliott and Chapman stated that the media often used a treat or criminalise dichotomy. Here the authors argued that underlying this dichotomy is the cultural value of abstinence from drug use and the social ideology of individualism (Elliott & Chapman, 2000). In conclusion, Elliott and Chapman found that the print media and by extension, many members of Australian society, attribute the social problems that arise from drug use to the individual user rather than the underlying social issues that are correlated with drug use. Elliott and Chapman argued that by attributing blame to the individual user and segregating those individuals from the rest of society, social policy is made in the form of criminal sanctions that serves to “protect” mainstream society (i.e. “us”) from those who are drug dependent and therefore immoral, or evil (i.e. “them”).

The drug addict stereotype used to justify the social policies developed also influence research. Coomber and Maher (2006) provided the example of drug adulteration to illustrate how the drug addict stereotype has influenced research.

Comber and Maher stated that the underlying belief that drug dealers' were evil and immoral or alternatively, were overwhelmingly influenced by their drug addiction, contributed to the assumption that illicit drugs such as heroin are routinely adulterated at each stage of the selling process so as to increase profit margins for drug dealers.

Coomber and Maher contend that this assumption has been uncritically accepted as truth in research, public policy and by society as a whole. However, more recent research has cast doubt on the extent to which such practices actually occur. Comber and Maher (2006) have suggested that since the mid-1990s drug adulteration ceased to be common practice in the United Kingdom and the United States, and further claimed that drug adulteration may never have been routine practice in the United Kingdom.

Further attempts to segregate drug addicts from the rest of society comes from the stereotype of the drug dealer who preys upon unsuspecting youth with the lure of a euphoric drug experience that will result in instant addiction. This stereotype is based upon the myth of instant addiction to illicit drugs such as heroin. The research does not support this notion. Indeed, the research evidence suggests that addiction to heroin can take as long as six months to develop, even in heavy drug users (Coomber & Sutton, 2006; Bennett, 1986; Khantzian, 1985).

The conceptualisation of drug addiction as an affliction that reduces individual volition and dramatically changes behaviour, in conjunction with the stigma and moral condemnation associated with drug dependence, contributed to the development of the disease model of addiction. This model proposed that addiction could be classified as a medical disease for which treatment could be sought (Hyman, 2007; Leshner, 1997; Walters, 1992). This model treats the insistent cravings, the drug seeking and consumption of drug dependent individuals, as signs or symptoms of an underlying disease or disorder, thereby rendering the drug user's behaviour with respect to continued drug use, involuntary (Morse, 2004; Kennett, Matthews, & Snoek, 2013). The conceptualisation of drug dependency as a disease is a parsimonious explanation that has face validity, in addition to social and political appeal. Evidence to support the

disease model of addiction has come from various neurobiological, neuro-pharmacological, psychodynamic and behavioural fields; however none can claim to have universal support or to have established a causal model (Foddy & Savulescu, 2010; Morse, 2004). Despite the lack of causation, continued scientific advancements in brain imaging and greater understanding of the manner in which addictive drugs affect the neural circuits of the brain, research has continued to propose the view that drug addiction is better understood as a brain disease (Morse, 2004). For example, brain imaging research has demonstrated that the brain of someone who can be considered drug dependent appears very different in structure and form from that of someone who is not drug dependent (Leshner, 1997). When this finding is viewed in conjunction with genetic research using twin studies that found evidence of a significant genetic contribution to the risk of developing an addiction when compared to other chronic medical illnesses (McLellan, et al., 2000), the disease model of addiction has gained significant empirical support. However, opponents of the neurobiological basis for the disease model of addiction argue that engagement in all pleasure orientated behaviours results in changes to the brain through the same mechanisms as drug use (Foddy & Savulescu, 2010).

The disease model of addiction has had far reaching implications. From a social policy and values perspective, this model serves at least two purposes; to perceive a drug dependent individual as suffering a “disease” reinforces the psychological segregation of those who are drug dependent (“them”) from mainstream society (“us”). While at the same time, reduces moral condemnation due to the reduction of volition and increases the notion of treatability. If addiction is to be understood as a medical disease, then it could be argued that a clear moral and clinical responsibility exists to intervene therapeutically (Morse, 2004). However, little to no definitive and effective medical treatment exists to either “treat” the disease or force individuals to cease using illicit substances (Weisheit, 1990). Therefore, as Hyman (2007) asserts, perhaps the benefit

of classifying addiction as a disease is that addicts are able to gain greater access to medical resources, rather than access to a medical cure. But do addicts need medical intervention? Foddy and Savulescu (2007) would argue not. These authors assert that the medical model of addiction is another example of the medicalisation of a socially unacceptable behaviour.

From Foddy and Savulescu's perspective the problem of drug addiction is a problem of managing pleasure seeking and not of treating a disease. From this perspective, and if the social stereotype of the drug dependant individual being nothing more than a "wanton hedonist" (Foddy & Savulescu, 2010; p 2) is accepted, then a medical treatment does not exist, only social sanctions or punishment. However, social policy tends to draw upon, rather than oppose, the disease model of addiction as justification for the imposition of criminalisation for drug use. As Husack (2004) opines, punitive laws are designed to protect something of enormous value. When applied to drug use, criminal sanctions are designed to protect an individual's capacity for voluntary action. Unlike other risky or harmful behaviour that people may engage, drug use is thought to be less voluntary when viewed through the lenses of the disease model of addiction (Husack, 2004; Jiggins, 1995; Morse, 2004; Foddy and Savulescu, 2010). Therefore, the state is justified in prohibiting drug use, on the basis that the imposed laws are protecting people from harming their capacity for free choice (Husack, 2004), or as Jiggins (1995) puts it, protecting the drug user from themselves. Therefore, the notion of a "war on drugs" is better conceptualised as a war on those people who hold certain values regarding drug use, rather than a war or a battle against the drug itself (Weisheit, 1990). The most obvious flaw in the criminalisation of drug use is that if drug use is less voluntary, then by extension, punishment by the state cannot be helpful or effective (Gottfredon & Hirschi, 1990; 2016; Husack, 1995). Following this line of thinking, Husack maintains that if it is justifiable to hold addicts accountable for their drug use and to punish them for this use, then their actions must be considered relatively free.



Wasserman (2004) provides a different perspective on the impact of the disease model of addiction on social policy and law. Wasserman stated that in the United States, as in other Western countries, antidiscrimination laws classify addiction as an impairment and as such, views those dependent on drug use as having a disability. One of the implications of adopting a disability classification of addiction might be that legally, leniency must be granted for those considered addicted or dependant. Socially, this means that conditions must be altered to accommodate for those dependant on drugs to reduce the burdens of discrimination which may be considered greater than the adverse biological effects of drug addiction (Wasserman, 2004). Some conceivable social accommodations would be the provision of housing, employment and financial support, in addition to access to medical and mental health resources.

From a psychological perspective, the disease model effectively reduces personal responsibility for the development and treatment of addiction. If addiction is a disease, then similar to other diseases, it is conceivable that addiction can in some way be contracted. By extension, the individual cannot be held responsible for contracting the underlying disorder or for exhibiting the signs and symptoms of the disease, in this case, drug dependency (Morse, 2004). Again, the issue of volition and autonomy is raised. According to Davies (1992) the disease model of addiction resulted in the view that to be “addicted” amounted to a reduction in culpability, volition and autonomy over one’s body and mind. Psychologically, to assert that one is addicted to a substance, activity, or behaviour, is to admit that one has failed to exert control over bodily desires and functions, in effect, the individual is asserting an inability to delay gratification (Bailey, 2005).

While one of the aims of the disease model of addiction was to reduce or remove the issue of morality and therefore the social stigma attached to drug addiction or dependence, it could be argued that the disease model has actually contributed to maintaining the view that drug dependency is a moral illness rather than a medical one.

Philosophically, there has been debate as to whether the label of disease is actually value neutral, or whether in reality, to have a disease or impairment is viewed to be undesirable and therefore disadvantageous (Wachbroit, 1998; Wasserman, 2004). This view is supported by Elliott and Chapman's (2000) study of the media depiction of heroin users, where the authors found that when drug dependent individuals were depicted as ill, often their illness was not framed as a medical illness, but instead a moral disease from which they needed to recover. This example provides evidence of the pervasive nature of moral attitudes in the social understanding of addiction. In an attempt to remove social stigma and reduce social stereotypes, the media actually has reinforced their use. Such deeply entrenched stereotypes and public attitudes provide the basis for Wasserman's (2004) proposal that addiction should be understood as a disability.

More recently, models of addiction have drawn upon the psychology of choice and behavioural economics to develop understandings of drug dependency based upon the universal principles of choice that govern ordinary behaviour to explain drug use (Kennett, Matthews, & Snoek, 2013). Ainslie (2000) applies the economic theory of action to ordinary behaviour and asserts that this theory makes the assumption that people are constrained to choose behaviour that is expected to yield the greatest perceived reward of all the options available. From this perspective, Ainslie asserts that it is impossible for an individual to be more motivated to engage in a behaviour that is perceived to be less rewarding when a more rewarding option is available. When applied to drug dependency, the individual drug user behaves as they would with any other behaviour; their choices are aimed at receiving a reward and are responsive to incentives (Ainslie, 2000; Kennett, Matthews, & Snoek, 2013). Over time and with continued drug use, motivation to continue to use drugs in the face of possible growing problems associated with this use (e.g. legal, financial and social consequences) are accounted for by this model in the following manner. The highly rewarding initial substance use sets up high expectations of the rewarding nature of future drug use. This expectation in turn, maintains motivation to use as drug use continues to be

perceived as the most rewarding immediate option available to the drug user when compared to other immediate choices (Ainslie, 2000; Heyman, 2009). The choice theory views ongoing drug use despite this drug use being a poor or less rewarding long term choice, as largely irrational and therefore seeks to explain this motivation (Kennett, Matthews, & Snoek, 2013).

Moderating in between the moral view of addiction, and the choice view, is that Liberal View of addiction proposed by Foddy and Savulescu (2010). Similar to the choice theory, the liberal view of addiction assumes that people act in accordance with their strongest preferences, which the authors identify as pleasure. The liberal view defines pleasure as a “conscious sensation produced by the brain that has the quality of being pleasant, satisfying or enjoyable” (2010; p. 19). Therefore, Foddy and Savulescu maintain that there is nothing unique about the choices made by those considered drug dependent, other than the order in which they value certain behaviours, which may be different to those who are not drug dependent (Foddy & Savulescu, 2010; Kennett, Matthews, & Snoek, 2013). In contrast to the choice theorists outlined above, the liberal view argues that there is no reason to believe that addictive behaviours are irrational, irrespective of the potential longer term adverse consequences. Foddy and Savulescu argue that drug dependent individual’s respond to incentives, like those who are not drug dependent, it is the social and legal policies that stigmatise the pleasures sought and choices made (Kennett, Matthews, & Snoek, 2013).

The role of pleasure in drug dependency is intertwined with morality and choice. As Foddy and Savulescu (2010) have highlighted, value judgements are made in society about what pleasure activities are appropriate. These value judgements are thought to influence the narratives of those who are drug dependent so that self reports of drug use may be either inflated or minimised. Kennett, Matthews and Snoek (2013) examined the role of pleasure in their sample of 69 opioid and alcohol-dependent participants. These authors conducted interviews and qualitative analysis and found that the role of pleasure was both nuanced and fluctuating across the course of the drug dependence life course.

Kennett et al categorised their participants into three categories with respect to the role of pleasure on their drug use; first, pleasure was identified as the main motivator for use and a hedonistic life was participant's main lifestyle goal; second, pleasure was identified by the participants as playing a major motivational role during initiation into drug use, however with continued use over time, pleasure no longer motivated use; third, ongoing motivation to use drug was difficult to explain and a "mystery" to the participant. Those participants who were categorised within the hedonistic life goal category however, identified a diachronic view of pleasure, that is, the participants concept of pleasure changed over time. Kennett et al stated that in the context of holding a diachronic view of pleasure, over time, drug use was not enough to induce pleasure or satisfy the first group's hedonistic life goals. Therefore in essence, "pleasure is more than using" (p. 6). The second group who reported deriving initial pleasure out of their drug use, stated that over time, drug use ceased to be pleasureable. Instead this group reported using drugs to ameliorate withdrawal or cravings.

## **2.6 Addiction, spirituality and religion**

Drug use, misuse and addiction have an extensive and intertwining history with religion and spirituality (Miller, 1998; Miller & Thoresen, 2003). Interest in going beyond what can be seen, touched and heard has been universally appealing to human beings throughout history. Spiritual ideals and meaning occupies an important role in every human society throughout recorded time (Sellman, Baker, Adamson & Geering, 2007) and sociologists across time have recognised the central role that religion plays in culture and the potential influence that religion can have on motivation and behavioural control (Smith, 2003; Ulmer, Desmond, Jang, & Johnson, 2012). Spirituality and self-transcendence has resulted in self-transcendence being described as a "heritable personality trait" that measures "the capacity to experience things beyond their own personal and interpersonal space; a state of unitive consciousness" (Sellman et al., 2007; p. 800). Despite universal interest in self-transcendence, spiritual and religious expression has taken various forms within different cultures of the world (Sellman et al.,

2007). To differentiate, spirituality has been defined as a universal dimension of experience that arises in three ways; within inner subjective experience, in relationships with others in the community, and/ or in a relationship with something that is transcendent and beyond the self (Cook, 2004; Heinz, Epstein & Preston, 2007).

Religion can be defined as “an organised system of beliefs and practices intended to mediate an individual’s relationship to the transcendent and the community” (Geppert, Bogenschultz & Miller, 2007; p. 389).

The various religions of the world espouse an equally varied opinion on the use of alcohol and other drugs. Hallucinogenic drugs have been used by human beings for thousands of years and have formed part of religious ceremonies, celebrations, rituals and by spiritual leaders for healing and enlightenment for equally as long (Sellman et al., 2007). However great diversity exists among the various religions as to whether altered states of consciousness induced by psychoactive substances invoke, threaten or are irrelevant to an individual’s spirituality (Miller, 1998). In the early twentieth century the use of “god finding” drugs such as mescaline and psilocybin remained common practice (Sellman et al., 2007). Somewhat more surprising is that some churches and religious organisations around the world continue to use hallucinogens as a means of drug substitution for the treatment of alcoholism and other drug addictions and for religious and cultural indoctrination for their youth (de Roi, Grob & Baker, 2002). de Roi and colleagues outlined various tribes in West Africa, where Hallucinogens were commonly used in a controlled manner to aid in teaching the tribe’s youth about cultural norms and religion through the use of suggestibility when intoxicated. The efficacy of hallucinogens as a drug substitute has also been espoused by a number of religious communities around the world, with varied success.

As the routine use of psychoactive drugs during mainstream religious ceremonies declined in the Abrahamic religions (Christianity, Judaism and Islam; Sellman et al., 2007), a repositioning of drug use from being a vehicle for transcendence to the realm of evil and the devil became apparent. In contemporary western society, the use of alcohol

and other drugs as a means of experiencing god are no longer normative or condoned practice (Sellman et al., 2007). Mainstream western religions vary in their views associated with members' use of alcohol and other drugs; some religions condemn alcohol and other drug use, while others condone the use of alcohol, but prohibit psychoactive substance use (Miller, 1998). It has been argued that condemnation for illicit drug use stems from the view that illicit drugs gradually come to replace the position in life and focus that was once occupied by a higher power or god, therefore, morally corrupting the user (Miller, 1998). In a society where drug use is no longer a legitimate form of religious expression and spiritual transcendence, research has now turned to investigating how religion influences an individual's use of alcohol and other drugs.

Some researchers' have found that those who admit to problems with alcohol and other drug misuse lack current religious involvement or affiliation (Hilton, 1991, Miller, 1998). It is therefore not surprising to find that religion has consistently been found to be protective against the formation of alcohol and other substance problems; however the nature of the relationship remains unclear (Burkett, 1980; Jessor, 1976; Kandel, 1980; Miller, 1998; Ulmer, Desmond, Jang, & Johnson, 2012; Walker, Ainette, Wills, & Mendoza, 2007). Research to date has failed to distinguish whether the influence of religiosity is direct and therefore not influenced by any co-occurring variables, or indirect through the relation of religiosity to other variables that are linked to substance use (Walker et al., 2007). Research undertaken investigating an indirect link between religiosity and drug use has suggested that attitudinal changes that result from religious affiliation and the associated beliefs are protective against substance use (Levin, 1996; Wallace & Williams, 1997). Sometimes referred to as the attitudinal pathway, religion is thought to have an indirect impact on substance use via increased exposure and acceptance of more conventional and therefore socially accepted attitudes and beliefs (Walker et al., 2007). The acceptance of conventional attitudes and beliefs is thought to decrease the individual's tolerance of deviance, and by extension, substance use (Walker et al., 2007). However, low tolerance of deviance can also extend to peer

association, in as much as researchers' have found an inverse relationship between religious involvement and deviant peer association (Bahr, Maughan, Marcos & Li, 1998; Walker et al., 2007). Indeed during adolescence, religious involvement has been found to have an inverse relationship with a range of deviant behaviours, including drug use, underage alcohol consumption, interpersonal violence and involvement in non-violent criminal behaviour (Baier & Wright, 2001; Brenda, 1997; Ulmer, Desmond, Jang, & Johnson, 2012). Researchers' such as Jang et al (2008), have also been documented evidence that involvement with religion throughout adolescence and young adulthood has a protective cumulative effect that reduces the risk of later adult drug use. While the effects of religious involvement have been documented, there has been little exploration of the processes by which religion might foster desistance (Ulmer, Desmond, Jang, & Johnson, 2012). One such explanation of how religious involvement might indirectly foster desistance is via the promotion of self-control (Pargament et al. 1990). It is hypothesised that religious involvement promotes self-control, which in turn has been found to be a protective factor against substance use (Walker et al., 2007).

Another facet of religious involvement that produces scant research attention is the fluctuations in commitment to religious beliefs across the lifespan and the change from one religion to another (Petts, 2009; Ulmer, Desmond, Jang, & Johnson, 2012). As Ulmer et al highlight, fluctuations in an individual's commitment to religious involvement may influence persistence or desistance in both deviant behaviour and illicit substance misuse. It is reasonable to assume that when an individual's commitment to religion is high, that involvement in deviant behaviour might be perceived as morally repugnant and therefore is likely to create dissonance and be avoided (thus encouraging desistance). However, during periods of waning commitment or involvement to religious conventions and beliefs, involvement in drug use and deviant behaviour may be perceived as less morally repugnant and therefore continued (thus encouraging persistence). Irrespective of periods of desistance or persistence, it is thought that the central concepts of redemption and forgiveness that is common to many religious beliefs, are factors that

have the potential to encourage and reinforce desistence (Petts, 2009; Ulmer et al., 2012). It is on this basis that treatment programs have drawn upon religious beliefs in an attempt to encourage rehabilitation and desistence.

Apart from the protective factors associated with religiosity in relation to initiating drug use, religion and spirituality has also formed part of a large array of treatment programs; the most widely recognised being the 12 step program of Alcoholic Anonymous (AA; Heinz, Epstein & Preston, 2007). The spirituality based 12-step program espouses life change through spirituality. Treatment modalities based upon the 12-step program boast significant reductions in drug use and relapse following treatment, irrespective of the client's religious affiliation and at a very low cost (Heinz, Epstein & Preston, 2007). According to Vaillant (2005), the AA program is effective in relapse prevention as it incorporates four essential features; "external supervision, ritual dependency on a competing behaviour, new love relationships and deepened spirituality" (p. 432). It is the role of the deepened sense of spirituality that remains controversial. From Vaillant's point of view, spirituality is valuable in the treatment of addiction for a number of reasons; first, spiritual connections offer a different form of healing than that of a counsellor-client or doctor-patient relationship. Spiritual healing communities are typically egalitarian, whereby the addict is not only asked to help themselves, but also those within the treatment group. Second, Vaillant states that spirituality has an impact on our behaviour by appealing to our emotion and not to reason. Third, religion and spirituality offers absolution from the enormous sense of guilt that alcohol and other drug addicts typically experience as a result of their behaviour while intoxicated (Vaillant, 2005). It is the absolution derived from a power greater than ourselves that provides a substitute to alcohol and becomes important in the healing process. Fourth, Vaillant states that spirituality, like that of human attachment, may be a viable substitute for drugs. The biological basis for this assertion is that like drugs, spirituality and human attachments indirectly stimulate the limbic brain and its endorphins (Vaillant, 2005). Therefore like other pleasure orientated activities, spirituality is thought to activate the



neuro-reward system. Furthermore the social milieu of AA programs is thought to act to inhibit drug use and deviant behaviour through the social bonds that are encouraged and formed throughout the program. In accordance with social control theory, which asserts that it is the strength of an individual's attachments, commitments, involvements and moral beliefs that discourage deviant behaviour (Hirschi, 1969), religiosity and forming social bonds with others who adhere to the conventional attitudes and moral beliefs are likely to heavily influence an individual's decision to desist from involvement in deviant behaviours.

In summary, the concepts of addiction, dependence, and excessive appetites are widely researched. The myriad of theories that have attempted to explain the initiation, maintenance and cessation of an individual's involvement in excessive alcohol and other drug use, have drawn upon biological, psychological, social, cultural, moral, religious and philosophical perspectives with differing levels of parsimony to their explanations. Emerged from the decades of research is a common understanding that the illicit (illegal) nature of drug use can be considered a social construction. Further, that alcohol and drugs (licit or illicit) at some level change the biology of those ingesting these substances, however the mechanisms of how substances interact and change structures at a neurological level remains debated. Factors such as the types of substance used, the genetic makeup of the individual and other extraneous psychological, situational and environmental factors, all hypothesised to have some level of influence of the state of intoxication, expectations of pleasure, tolerance to the substance and motivation to cease or to continue use. Furthermore, it remains unclear the length of time that drug induced biological changes remain influential, the amount of the illicit substance needed to cause a change in biological structure, how biological changes contribute to the evolution from casual drug use to dependency and what behavioural and psychological changes are reliably produced from these changes.

The psychological theories of addiction outlined are based upon an inherent assumption that drug use does cause structural change at a neurological level; however

attempt to account for the change in behaviour both at the time of initiation, during intoxication and in the development of dependence or addiction from a psychological perspective. While some theories draw upon principals of reinforcement (positive or negative), others rely upon learning (operant, aberrant, conditioning, implicit or explicit) and still others draw upon motivation. Within all of these psychological theories, there are certain psychological abilities or functions of behaviour that are thought to be involved in the formation and maintenance of addiction, yet precisely how that are related remains contentious. Concepts such as volition, self-control, self-regulation, decisional capacity, affect or emotional systems, values, spirituality and morals are all acknowledged to, in some way, influence drug use, drug seeking and dependency. Each of these biologically and psychologically derived theories is inherently individually focussed. That is, the theories attempt to explain the intra-personal factors that influence drug use and drug dependency. While aspects of the psychological theories outlined acknowledge external factors such as social cues that contribute to craving, the focus remains individualistic.

Extending beyond explanations at the individual level is Orford's (2001) integrated model. Orford offers a complex, yet comprehensive view of attachment to excessive appetites that is couched in the social and cultural context. Therefore, the "relevance of values, morality, social conformity and spirituality" (p. 344) remains influential in his social-behavioural-cognitive- moral model of addiction. There are certain assumptions that Orford makes in his model that acknowledge common assumptions in the addiction field; he accepts that addiction does exist in as much as those who possess strong attachments to excessive behaviour describe persistent involvement despite the adverse consequences that may ensue at an individual, family, and social level. As such he accepts that an individual's volition is compromised in a dynamic sense. He draws upon the presence of ambivalence; that is, the presence of competing approach inclinations and avoidance desires, similar to that outlined in the Ambivalence Conceptualisation of Cravings (Breiner et al., 1999) as the basis to adopt a more dynamic view of volition. However, Orford goes beyond this to explore the influence of

culture, social behavioural expectations, morals and value beliefs in influencing excessive behaviours. It is this aspect of Orford's conceptualisation of addiction that is valuable to this thesis.

If Orford's view of addiction is to be accepted, then it is accepted that addiction extends beyond that of alcohol and other drugs, to other behaviours. At a biological level, this assumption means that engagement in excessive behaviours that do not chemically usurp the reward neuro-circuitry system are thought to produce the same level of psychological myopic focus, motivational drive and cognitive dissonance as excessive alcohol and drug use. Certainly biologically based theories accept that naturally occurring biological changes to the reward neuro-circuitry does occur, through engagement with nature and society, however whether these changes can become excessive or appetitive remains contentious. Orford accepts that beyond his identified core group of excessive appetites (i.e. alcohol, drug use, sex, gambling, and eating) others may exist. If this is the case, can any behaviour become excessive, so that an attachment forms? This question is important to the topic of this thesis where an exploration of the interaction between criminal behaviour and substance misuse is investigated. Can it be assumed that involvement in both behaviours across the lifespan can simply be classified as an addiction or attachment to excessive behaviour?

## Chapter Three

### 3.1 Theoretical Models of the Drugs-Crime Connection

Research support for the link between drug use and aggression, anti-social behaviour, and crime has been accumulating since the 1930s (Tomlinson, Brown & Hoaken, 2016). The accumulation of research evidence has developed from generalised studies that rely on aggregate measures of drug and crime involvement, to more recent specialised studies that have a more narrow focus of specific drug users and different types of criminal behaviour (e.g. cocaine users and violent crime; Sevigny & Coontz, 2008). From the decades of research, drug-related crime has been classified under four broad areas; (1) drug defined crimes, that is, those that are only crimes due to the legal sanctions against prohibited substances, e.g., drug possession; (2) crimes related to the distribution of drugs (e.g., bribery and assaults that are intended to maintain the integrity of the drug distribution network); (3) crimes directly attributed to the psychopharmacological effects of a particular drug (e.g. crime committed in a drug induced psychosis); and (4) acquisitive crimes committed in order to support a continuing drug habit (Wardlaw, 1978). There are numerous established theories which attempt to account for the drugs-crime connection. Research has focused both on non-drug related and consensual crime when investigating the association (Hunt, 1990). Each of the theories outlined below describe a sequence of events that leads to the establishment and continual involvement in drug consumption and involvement in criminal behaviour. Some of the theories reflect an attempt to establish causation, while others describe an association. The empirical research investigating this topic is vast and has utilised a myriad of participants, situations, environments, drug (licit and illicit) and offences types (e.g. violence, acquisitive crime, fraud etc.) in an attempt to explain the relationship. The Drug Use Cause Crime; Crime Causes Drug Use; common cause model and coincidence model (see below for discussion) are the four broad models within which more specific models have evolved (Bennett & Holloway, 2006; White, 1990, White & Gorman, 2000). These broad theoretical categories have contributed to the development

of the more specific theories such as the psychopharmacological model, the economic motivation model; the systemic model and Goldstein's (1985) tripartite model. Each of these sets of theories will be outlined below and the empirical research that supports and disputes each model will be discussed. It should be noted that while there has been decades of research across psychology, criminology, philosophy, neurobiology and economics all of who have made attempts to explain the association between substance use and crime, there has been few deviations away from the aforementioned theoretical groups. As such, much of the research upon which these theories were founded and therefore forms part of this review, is long-standing research, with specific nuances of the relationship tested across time, culture, gender and geography.

*Association or causation?* A primary consideration for researchers' exploring the drugs-crime relationship is the nature of the relationship, that is, the issue of causation or association. Early research exploring the relationship attempted to establish a relatively simplistic direct or indirect causal link between the two behaviours, such that involvement in drug use was thought to cause involvement in criminal behaviour or vice versa. The conceptualisation of a direct or indirect causal link formed the basis upon which the most common (and politically popular) explanatory models of the drugs-crime relationship have been established (Bennett & Halloway, 2006). Early theories' explaining the drugs-crime relationship drew upon research exploring the temporal ordering of initiation into both drug use and criminal behaviour through wide scale prevalence studies of drug users, arrestees' or incarcerated populations to argue for the establishment of a causal link (see below for further discussion). However, with evolving research into the nuances of the relationship, there is little empirical support for such a simplistic causal relationship. Indeed, the causal factors thought to underpin involvement in both behaviours' are likely to influence the drugs-crime relationship in idiosyncratic ways. For example, Bennett (2005) and others' (MacCoun, Kilmer and Reuter (2003) point out that causal influences are more likely to be indirect and probabilistic rather than deterministic. This means that drug use may cause crime through intervening variables (Bennett,

2005). For example, consumption of alcohol results in an assault due to crowded conditions (intervening variable) in a bar. Furthermore, the relationship is understood to be probabilistic, as it is accepted that the majority of drug using individuals are not otherwise criminally active, nor does drug use always accompany other forms of criminal behaviour (MacCoun et al., 2003). However, drug use may play an important causal role in certain criminal behaviour, especially property crime and violence, amongst certain individuals within certain environmental conditions (MacCoun et al., 2003).

When exploring the nature of causal influences over time within the drugs-crime relationships, researchers' have disaggregated developmental versus intensification causal factors. Those factors associated with onset of initial involvement in both drug use and crime can be conceptualised as a developmental cause (Bennett, 2006; Hammersley et al., 1989). While an intensification cause of involvement in the drugs-crime relationship occurs when involvement in drug use and criminal behaviour is already established, however the need for more drugs might cause crime or the proceeds of crime might cause drug use (Bennett, 2005). The importance of this distinction is illustrated by Farabee et al. (2001). Farabee et al., found that the order in which their participants addiction and criminal careers initiated was significantly related to the types of criminal activity engaged in. Those participants who began committing criminal acts after establishing regular drug use (intensification causation) were much less likely to commit predatory crime (versus victimless crime) when compared to those who had established a pattern of criminal activity before regular drug use (Farabee et al., 2001). Therefore, the authors hypothesised that the route that leads to the individual's criminal career may be more important than the age of onset.

Taken as a whole, it is no longer accepted within the empirical research literature that the drugs-crime relationship is a simplistic direct causal relationship, but rather, an association that is complex and multifaceted with indirect causal factors that operate in an idiosyncratic nature over time, across individuals, environments and culture. The

theories discussed below depict this understanding to varying degrees, which have developed over time.

### **3.2 Crime leads to substance use**

The assumption underlying the crime leads to substance use theoretical models, is that deviant individuals are more likely when compared to non-deviant individuals, to choose or be coerced into subcultures and situations where heavy drinking and drug use are condoned, normalised or encouraged (White & Gorman, 2000). Involvement within a criminal subculture therefore provides the individual with the context, reference group and situations that contribute to subsequent participation in drug use (White, 1990; White & Gorman, 2000). Early ethnographic studies that sought to confirm the causal link between drug use and crime typically found that engaging in a profitable crime preceded the purchasing of illicit substances (Agar, 1973; Spekart & Anglin, 1986). It was therefore hypothesised that an individual commits a criminal act and chooses to use the income from that crime to purchase illicit substances (Collins et al., 1985; Menard et al., 2001; Spekart & Anglin, 1986). This model considers individual explanations such as using drugs to self-medicate or as an excuse to engage in a deviant manner. Additionally, the model considers lifestyle and sub-cultural explanations such as aspects of the professional criminal lifestyle that are also conducive to drug use, such as periodic work, hedonistic goals, remaining unmarried, and living a transient existence (White & Gorman, 2000).

### **3.3 Empirical research exploring the crime leads to drugs hypothesis**

Empirical research support for the crime-leads-to-drug-use hypothesis has come predominantly from research investigating the temporal ordering of the association. Early research conducted between the 1950s to late 1970s discovered an increasing number of drug users had criminal records that pre-dated their reported onset of drug use (Wardlaw, 1978). For example, Chein and Rosenfeld (1957) studied a sample of 3500 heroin users and reported that three-quarters of their sample had been engaged in delinquent behaviour prior to drug use. Later, Chein, Gerard, Lee and Rosenfeld (1964)

replicated their earlier finding in their longitudinal study of 3475 males aged 17 – 21 years who were considered “heroin addicts” residing in New York City across a seven year period (1949 – 1955). Chein et al concluded that illicit drug use itself does not cause criminal behaviour.

In an early Australian study, Wardlaw (1978) analysed the characteristics and criminal histories of 1319 drug offenders (79% male, 20% female) randomly selected from records held by the Australian Crime Intelligence Centre (ACIC). Wardlaw’s research explored the relationship between drug user crime before and after first conviction for a drug offence, drawing upon criminal histories, drug intelligence reports held by ACIC and relevant police departments for recorded drug offenders in each state and territory of Australia in 1977. Wardlaw made within group comparisons between a sample of 482 offenders’ convicted of drug offences (including opiates, amphetamines, barbiturates, hallucinogens and tranquillizers) with a sample of 837 offenders’ convicted of cannabis offences only. Wardlaw reported no significant difference in the background characteristics of the two comparison groups, with the majority of the whole sample aged between 18 and 25 years (74%) and born in Australia (73%). Of those classified in the mixed drug group, 78% reported using opiates, 12% hallucinogens and 9 % reported using amphetamines, barbiturates, tranquilizers and other drugs. Wardlaw’s examination of the sample’s criminal history revealed that a substantial number of both groups had criminal convictions prior to a drug related charge. The mixed drug group were more likely to have a previous criminal record (66% of group) when compared to the cannabis-only sample (48%) and had a higher number of previous convictions. However, there was no significant difference between the two groups’ with regard to the types of offences committed. Both groups’ were found to engage in a large amount of property crime (41% of total prior offences for the total sample) prior to their involvement in drug offences.

Exploring the drugs-crime relationship in the two samples further, Wardlaw (1978) found that the most likely subsequent offence to be committed was a further drug



offence. If drug offences were excluded from the analysis, Wardlaw found that across the total sample, the probability of committing an armed robbery was slightly increased, while the probability of committing a property offence was slightly decreased. Of those participants who were first convicted of a non-drug related crime, 65% were not convicted of their first drug related crime until more than two years after their first non-drug conviction. While 33 % were not convicted of a drug charge for over five years after their first non-drug conviction.

On the basis of this research, Wardlaw (1978) concluded that while it is probable that drug users commit a substantial amount of crime, a large proportion of that crime can be viewed as an extension of previous criminal activity and cannot be directly attributable to involvement in drug use. Further, Wardlaw stated that in the Australian context of 1977, patterns of crime do not seem to change markedly following drug convictions and as such, reports that drug use causes crime are “grossly exaggerated” (p. 41). Wardlaw’s reliance on criminal history data makes it feasible that the estimation of both crime and drug use is underestimated and potentially misrepresented. A drug related conviction cannot be taken to indicate definitively that an offender has not used drugs prior to this conviction, nor that any prior criminal conviction was not in some way related to the offenders drug use. As with any social science research, the social context in which the research takes place shapes not only the enquiry, but also the outcome. This is evident in the early research exploring the temporal ordering of involvement in both drug use and crime. In an early review of this research, Greenburg and Adler (1974) found that, over time the research literature swayed from suggesting that drug use preceded crime (1920’s) to indicating that it was crime that preceded the use of drugs (1950’s). Greenburg and Adler hypothesised that the shift in the temporal ordering of this relationship was due to the change in the focus of researchers from an addict who was predominantly white middle class and addicted to medically prescribed opiates in the 1920’s, to a predominantly young, black, heroin addict of lower socio-economic status in the 1950’s. Shifts in social and political views pertaining to what substances

are considered problematic or to cause the most social harm (i.e. crime) are important contextual aspect of the drugs-crime relationship to explore over time and across cultures.

Researchers' exploring the drugs-crime relationship in the 1980's and beyond have drawn upon samples from the general population, known offenders' and those who were incarcerated to again replicate that crime frequently preceded substance misuse (Anglin & Hser, 1987; Anglin & Speckhart, 1988; Elliott et al., 1989; Parker and Newcombe, 1987). Researchers' who attempted to identify the aetiology of the drugs-crime relationship have found that approximately two thirds of participants describe involvement in criminal behaviour that precedes use of illicit substances (Dietch, Koutsenok & Ruiz, 2000; Hunt, 1990). Support for the crime-causes-drug use theory is not only bolstered by the temporal ordering of the association, but also the understanding that within the general population, most people who are not involved in criminal behaviour are likewise never involved in serious illicit substance use and further, that such people are at decreased risk for involvement in cannabis use (Elliott et al., 1989; Huizinga et al., 1989; Menard, Mihalic & Huizinga, 2001). Three mechanisms that may underpin the direct causal relationship between drug use and crime are financial, associational and recreational (Bennett, Holloway & Farrington, 2008; Menard, Mihalic, & Huizinga, 2001). Collins et al (1985) proposed that involvement in criminal behaviour places an individual within an environment and social setting that is likely to reinforce illicit drug use, thus increasing the likelihood that drug use will follow involvement in acquisitive offending behaviour. Further, that involvement in acquisitive criminal behaviour provides the necessary financial benefits to purchase alcohol and other drugs. From this perspective, the financial and recreational mechanisms that underpin the crime-causes-drug use relationship are intricately related, as it is thought that alcohol and other drugs may be used as a form of "chemical recreation" to celebrate criminal success (Collins et al., 1985; Menard, Mihalic, & Huizinga, 2001). In this way, criminal behaviour may provide both the financial resources and motivation to engage in

chemical recreation; following this logic, crime contributes directly towards drug use (Menard, Mihalic, & Huizinga, 2001).

While the crime-causes-drug use theory directly addresses the issues of initiation into both behaviours as a causal pathway, the model also assumes that involvement in criminal behaviour is likely to prolong the continuity of involvement in drug use (Menard, Mihalic, & Huizinga, 2001). However, research support for this assertion is mixed. Studies that explore involvement in juvenile offending or delinquency tend to highlight that the onset of anti-social or delinquent/ criminal behaviour precedes drug use and therefore support the crime-causes-drug use relationship. Indeed, Menard et al. (2001) in their research exploring the drugs-crime relationship from a developmental perspective over time, concluded that their data was most consistent with the crime-causes-drug use explanation. Menard et al., drew upon survey data from the 9 waves of the longitudinal National Youth Survey in America, which commenced in 1976 when the participants were aged 11 to 17 years and the final wave of data in 1992, when the participants were aged 27-33 years. Participants most commonly cited that involvement in adolescent crime preceded involvement in drug use, such that the authors found that drug use and crime are more closely related during adolescence when compared to adulthood. Additionally, involvement in less serious criminal behaviour and drug use appeared to be a prerequisite for involvement in more serious offending and substance use. However, over time the strength of this relationship weakened, so that involvement in crime and drug use over the short term shifted to a relationship of mutual causality. This means that involvement in drug use influenced involvement in criminal behaviour and vice versa, particularly for more serious forms of offending behaviour and more serious forms of illicit drug use.

The complexity of the drugs-crime relationship illustrated by Menard et al's (2001) results, is similar in some respects to that obtained by Prichard and Payne (2005). Prichard and Payne sought to investigate the drugs-crime relationship within the juvenile offender population as part of the larger Drug Use Careers of Offenders (DUCO) study.

The authors reported on survey interviews conducted with 371 juveniles (aged 10-17 years) detained in detention centres in each state and territory of Australia. Investigation of the temporal ordering of initiation into drug use and crime produced mixed results dependent upon the type of drug used and criminal behaviour. For example, the authors found that the self-reported onset of stealing occurred prior to reported use of cannabis and alcohol, however, self-reported involvement in other criminal behaviour such as vandalism, assault and burglary, co-occurred with the onset of cannabis and alcohol use (Prichard & Payne, 2005). Therefore, Prichard and Payne described their data as supporting an interaction between the type of offending behaviour and the onset of alcohol and other drug use.

On average, the Pritchard and Payne (2005) found that regular violent offenders' reported using substances at an earlier age when compared to regular property offenders'. Those classified as non-regular offenders were found to have begun using substances at a later age when compared to both groups (Prichard & Payne, 2005). The data indicated that on average, the age at which the sample began offending did not influence whether they later became daily substance users. Further, half of the sample reported using drugs after their first offence, one quarter reported initiating drug use within the same year as their initiation into offending behaviour and the last quarter of the sample reported using drugs prior to initiation into offending behaviour (Prichard & Payne, 2005). Overall, the results obtained by Pritchard and Payne replicate the findings by Menard et al (2001) with respect to how mutually reinforcing and influential the relationship between drug use and criminal behaviour is during adolescence.

Overall, as a simplistic causal theory, the crime-causes-drug use model has face validity. This model has political and programme appeal (Bennett, 2005), however the early reductionist approach to explaining the drugs-crime association ignores many of the complexities of this association that have been elucidated over time and with ongoing research (Simpson, 2003). Most notably, not all those involved in criminal behaviour are also involved in drug use; while crime may contribute to involvement in some drug use, it

may not contribute to involvement in the use of all classes and types of drugs; there is little differentiation between the developmental and intensification onset of drug use; and criminal behaviour might become a risk or protective factor for involvement in drug use depending on other extraneous factors (Bennett, 2005).

### **3.4 Common Cause Model**

The Common Cause model proposed that the drugs-crime connection is not causal in nature, but rather drug use and crime share some common explanatory factors. This means that their joint occurrence may be the result of shared causal roots (Walters, Reinerman & Fagan, 1985). The common cause theory originated from research that found illegal behaviour to be concentrated among individuals who were involved in both serious drug use and serious offending behaviour (Chaiken & Chaiken, 1982; Elliott, 1982; Menard et al., 2001).

Early researchers' such as Jessor and Jessor (1977), suggested that drug use, criminal behaviour and alcohol use were all factors associated with a Problem Behaviour Syndrome; suggesting that these behaviours were a manifestation of a single underlying phenomenon. Some of the identified common causes that are thought to underlie drug use and criminal behaviour fall into psychological, situational and environmental categories, including genetic, temperamental traits, antisocial personality disorder, parental alcoholism and poor relationships with parental figures (Abram, 1989; Walters, Reinerman & Fagan, 1985; White, 1990; White & Gorman, 2000). Within the environmental and situational causes, common factors include; social disorganisation, poverty, densely populated communities, transient populations and poor community infrastructure. Communities where unemployment is high, or avenues of legitimate employment are scarce and individuals are able to make more money from engaging in illegal activity, are in turn, more likely to have both a high crime rate and high rate of drug usage (Ford & Beveridge, 2004).

In general, the more deviant the environment, the more likely a child or adolescent is to perform poorly in school, use illicit drugs and to engage in criminal

behaviour (Chaiken & Chaiken, 1990). In this way, it is proposed that the structure of the drug user's everyday lifestyle and the broader milieu in which that use occurs, mediates each stage of progression from drug experimentation to the development of drug dependency and the possibility of involvement in criminal activity (Walters, Reinerman & Fagan, 1985). Certain places and situations have also been found to contribute to greater rates of drug use and crime (White & Gorman, 2000). Areas such as nightclubs, pubs and sports stadiums where patrons are drinking on certain days and times (e.g. weekends and at night) display higher crime rates (White & Gorman, 2000). High levels of public drug sales evident within disadvantaged communities has been found to impact at a community level by repelling legitimate business ventures to establish within the community. In turn, the lack of legitimate infrastructure decreases community cohesion and increases community fear of crime and violence (Ford & Beveridge, 2004).

### **3.5 Empirical research exploring the common cause model**

Empirical support for the common cause model can be found implicitly in research that fails to find evidence to support various other theoretical models, in addition to explicit examination of the factors underpinning the common cause model. For example, implicit support for the common cause model can be gained from research such as Welte, Zhang & Wieczorek (2001), who reported no support for the assertion that substance use and criminal offending significantly influence each other when the effects of demographic variables are held constant. It has also been suggested that similar personality and temperament traits can be found in populations who are vulnerable to both drug use, violence and delinquent behaviour (Fishbein, 1998). Such findings suggest that both drug use and criminal involvement may be explained by a third set of variables. In their research, Chaiken and Chaiken (1990) demonstrated that criminal behaviour and drug use co-occurred, that is, participants reported commencing drug use and criminal behaviour at a similar time. In earlier research investigating the amphetamine and crime connection in the post war period in Japan, explicit empirical support was found for the common cause model, where poverty, social disorganisation

and dislocation coupled with increased availability of amphetamines, resulted in a sharp spike in the amount of people using amphetamines and also committing crime (Greenburg, 1976). Johnson and Schmeidler (1981) proposed that the extent of crime committed was largely dependent upon the extent of drug use. However, the research does not support the notion that those heavily involved in crime are the same people that are heavily involved in drug use, that is, the groups are not overlapping (Chaiken & Chaiken, 1990).

In an effort to investigate the drug use and criminal behaviour of arrestees within and between countries, the United States National Institute of Justice devised the International Arrestee Drug Abuse Monitoring Program (I-ADAM; Taylor & Bennett, 1999). The I-ADAM program forms an extension of the Arrestee Drug Abuse Monitoring (ADAM) program, whereby arrestees in urban jurisdictions throughout the United States are periodically tested to evaluate the extent of illicit drug use among this population (Taylor & Bennett, 1999). The I-ADAM program operates in several countries including England and Australia.

Taylor and Bennett (1999) reported on the similarities and differences in the drug use and criminal patterns of arrestees in five English (London, Manchester, Nottingham, Sunderland & Cambridge) and five American (New York, Fort Lauderdale, Florida, Miami, Washington, D.C & Birmingham, Alabama) locations. The sample comprised of a matched sample of detainees who had been arrested in the specified catchment areas during 1996 or early 1997, who were detained for less than 48 hours, were deemed fit to be interviewed (i.e. not intoxicated) and were deemed not mentally disordered or potentially violent (Taylor & Bennett, 1999). The final sample included 4470 participants from the United States and 839 participants from England and drew upon the methodology already operational as part of the ADAM project in the United States (Taylor & Bennett, 1999). This meant that the methods utilised between the various locations and between the two countries were similar.

Participants in both countries and all locations were given a self-report questionnaire and were interviewed on the areas of self-reported drug use (ever, in the last 12 months, past month and past 3 days); injection of drugs and needle sharing; dependency on drugs and alcohol; links between drugs and crime; legal and illegal sources of income; amount of money spent on alcohol and other drugs; and treatment needs (Taylor & Bennett, 1999). In addition, the participants were asked to provide a urine sample for urinalysis to detect the presence of eight different types of drugs; marijuana, opiates, methadone, cocaine, amphetamines, benzodiazepines, LSD and alcohol

When inspecting the raw data of the urinalysis, the results revealed that in both England and the United States, a large proportion of detained arrestees had consumed drugs in the previous three days before arrest (Taylor & Bennett, 1999). Comparisons of the urinalysis between the countries revealed that a larger proportion of the English sample tested positive for most of the selected drugs. Some geographical differences emerged in the drug use patterns of arrestees between the two countries; cocaine was the only drug which was found to have a greater prevalence of use in the United States sample (40% of sample) when compared to the English sample (10%; Taylor & Bennett, 1999). However, the use of amphetamines and multiple substances revealed no statistical difference between the two countries. The English sample was found to have higher prevalence rates when compared to the United States sample for the use of Marijuana, opiates/heroin and methadone in both the adjusted and non-adjusted data analysis. However, the rates of any drug use, and the prevalence of cocaine remained significantly higher in the United States sample with both the adjusted and non-adjusted data.

Consistent with the common cause model, Taylor and Bennett (1999) explored further correlations between drug use, demographics and other related characteristics, such as gender, race, age, employment status and type of crime the detainee was arrested. The results indicated that both countries were similar in the finding that female



arrestees were just as likely, and in some cases more likely, to test positive for drug use. The only drug for which the male sample was more likely to test positive for was marijuana in both the United States and English samples. The results of age on the type of drug used revealed that in both countries, older arrestees (21 years and over) were more likely than younger arrestees to test positive for any drug. The only drug found to have a higher prevalence in the younger sample was marijuana, with no statistically significant difference in the proportion of younger and older arrestees for the presence of any drug in either sample. The results for the differences in the drugs used by participants of different racial groups detected only small differences, while there was consistency between the countries with respect to employment status, such that both countries found that unemployed arrestees were significantly more likely to test positive for a range of drugs when compared to those arrestees who were employed (Taylor & Bennett, 1999). However this statistical difference diminished to insignificance when the prevalence of marijuana and amphetamine use in the United States sample was explored and in amphetamine use in the English sample (Taylor & Bennett, 1999).

To test the relationship between drug use and the types of crimes committed within and between the two countries, Taylor and Bennett (1999) categorised the offences into five areas; personal crimes, property crimes, alcohol/drug offences, public disorder offences and other offences (Taylor & Bennett, 1999). In the English sample, the results revealed that the largest number of arrestees that tested positive for drugs were those who had committed property offences. In the United States sample, the highest proportion of positive drug tests was found in the sample of arrestees who were charged with alcohol/ drug offences, with the exception of marijuana, who were more likely to be charged with "other" offences. Taylor and Bennett broke down the data into groups of men and women in each country and then further dissected those groups by race, age, employment status, and type of crime. This analysis was then compared to national averages of drug use for each category of drug in each country. The results revealed that the level of drug use varied substantially among demographic groups and

depending upon the type of offence committed. For example, in the U.S., those arrestees found to use multiple drugs was 27.2%, within this category, 40.1% of older arrestees (31-35 years) were found to have used multiple drugs and within this age cohort, those who reported being unemployed were even more likely to report multiple substance misuse, with 54.6% of the sample reported to have used multiple drugs.

Research evidence supporting the common cause model has therefore tended to draw upon demographic and psycho-social variables that are common amongst those who are involved in drug use and criminal behaviour to support the argument that these common factors cause, or are at the least strongly associated with the initiation and continuation of both behaviours. However, the factors that tend to be explored and touted as “common” are also common amongst a range of adverse outcomes, and therefore are not unique to explaining the drugs-crime connection. For example, while unemployment may be linked with substance misuse, it can also be linked to poverty, poor physical health, poor psychological health, low self-esteem and so on. Further, researchers’ have found that some factors thought to be influential on both involvement in drug use and crime, have been found to be more influential in respect to involvement in one behaviour over the other. For example, Elliott et al., (1989) found that moral reasoning around the wrongfulness of committing crime was important in participants use of illicit substances but not for committing crime. White et al., (1987) found similar results when exploring the aetiology of the drugs-crime relationship, that is, some factors were common to involvement in both behaviours, but that intra-psychic beliefs and attitudes were more influential on substance misuse than they were on the participants involvement in illegal behaviour. Therefore, while the common cause model has been able to identify a range of common variable present in those involved in drug use and criminal behaviour, these factors lack specificity in what common causes are unique to the drugs-crime connection beyond other adverse outcomes.

### **3.6 Drugs cause crime model**

This causal model is an overarching theoretical framework that maintains the use of alcohol and illicit drug use causes involvement in crime due to the one of three reasons; the psychopharmacological effects of the drug; the economic motivation to purchase more drugs; or the systemic violence associated with the illegal drug market (Goldstein, 1985; White and Gorman, 2000). Each of the three theories (i.e. psychopharmacological model, economic motivation model and systemic model) that comprise the drugs causes crime model will be discussed separately.

The drugs-causes-crime model is popular within the public policy arena and is the cornerstone of drug policies within both the United States and Australia (Walters, Reinerman & Fagan, 1985). As will be reviewed below, policy development has tended to cite and rely upon empirical research evidence that has adopted descriptive methodology and historically sought to measure the prevalence of offenders who have ever used alcohol and other drugs (Urbis Keys Young, 2004). Such epidemiological studies, while informative and important when considering aspects of corrections rehabilitation programs and community protection, does not establish a causal relationship (Urbis Keys Young, 2004). Instead, as Walters, Reinerman and Fagan (1985) assert, the appeal of drawing upon the drugs-causes-crime model from a public policy perspective, appears to have originally stemmed more from the fear that non-medical use of psychotropic drugs could cause violent and non-violent criminal activity even in otherwise law abiding citizens. The early origins of this view are evident in a statement by Anslinger and Tompkins (1953) who commented that the use of illicit drugs “causes a relentless destruction of character and releases criminal tendencies” (pp. 189-190). As will be discussed in greater detail below, it is from early basis that the psychopharmacological model was developed and over time has been refined with advances and sophistication in research methodology.

### **3.7 Psychopharmacological model**

The psychopharmacological model joins together aspects of the pharmacological and psychological theories of explaining the substance-violence and the substance-

crime connection (Fagan, 1990). From a purely pharmacological theoretical perspective, the drugs-crime connection is explainable through the direct effect that intoxicants have on neurological and bodily processes that result in behavioural change, independent of any intervening psychological processes (Fagan, 1990). Conversely, a purely psychological explanation accounts for the changes in behaviour after ingestion of a substance by drawing upon psychic processes that are thought to be causally linked to aggression and/ or criminal behaviour, such as personality factors, psychological predisposition to aggression and other pathologies (Fagan, 1990). From an entirely psychological point of view, an individual who becomes violent or engages in criminal conduct after ingesting an intoxicant is thought to have been predisposed to act in such a manner prior to the ingestion of the substance. The state of intoxication can therefore be construed as a manifestation of these predispositions, or the changes in behaviour are indicative of a more significant personality dynamic (Fagan, 1990; Mayfield 1983). In isolation both the psychological and pharmacological explanations are incomplete and can be misleading (Pihl & Peterson, 1995). The psychopharmacological theory therefore, looks at the interaction between the psyche and the substance to suggest that following the ingestion of a substance, an individual may exhibit aggressive and engage in criminal behaviour due to the effect that the intoxicant has on the individual's personality and affective states (Fagan, 1990).

Intoxication plays a key role in the psychopharmacological theory and is thought to affect an individual's behaviour in one, or all of the following ways; dis-inhibition, cognitive-perceptual distortions, attention deficits, poor judgement, and neuro-chemical changes that lead the individual to behave in a manner that may not be consistent with their behavioural repertoire while sober (Fagan, 1990; Pihl & Peterson, 1995). From a biological perspective, the research has established that different intoxicants affect the mind and body differently. Factors such as the type of drug used, purity level of the drug, amount of the substance ingested per unit of body weight, tolerance to the drug, the presence of more than one psychoactive ingredient (interaction effects), cultural

sanctions of use, history of use, history of reinforcement for aggressive and criminal behaviour, gender, age, hormonal differences, expectations associated with use and genetic or biological predisposition all influence how a drug affects the body, whether intoxication occurs and how intoxication manifests behaviourally (Fagan, 1990; Kuhns & Coldfelter, 2009; Pihl & Peterson, 1995).

The state of intoxication can vary from acute to chronic. Acute intoxication, that is, the state of intoxication that occurs directly after ingestion of a substance, is most commonly associated with behavioural changes that are accounted for by the psychopharmacological model. However, chronic intoxication is proposed to lead to aggressive and criminal behaviour through the secondary effects that long term drug use can have on an individual, such as sleep deprivation, withdrawal effects, nutritional deficits, impairments in neuropsychological functioning or the enhancement of pathological personality disorders (White & Gorman, 2000). Johnson, Golub and Dunlap (2000) illustrate the difference between acute and chronic intoxication with reference to heroin and its association with aggressive and criminal behaviour. Johnson et al state that the acute pharmacological effects of heroin rarely results in psychopharmacological violence as heroin works as a depressant on the central nervous system. However, violence and other criminal behaviour are more likely to occur during the period after drug intoxication, when the acute effects of the drug wear off and the drug user experiences drug cravings and withdrawal effects.

The psychopharmacological model has not only gained a large base of empirical support, but has also gained popularity within the public policy realm and has provided the basis on which prohibition and the “war on drugs” was founded (Thornton, 1998; White, 1990). Prohibition and the “war on drugs” was founded upon the belief that the potency of illicit drugs makes them “mind-altering” and leads the user to succumb to immoral and anti-social behaviour (Thornton, 1998). Early researchers’ established that at least 25% of all crimes committed in the United States were carried out by those addicted to illicit drugs; this statistic was thought to be the result of the alleged

“maddening” effect of illicit drug use, such as heroin (Inciardi, 1977). Other drugs that were believed to be less potent, such as marijuana, were considered “gateway drugs”. The use of a gateway drug was believed to cause interest in, and use of, other more potent illicit drugs through the process of the individual building up a tolerance to their drug of choice and a level of acceptance for illicit drug use. Once drug tolerance is established, the individual is believed to seek out other more potent drugs to achieve a more pleasurable state of intoxication (Thornton, 1988). An example of a stereo-typical gateway path would be commencement of marijuana use, which contributes to the individual feeling enticed to use more potent substances that will ultimately lead to heroin addiction, overdose and finally death (Thornton 1998).

Playing into the fear that stems from the potency of illicit drugs is the suggestion that illicit drugs such as heroin are so addictive that after a single shot of heroin, the user is instantly addicted (Coomber & Maher, 2006). While this stereotype is not supported by the empirical research literature, the public fear that is generated from such an image is a powerful political tool to generate public policy governing the use of drugs.

### **3.8 Empirical research exploring the psychopharmacological model**

In the context of the psychopharmacological model being focussed on the interaction of the biological changes that occur after drug ingestion and the psychological manifestation of these changes, much of the empirical research literature that explores the psychopharmacological model and its association to criminal behaviour draws upon the display of aggression and violence in individuals while in a state of acute intoxication. Periodically since the early 1930's, comprehensive reviews of the large amount of literature exploring the relationship between drug use, violence and violent crime are published. Thomlinson, Brown and Hoaken (2016) have provided the most recent addition to the research literature, reviewing the research on recreational drug use and involvement in human aggressive behaviour since the year 2003. This comprehensive review, acknowledged the influence that environmental, individual factors and definitional differences between what constitute aggression and drugs have on research outcomes

for both animal and human studies. In acknowledgment of the complexity of the research findings over time and across drug classes, Thomlinson et al broke down the review to focus on the recreational use of different classes of drugs on involvement in aggressive behaviour. As will be discussed more thoroughly below, the review outlined varying levels of research support for the psychopharmacological effects of the different classes of drugs on involvement in human aggression in a variety of relationship contexts, however did not explore involvement in other forms of criminal conduct or other drug consumption patterns. Criminal behaviour encompasses acts and behaviour beyond that of aggression and violence, and as such, factors that contribute to violence should not be assumed to also contribute to other forms of criminal conduct.

In acknowledgement of the complexity of the broader relationship between drug use of all patterns (e.g. recreational use, substance use disorder etc), criminal behaviour (including aggression and violence), and the psychopharmacological effects of different types and classes of drugs, this review will adopt a similar structure to that of Thomlinson et al by reviewing the literature of different classes or types of drugs. This review will, where possible, expand upon the results of Thomlinson et al by reviewing research on other forms of criminal conduct and substance use patterns. Therefore, this section will be broken into alcohol, cannabis, hallucinogens and psychedelics, psycho-stimulants, and opioids will be explored separately below with reference to their association with violent and other criminal behaviour.

**Alcohol research.** Empirical support for the psychopharmacological model stems largely from research involving alcohol and the link between alcohol intoxication and violence across both community and offender populations (White & Gorman, 2000; Thomlinson et al., 2016). There is a large body of research that has repeatedly documented the association between alcohol use, intoxication, and alcohol dependency with verbal aggression (Sharma & Marimuthu, 2014), physical assault against intimate partners' (Foran & O'Leary, 2008), strangers and acquaintances (Maldonado-Molina, Jennings & Kormo, 2010; Pridemore 2004), sexual assault (Abbey, Wegner, Woerner,

Pegram & Pierce, 2014; Zinzow & Thompson, 2015) and homicide for both perpetrators (Boles & Miotto, 2003; Fagan, 1990; Forrest & Gordon, 1990; Pihl & Peterson, 1995; Thomlinson et al., 2016) and victims (Johnson et al., 1978; Wolfgang & Strohm, 1956). The strong empirical support for alcohol consumption and all forms of aggression led Thomlinson et al to conclude that the casual nature of this relationship is long standing and indisputable.

While empirical support for the relationship between alcohol and aggression is well established, the mechanisms by which alcohol consumption is hypothesised to cause aggression in some, but not all those who consume it, is less clear. The psychopharmacological effects of acute alcohol consumption are thought to be biphasic; producing both aversive, sedative effects, in addition to stimulant-like, euphoric states (Quinn, & Fromme, 2016). Subjective feelings of increased self-confidence, feelings of relaxation, reduced inhibition, and insensibility are commonly reported as a result of the stimulant-like euphoric phase of moderate alcohol consumption and even intoxication (Thomlinson et al., 2016). However in larger doses, alcohol can be toxic to the body, resulting in, amongst other aversive states, headaches, nausea, short-term unconsciousness and in extreme cases of toxicity, coma (Thomlinson et al., 2016). Several theories have been developed in an attempt to account for the relationship between alcohol and aggression in particular. Bushman (1997) groups these theories into the following three groups based upon their underlying assumptions; the disinhibition model, the expectancy model and the indirect causal model.

The disinhibition model makes the basic assumption that cognitive structures within the frontal cortex inhibit aggressive behaviour (Kuhn et al., 2014). The pharmacological effects of alcohol (or ethanol) are assumed to impair inhibitory control within the frontal cortex, thwarting an individual's ability to inhibit desires and resulting in poor cognitive and behavioural control, allowing for unrestrained aggression (Giancola, Josephs, Parrott, & Duke, 2010; Kuhns et al., 2014; Noel et al., 2009). Or put another way, alcohol exacerbates pre-existing aggressive urges that when in a state of sobriety,



are in some way constrained and inhibited during everyday life (Kaplan, Tolle and Yoshida, 2001). Early research support for the disinhibition model is found in the work of Pihl and Peterson (1995) who maintained that alcohol acts pharmacologically on anxiolytics to reduce the protective control of anxiety. When related to aggression, Pihl and Peterson argue that anxiety serves to inhibit behaviour and therefore protect the individual by avoiding situations of potential threat; alcohol diminishes this system and in turn diminishes inhibitions towards aggression.

The disinhibition model has also gained research support from laboratory studies exploring the effects of alcohol consumption on variations of aggression, including sexual aggression. Such laboratory studies have made two main discoveries to support the model; first, that intoxicated individuals are more likely to accept sexually aggressive behaviour (Abroms, Gottlob & Fillmore, 2006) and second, that individuals with pre-existing misogynistic beliefs and attitudes experience difficulty suppressing these beliefs and attitudes when intoxicated. The influence pre-existing misogynistic beliefs and attitudes is thought to be that the individual who ascribes to such beliefs when in a state of acute alcohol intoxication, may be more likely to act upon misogynistic beliefs (Locke & Mahalik, 2005). Therefore, negative and sexist attitudes towards women may act to moderate the relationship between alcohol intoxication and sexual aggression (Thomlinson, Brown, & Hoaken, 2016). Critics of the disinhibition model have highlighted the inherent assumption within the model that the relationship between alcohol and aggression is deterministic and predominantly invariant (Kuhn et al., 2014). This is despite the large body of research to suggest that alcohol intoxication and aggression is probabilistic and moderated by a large range of individual, situational and environmental factors (Chermack & Giancola, 1997; Kuhn et al., 2014). Some authors have sought to vary the disinhibition model and proposed the selective disinhibition model, which asserts that the psychopharmacological effects of alcohol intoxication interact with the various social norms in which the individual interacts to produce variable outcomes across social situations (Parker & Rebhun, 1995). In this way, the relationship

between alcohol and aggression is no longer thought to be invariant, but conditional on the social norms and expectations of behaviour within any given setting (Kuhn et al., 2014).

From a different perspective, the expectancy model states that a person's learned beliefs and attitudes towards alcohol foster aggression rather than the pharmacological properties of the ethanol (Kuhn et al., 2014). Expectations, beliefs and attitudes about alcohol as a moderating variable can relate to a range of behaviours. There is a vast body of research that has documented that people expect alcohol and other specific drugs to increase libido, sexual performance and aggressive behaviour (Carpenter & Dobkin, 2010; Chermack & Taylor, 1995; Kidder & Cohn, 1979; Southwick et al., 1981); that this belief is found in even young children (aged 5 to 12 years; Lang et al., 1992); that expectations vary with culture, dose and type of beverage consumed (Southwick, Steele, Marlatt & Lindell, 1981; Lang, Kass & Barnes, 1983); that the more experienced the drinker, the more salient the expectancies; and that expectancies have been found to predict alcohol-related aggression (Fillmore, 1985). However, the research support for alcohol expectancies in and of themselves as a simple causal relationship has been described a "generally weak, with little explanatory power" (Kuhn et al., 2014, p. 253).

The final explanatory model is the indirect causal model. This model assumes that the alcohol- aggression relationship is moderated by a range of cognitive, emotional and physiological factors that occur subsequent to alcohol consumption (Kuhns et al., 2014). An example of an indirect casual model is the Alcohol Myopia Model (AMM; Steele & Josephs, 1990). The AMM asserts that acute alcohol consumption impairs controlled and effortful cognitive processes, that is, those that require good attentional capabilities (Giancola, Josephs, Parrott, & Duke, 2010). Pharmacologically then, the alcohol induced cognitive changes are thought to result in a narrowing of focus, or alcohol myopia, such that there is a restriction on the amount of internal and external cues that the individual can focus on at any given time. This, in turn, results in the

individual only being able to process cues within the environment that are most salient, attention grabbing and easy to process (Giancola, 2000; Giancola, Josephs, Parrott, & Duke, 2010; Popovici, Homer, Fang, & French, 2012). With impaired attentional and cognitive control, situational and environmental factors play a key role. In hostile environments or situations, it is presumed that alcohol facilitates aggression by the intoxicated individual focussing on the most salient and immediate sources of provocation (myopic focus), rather than the more subtle non-provocative cues. Cues that pertain to inhibition and those that are less salient may never be processed, resulting in the individual being more likely to respond in a hostile and/ or aggressive manner (Giancola, Josephs, Parrott, & Duke, 2010).

Where environmental cues are more benign and where non-provocative cues are the most salient, then the AMM predicts that alcohol myopia will have the effect of reducing the individual's potential for aggression and aggressive behaviour, even in those individuals who may display aggressive behaviour when sober (Giancola, Josephs, Parrott, & Duke, 2010). The AMM therefore, accounts for earlier research findings that acute alcohol intoxication is only associated with aggression when the intoxicated individual is provoked (see Bushman, 1997 for early review).

When violence and criminal behaviour is broken down into classes or categories of behaviour, the pattern of alcohol consumption and intoxication is found to exert a highly variable influence. A comprehensive review of all the literature pertaining to the influence of alcohol consumption, alcohol use disorder and intoxication on all forms of aggressive, violent and other forms of criminal behaviour is beyond the scope of this review. Instead, the following section will attempt to illustrate areas of research strength with respect to the psychopharmacological effects of recreational alcohol consumption, alcohol use disorders and intoxication on community based and offender samples with respect to aggressive behaviour (intimate partner violence, sexual aggression and homicide) and where possible, involvement in more general non-violent

offending behaviour. Where strong evidence exists to refute the claims of the psychopharmacological model, this will also be outlined.

*Research exploring the alcohol-violence relationship using community samples-*

Researchers' exploring the role of alcohol consumption, irrespective of the pattern of use, have explored a range of aggressive behaviours across the spectrum of violence, from verbal, physical, and psychological aggression to sexual aggression. Verbal and psychological aggression are commonly operationalised as involving threats, manipulation, insults, and swearing from one person towards another, while physical aggression is commonly operationalised as involving one person intentionally inflicting bodily harm onto the other without consent (Kachadourian, Taft, O'Farrell, Doron-Lamarca & Murphy, 2012; Thomlinson et al., 2016). Sexual aggression refers to one person coercing or forcing another into unwanted sexual activity (Kachadourian et al., 2012).

Within laboratory settings, researchers examining the alcohol-aggression link under controlled environmental conditions, have used experimental designs where participants are administered various controlled doses of alcohol and placed under various conditions of provocation. Under these conditions, results have consistently confirmed an increased display of aggression (i.e. more punitive forms of punishment) directed towards a fictitious partner for those administered alcohol when compared to participants consuming a placebo (see Ito, Miller, & Pollock, 1996 and Bushman & Cooper, 1990 for review). In community based settings, Thomlinson et al reported in their review of the literature, that the strongest support for the alcohol-aggression link is found in research drawing on samples of intimate partner relationships. In intimate partner relationships where one or both partners' fulfil the criteria for an alcohol use disorder, the perpetration of intimate partner aggression is significantly more likely when compared to relationship where neither partner suffers from an alcohol use disorder (Foran & O'Leary, 2008). However, in relationships where neither partner suffers from an alcohol use disorder, the likelihood of perpetrating physical or verbal aggression

towards an intimate partner, in addition to the likelihood of being victimised increased significantly when alcohol was consumed in the preceding four hours, irrespective of gender (Testa & Derrick, 2014).

Using self-report data from 118 married and cohabitating couples, Testa & Derrick (2014) asked intimate partners' to make independent daily diary entries over 56 days with respect to alcohol consumption and incidents of intimate partner violence. The authors hypothesised, consistent with the alcohol myopia model, that episodes of alcohol consumption (i.e. the psychopharmacological effects of alcohol consumption) would increase the odds of verbal and physical aggression occurring within the following few hours. The authors found a clear temporal association between drinking episodes and subsequent involvement in verbal and physical aggression, perpetrated by both men and women. When the amount of alcohol consumed by each partner was analysed, it became clear that the results were obtained from the participants reporting moderate levels of alcohol consumption (2-4 drinks per episode; Testa & Derrick, 2014) and not heavy alcohol as is more commonly associated with aggression and violence. Further, the results revealed that the interaction of both partners' consuming alcohol did not significantly increase the odds of verbal or physical aggression. Testa and Derrick's results failed to find support for the role that the volume of alcohol consumed has on the likelihood of aggressive behaviour being perpetrated against an intimate partner. The results are also inconsistent with other researchers' who have identified that the amount of alcohol consumed is associated with the both the frequency and severity of intimate partner violence episodes (e.g. Schumacher et al., 2008; Watkins, Maldonado & DiLillo, 2014). Further, Testa and Derrick found little support for the alcohol myopia model due to the moderate drinking levels reported by the participants. Instead, these results appear to support the alcohol expectancy model, or perhaps reflect the influence of the context in which the alcohol was consumed rather than the pharmacological factors associated with intoxication. It is possible that the setting and associated norms within which the couples have implicitly developed that govern alcohol use within that

environment (Zinberg, 1986) has significantly contributed to the involvement in violent behaviour.

The psychopharmacological effects of alcohol consumption on the perpetration and victimisation of sexual aggression has also revealed a strong positive association (Thomlinson et al., 2016). Earlier researchers' considered alcohol and other drugs to generally play a contributing or companion role, but not a causal one during the commission of sexually assault and rape offences, however, more recent research asserts a bolder causal claim (Peugh & Belenko, 2001). Research drawing upon a range of population samples, from those convicted and imprisoned of sexual assault, to community samples of sexual assault perpetrators' and victims', in addition to college student victims' and perpetrators' have consistently documented that alcohol use by the perpetrator, victim or both is a contributing factor in one-half to two-thirds of sexual aggression cases within the United States of America (Abbey, McAuslan & Ross, 1998; Abbey, Ross, McDuffie & McAuslan, 1996; Ageton 1983; Scully, 1991; Ullman, 2003). Research has documented the effects of gender, culture and age in the prevalence and severity of sexually aggressive offences within America. For example, younger females (of college/ university age) of African American decent have been found to be more likely when compared to Caucasian female Americans to be victims of sexual aggression (Ullman 2003). While perpetrators' of sexually aggressive offences are more likely to be known to the victim (but not necessarily involved in an intimate partner relationship) and to have consumed a large amount of alcohol, most commonly within a party setting (Gross et al., 2006; Johnson & Stahl, 2004; Locke & Mahalik, 2005).

Abbey et al (2003) found an inverted U shaped curvilinear relationship between alcohol and sexually aggressive behaviour. Consistent with previous research (e.g. Abbey et al., 1996; Ullman et al., 1999), Abbey et al. replicated the linear relationship between the perpetrators' alcohol consumption and increased aggressiveness, in addition to the finding that victim's alcohol consumption was also found to be linearly related to more severe forms of assault being committed. This means that, throughout

the commission of the offence, the more the victim resisted, the more aggressive the perpetrator became. When exploring more specifically the influence of dose or amount of alcohol consumed, the relationship between the amount of alcohol consumed and the severity of sexual aggression was found to be an inverted U shape. The most severe forms of assault were reported to have occurred after moderate alcohol consumption and decrease again in severity with higher doses of alcohol or greater levels of intoxication (Abbey et al., 2003). It is proposed that once increased levels of intoxication are achieved, the use of physical aggression likewise increases during the sexually aggressive acts, especially in circumstances where the perpetrators sexual advances are rejected (Abbey et al., 2009). However, if a high level of alcohol intoxication is reached (hypothesised to be around a blood alcohol concentration of 0.2mg/L), the perpetrator loses the motor coordination necessary to carry out a sexually aggressive act and is therefore thought to be so incapacitated that the risk of involvement in sexual aggression is thought to be minimal (Abbey et al 2014). These results suggest that it is perhaps the disinhibiting effects on cognition and behavioural activation of moderate alcohol use, rather than intoxication that is associated with sexual aggression.

However, in their meta-analytic review of the literature, Thomlinson et al (2016) found that irrespective of alcohol and intoxication expectancies, social setting, pre-existing beliefs and attitudes, and any other moderating variable, researchers' have repeatedly demonstrated that individuals are at significantly heightened risk for perpetrating sexual aggression when intoxicated.. Further, Thomlinson et al (2016) stated that the research evidence for a direct causal link between acute alcohol intoxication and perpetration of sexually aggressive behaviour is now so strong, that there is consensus that alcohol has a direct causal link on sexual aggression.

*Research drawing on offender samples-* Research exploring the prevalence of alcohol consumption within offender population groups dates back to as early as 1958. For example, Wolfgang studied 588 criminal homicides that had occurred in Philadelphia between 1948 and 1952. Wolfgang found that the offender had been drinking in 54.4 %

of the cases, while the victim had been drinking in 52.7% of these cases. When the offender and victim statistics were combined, the results indicated the victim, offender or both had been drinking in 63.6 % of the cases studied (Wolfgang, 1958). From this beginning, researchers over time and across geographical locations have reported similar statistics using similar methodologies. For example, Murdoch, Pihl and Ross (1990) reported that over half of their sample of violent offenders committed their crimes while under the influence of alcohol. While Greenfield and Henneberg (2001), surveyed incarcerated offenders and those on probation in the United States, and found that 38% reported consuming alcohol at the time of their crime. Similarly, Branas et al (2009) found that heavy consumers of alcohol were 2.67 times more likely to be shot during an assault when compared to those who were classified as non-drinkers.

Most recently, a meta-analysis conducted by Kuhn et al., (2014) examined the prevalence of alcohol involved homicide; drawing upon the data from 23 studies with the combined information of 28, 265 homicides across 9 different countries (Australia, England, Wales, USA, Russia, Scotland, Sweden, Ireland and Finland). All of the studies were published between 1954 and 2010 and described homicides that occurred between 1948 and 2008. Across all 23 studies, alcohol use and intoxication at the time of the offence was most commonly obtained via self-report, a review of criminal justice files, questionnaires or less commonly via urinalysis (Kuhn et al., 2014). The studies compared provided little information with respect to the prevalence of alcohol use across different motivations for the homicide, however did specify the use of weapons, which Kuhn et al dichotomised into firearm use and use of other weapons. Across the 23 studies, an average of 48% of homicide offenders' reportedly tested positive for alcohol and an average of 37% were intoxicated at the time of the offence. These estimates were stable across geographic location, age, gender and racial groups. When alcohol use and the offence characteristics were examined, it was found that when compared to those homicides committed with a firearm, homicides that involved the use of some other weapon were significantly more likely to involve an offender who had been drinking



(Kuhns et al., 2014). The average level of alcohol consumption by homicide offenders' was found to mirror that of research that investigated toxicology results of homicide victims. For example, Kuhns et al (2014) conducted a meta-analysis of alcohol use amongst homicide victims and found that 48% of victims tested positive for some level of alcohol use, while 33-35% met the threshold for intoxication. Where the results from the victim's study deviated from that of the study of offender alcohol consumption is in relation to variations in the victims' alcohol consumption across age, gender and racial demographics (Kuhns et al., 2014). When comparing these contrasting results across the two meta-analytic studies, Kuhn et al., (2014) suggested that the role that alcohol plays among homicide offenders may be more uniform across a broad range of countries and cultures when compared to homicide victims.

Research exploring arrestees or offenders who use alcohol and are involved in minor level criminal behaviour is less well developed when compared to the research literature exploring involvement in more serious forms of violent criminal behaviour. In an effort to address this gap, Kopak, Vartanian, Hoffman, and Hunt (2014) drew upon the 2010 Arrestee Drug Abuse Monitoring II (ADAM-II) data, which includes data drawn from arrestees in 10 counties, in 10 different states across the United States, to explore the relationship between alcohol and illicit substance dependency and various types of criminal behaviour. The final sample consisted of 3006 arrestees, the majority (60%) of who were arrested on minor charges. Logistic regression analysis were used to determine whether arrestees' who were classified as alcohol or substance dependent were more or less likely to be charged with a serious offence when compared to arrestees classified as non-dependent. After controlling for previous substance use treatment, and prior arrests, those who were identified as alcohol dependent were found to be 32% less likely to be arrested for a serious offence (felony charge) when compared to the non-dependent group. This finding, which was contrary to the authors initial hypothesis that those classified as alcohol dependent would be more likely to be charged with serious offences, may be accounted for by the large number of arrestees charged

with low level criminal behaviour such as minor domestic violence, driving under the influence, trespassing, disorderly conduct and possession of alcohol (Kopak et al., 2014). However, when alcohol dependent offenders were charged with violent offences, the offences were most commonly aggravated or other forms of assault (41.7%) followed by domestic violence (31.1%).

The results of Kopak et al (2014) with respect to the alcohol dependent arrestees being more likely to be charged with low-level criminal conduct is consistent with the all-male category of “nuisance inebriates” identified by the cluster analysis conducted by Sevigny and Coontz (2008) on 377 arrestees (319 men and 58 women) as part of the Pennsylvania Substance Abuse and Need for Treatment among Arrestees (SANTA) study. Sevigny and Contz described nuisance inebriates as alcohol users who reported the highest level of recent alcohol use in close proximity to the time of engaging in behaviour that causes a disruption to public order. This group reported lower levels of alcohol dependence were predominantly Caucasian, gainfully employed and less likely to be married. In essence, men in this category were single men, who were intoxicated and offending against the public order, resisting arrest etc. From a psychopharmacological perspective, it could be argued that the effects of acute alcohol intoxication have resulted in the display of unconventional behaviour in a public place, which in turn, resulting in a criminal charge (Kopak & Hoffman, 2014). In contrast, those who were categorised into the violent alcoholic typology, reported greater alcohol dependency, were more likely to be married, employed full time and were older when compared to the other 4 typologies. While gender differences between the samples emerged, there was homogeneity with respect to the violent alcoholic group. This meant that both the male and female cluster analysis revealed a violent alcoholic group and similar to the male typology, the female typology were more likely to be married, gainfully employed and graduated from high school. The consistency across gender of the violent alcoholics typology supports the notion that alcohol abuse and violent behaviour, especially in intimate partner relationships, is not solely a male phenomenon (Sevigny &

Coontz, 2008). Genders differences emerged in typologies with respect to the use of illicit substances, poly substance use and various types of criminal behaviour.

In summary, despite the large body of research that has consistently found an undeniable link between alcohol use, intoxication and dependence and violent behaviour, in particular intimate partner and sexual violence, there is less consistency across research studies with respect to the psychopharmacological effects of alcohol and involvement in more general criminal behaviour. Despite what Thomlinson et al (2016) have called an undeniable link between alcohol and violence, the cause of why some who use alcohol behave in an aggressive manner while others do not remains contentious (Forrest & Gordon, 1990; Lang, 1992). Irrespective of the theory or explanation offered, it is clear that the psychopharmacological effect of alcohol on the potential to engage in criminal behaviour is heavily influenced by a range of interacting pharmacological, endocrinological, neurobiologic, genetic, situational, environmental, social and cultural factors (Miczek et al. 1993).

**Illicit drugs research.** As a causal explanation for relationship between illicit drug use, violence and other criminal behaviour, the psychopharmacological model has varied empirical support. When exploring the relationship between illicit drug use and violence specifically, many studies do not differentiate between the classes or types of illicit drug used and violence (Boles & Miotto, 2003). Differentiation between substances is vital due to the different pharmacology of each substance and the variable areas of biological change on the body after ingestion. Psychopharmacological violence has most commonly been linked to the amphetamines and methamphetamines (Cartierm Farabee & Prendergast, 2006), cocaine (Inciardi, 1990), barbiturates (Fagan, 1990) and PCP (Boles & Miotto, 2003). However, there is little empirical evidence for psychopharmacological-induced violence for substances such as heroin, cannabis and other hallucinogens (Kuhns & Coldfelter, 2009). Given the variable research support for different classes of substances, the empirical support for psychopharmacologically

induced violence and other forms of criminal behaviour will be explored for the following classes of drugs; cannabis, psychostimulants, opioids and other substances.

*Cannabis.* Cannabis is the most widely used illicit drug in most parts of the world, with reported use peaking during adolescence and early adulthood (Norstrom & Rossow, 2014; Lee et al., 2009; Lee et al., 2015). Despite the widespread global prevalence in the use of cannabis, most people do not progress to problematic use over protracted periods of time (Green, Kavanagh & Young, 2003). Research exploring the relationship between cannabis use and violence has suggested that cannabis users are at increased risk for involvement in interpersonal violence; with hypothesised causal mechanisms underlying the association similar to the three categories used to explain the alcohol violence relationship. First, psychopharmacological violence; that is, the acute intoxicating effects of cannabis are commonly known to be comprised of mild euphoria, and relaxation, adverse psychopharmacological effects can also include panic attacks, perceptual disturbances (e.g. cannabis-induced psychosis), paranoia and confusion, all of which are hypothesised to adversely affect cognition and emotional states to produce aggressive responses to perceived provocation (Lee, Sukavatvibul, & Conigrave, 2015; Norstrom & Rossow, 2014). Second, the experience of withdrawal effects (e.g. a cannabis withdrawal syndrome) inducing a state of irritability, anger and possible aggression, and third, systemic violence (see systemic violence section for further discussion) associated with transactions of the illegal drug market or when cannabis supply becomes limited (Lee et al., 2015).

Laboratory studies exploring the cannabis-violence relationship with both animals and humans have produced mixed results (Abel, 1977; Moore & Stuart, 2005). Some researchers' have found that the acute effects of moderate doses of cannabis inhibit aggression and violent behaviour (Fagan, 1990; Tomlinson, Brown & Hoaken, 2016). Outside the laboratory, more recent cross sectional research has found that cannabis users are at increased risk for involvement in violent behaviour, however the results have been confounded by both stable individual factors (e.g. genetic, neurological, exposure

to parental substance use, anti-social personality factors), time-dynamic and environmental factors (Norstrom & Rossow, 2014). The use of longitudinal research designs to explore the cannabis-violence link has also produced mixed results. Some researchers' (e.g. Brooks et al., 1999; Fergusson & Horwood, 1997; White & Hansell, 1998) exploring the longitudinal links between cannabis use in adolescence on later violent behaviour during adulthood have reported a positive association after controlling for confounding variables, while others such as Green et al (2010) have not.

More recently, Norstrom and Rossow (2015) drew upon the longitudinal data from 2681 respondents of the 1994 (mean age 16.5 years) and 1999 (mean age 21.6 years) cohort of the Young in Norway Longitudinal Study (see Strnad & von Soest, 2007) to explore the relationship between cannabis use and violence. The authors attempted to account for confounding factors common to both cannabis use and violent behaviour through the use of a multivariate modelling which included a set of potential confounders; age, sex, impulsivity, violence, heavy episodic drinking and involvement with non-normative peers. Norstrom and Rossow found a positive and statistically significant association between cannabis use and violence, even after the inclusion of the control variables. Statistically, the authors reported that the fixed effects model implied that for this sample of youth and young adults, a 10% increase in cannabis use frequency was associated with a 0.4% increase in the frequency of violent behaviour. Despite reporting a positive association longitudinally between cannabis and involvement in violent behaviour, it was not clear from this research whether the risk for violence increased during a state of intoxication or withdrawal, or whether the young people studied over time were considered to have a cannabis use disorder.

Australian research exploring the cannabis-violence link within Aboriginal communities in the Northern Territory (discussed in full detail in Chapter 4), have reported that cannabis users within the communities studied were 4 times more likely to be involved in violent trauma when compared to non-cannabis users (Lee et al., 2015). It was however; unclear from the medical records studied by Lee et al as to whether the

medical presentations by the individual were due to violent victimisation, being a perpetrator or both. Despite this, Lee et al noted anecdotal reports from community members involved in the research sample, that the incidents of violence was observed to increase in response to a lack of cannabis supply (consistent with the cannabis withdrawal syndrome hypothesis). During acute intoxication, Lee et al hypothesised that the psychopharmacological effects that cannabis has on impaired concentration, attention, motor coordination, executive functioning and distortions of time and space may contribute to being both the victim and perpetrator of violent behaviour.

The common finding between both laboratory and naturalistic studies with respect to the psychopharmacological effects of acute intoxication and withdrawal symptoms from chronic cannabis ingestion on subsequent aggressive behaviour pertains altered affective and mood states. However, there is a great deal of variability with respect to the type (e.g. euphoria, relaxation or agitation), severity (e.g. mild to severe mood changes) and influence of altered moods states on the individual and whether or not they subsequently engage in aggressive or violent behaviour. Self-reported variability of cannabis intoxication may be accounted for by different stages of intoxication, individual variability with respect to the descriptions of intoxication (e.g. variations in the definition of euphoria) and whether the experience of cannabis intoxication is multi-dimensional (Green, Kavanagh, & Young, 2003). The presence of extraneous contextual factors, such as drug expectancies, emotional states prior to ingestion of cannabis, history of use, route of administration, in addition to individual genetic and personality differences are intervening variables that heavily influence the experience of intoxication and the cannabis- violence relationship. In a review of 30 research studies exploring the subjective experience of cannabis intoxication, Green et al (2003) noted that the most common finding across the studies was the variability in effects experienced by the research participants irrespective of laboratory or naturalistic setting. The variations in experience reported across the 30 studies pertained to the participants reporting the opposite effects being experienced by different individuals, as well as

variation within a single occasion of use and between occasions of use (Green, Kavanagh, & Young, 2003).

Overall, the evidence in support for a direct causal link between the psychopharmacological effects of cannabis, violence and other offending behaviour is weak and variable. There is a great deal of inconsistency with respect to the effects of dose on resultant behaviour and perceptions of intoxication. In moderate doses, cannabis is thought to inhibit violent behaviour (Fagan, 1990), while during states of withdrawal or when cannabis is in short supply (e.g Lee et al 2015), affective states of agitation and physical discomfort may contribute to violent and aggressive behaviour in those with cannabis use disorder (Kuhns & Coldfelter, 2009).

*Psychostimulants*- The psychostimulants are a class of illicit drugs that include cocaine, methyl-amphetamines and ecstasy; each will be briefly discussed in turn.

*Cocaine*- Research exploring the link between cocaine intoxication and criminal behaviour has focussed predominantly on violent offences and intimate partner aggression, with less research attention being paid to more general criminal behaviour. In a study exploring a large array of drug use across multiple variables of age, gender, and environmental factors, Chermack et al., (2010) found that cocaine use and being male were the variables most commonly associated with violent crime. Earlier, Bennett and Halloway (2008) reported that when general crime was taken into consideration, the use of crack cocaine significantly added to the prediction of robbery, burglary, shoplifting and prostitution, but not necessarily violent offences.

Psychopharmacologically, cocaine may promote involvement in aggressive behaviour through the effects this drug has on the serotonergic signalling system (Knyshevski, Ricci, McCann, & Melloni, 2005), however the direct effects of the drug on aggression are largely unknown (Moore et al., 2008). Crack cocaine or smoking cocaine freebase, has been found to cause a rapid elevation of blood level of cocaine which in turn creates euphoria within one to five minutes of consumption. Shortly after this euphoria, a dramatic drop in cocaine levels ensues, which often results in a dramatic

dysphoric state, which is a psychological state akin to a deep but temporary depression (Johnson, Golub & Dunlap, 2000). During this dysphoric state, the consumption of another dose of cocaine is thought to restore the euphoric state. The consumption of cocaine in binges, that is, high frequency, high intensity use, where the user takes multiple doses of cocaine over a prolonged period, sometimes days, causes the drug user to be heavily stimulated even when sleep deprived (Johnson, Golub & Dunlap, 2000). It is thought that this level of stimulation, in combination with the additional psychopharmacological effects of cocaine, such as increased feelings of paranoia, may interact with social and environmental factors to contribute to social and/ or physical altercations through accusations, arguments and assaults.

The pattern of consumption is but one of many variables thought to influence the relationship between cocaine and criminal behaviour. Researchers' have identified a number of personality factors that are common amongst those who develop cocaine use disorder and also engage in violent behaviour. For example, traits such as impulsivity (Patkar et al., 2003; Roozen, van der Kroft, van Marie & Franken, 2011), sensation seeking (Moeller et al., 2002) and the presence of anti-social personality disorder (Mariani et al., 2008) have all been associated with a cocaine use disorder, violence and other criminal behaviour. The difficulty lies in being able to disaggregate the temporal ordering of these personality traits from the pattern of cocaine use, and criminal behaviour to establish a causal relationship. One way in which research has made attempts to do this, is by exploring the route of cocaine administration. The speed and route of administration of cocaine has also been attributed to involvement in violent behaviour. Gianni et al (1993) found that the route of administration was associated with the level of self-reported violence in a sample of 101 cocaine users (77 men, 24 women) assessed for treatment. However the relationship was not straight forward. Participants who reported the use of crack or freebase also reported greater levels of violence in situations that do not require sustained action, for example assaults against people, objects and involvement in family violence against children and spouse (Gianni et al.,



1993). When other forms of violence were considered that required more sustained attention and actions, such as robbery, burglary and sexual assault, there were no statistical differences between routes of cocaine administration. Gianni et al therefore hypothesised that proximal situational factors may be of equal importance to the route of administration when considering the cocaine-violence relationship.

Researchers' exploring the influence of cocaine use on intimate partner aggression have also reported mixed results with respect to whether the psychopharmacological effects of cocaine have a causal influence on the perpetration of intimate partner violence (Thomlinson, Brown, & Hoaken, 2016). In a meta-analysis of 96 studies that investigated a range of drug use and multiple forms of intimate partner aggression (i.e. physical, psychological, sexual and mixed aggression) completed by Moore et al., (2008) found a statistically significant average composite effect size between drug use and intimate partner violence. Moore et al reported that the odds of intimate partner violence being perpetrated within the relationship were 3 times greater when drug use and abuse are implicated within the relationship. When Moore et al explored the impact of different classes of drugs on involvement in intimate partner violence; cocaine produced an effect size that was significantly greater when compared to any other class of drug, across all measures of aggression. Despite the strong association between cocaine and intimate partner violence, the results were not clear as to whether this was due to the psychopharmacological effects of the drug. The lack of clarity of the results obtained was due predominantly to the failure to account for levels of alcohol consumption or poly substance use, which may account for the inflation in results.

More recent research by Epstein-Ngo et al., (2013) however, failed to find support for the relationship between cocaine and intimate partner violence. Thomlinson et al (2016) in their recent meta-analysis assert that while there is some evidence to support a relationship between the psychopharmacological effects of cocaine use and aggression; the lack of consistency in the research outcomes means that there is limited

support for a causal relationship. With respect to criminal behaviour more generally, the influence of cocaine use appears to be mediated by pre-existing personality traits such as deficits within the self-regulatory systems and anti-social personality traits that require further exploration and elaboration.

*Amphetamines and methyl-amphetamines-* Amphetamines and Methyl-amphetamines (MA) are psycho-stimulants that have a powerful effect on the central nervous system and several neurotransmitter systems within the brain (Thomlinson et al., 2016). Psychopharmacologically, the acute positive effects of methyl-amphetamines are known to increase sexual arousal, alertness, concentration, energy, and produce euphoria, with more adverse acute effects being stroke, seizures, myocardial infarction (Pietsch et al., 2013). Prolonged use can produce a neurotoxic effect, changing brain structures, restricting the production of serotonin, cause hyperactivity, dilated pupils and restlessness (Pietsch et al., 2013; Thomlinson et al., 2016). One adverse side effect of amphetamine use that is thought to contribute to involvement in aggressive behaviour in particular, is the experience of a paranoid psychosis (Mayfield, 1983).

Research over time has consistently reported a relationship between amphetamine use and increased aggression. Early researchers' (Asnis, Smith & Crim, 1978; Ellinwood, 1971) reported high levels of amphetamine use among reported incidents of homicide and assaults. However, within the laboratory setting, the acute administration of MA to mice produced mixed results, with some studies citing an increase in fighting behaviour between the mice (Crowley, 1972; Miczek and O'Donnell, 1978), while others' failed to find any such changes in behaviour (Shintomi, 1975). More recent laboratory work has suggested that it is the chronic administration of MA rather than acute intoxication that may increase aggressive behaviour, at least in mice. To illustrate, Sokolov, Schindler and Lud Cadet (2004) found that in their sample of mice, an increase in aggressive behaviour occurred only after 8 weeks of MA administration, but not following acute administration of the drug.

Exploration of the impact that acute and chronic methamphetamine use has on various regions of the brain and the neurocircuitry underlying emotional processing has added additional understanding to the psychopharmacological relationship between methamphetamine and aggressive behaviour (Payer, Nurmi, Wilson, McCracken & London, 2012). Those who use methamphetamines have been found to have abnormalities within both the prefrontal cortex and amygdala regions of the brain, in addition to differences in serotonergic markers, which are related to social cognition, insight, harm avoidance, low mood and aggression or hostility (Payer et al., 2012). This means at a neurological level, it is thought that the neurobiological changes in serotonin transporter densities and increased microglial cell expression cause behavioural changes (Thomlinson et al., 2016). These behavioural changes include, impulsiveness, hostility and decreased emotional insight, which in combination, contribute to an increase in aggressive behaviour (Payer et al., 2011; Payer et al., 2012).

Outside of the laboratory, support for the methamphetamine- violence relationship stems from epidemiological studies have drawn upon case studies of methamphetamine users behaving in violent manner (e.g. Ellinwood, 1971; Griffith, Cavanaugh, Held & Oats, 1972), survey designs and convenience samples of offenders to explore the methamphetamine-crime relationship (Cartier, Farabee & Prendergast, 2006), and cross sectional studies that have demonstrated higher rates of violence amongst MA users when compared to those who do not use. However empirical support for the relationship has not been universal. Early research by Simonds and Kashani (1980) found that amphetamine use had a weaker association with crimes against the person than did numerous other intoxicants. Later, Fagan (1990) reported little empirical support for a psychopharmacological link between short or long-term amphetamine use and aggression. While other researchers' such as Sommers and Baskin (2006) found in their survey sample of 205 methamphetamine users that 26.8% had committed more than 80 acts of violence while intoxicated on methamphetamines.

In a more recent piece of Australian research, comparative rates of self-reported violent offending were compared in a sample of 400 methamphetamine (n =118), heroin (n=161) and poly substance users (n = 121) in Sydney, New South Wales. The authors found that across all groups, the lifetime rate of violent victimisation was “close to universal” (p.919), with half of sample reported to have been physically victimised within the last year (Darke et al., 2009). This rate of victimisation is compared to a 5% rate of violent victimisation within the Australian population more generally. Of importance to the current discussion, the self-reported regular methamphetamine users were found to have a higher rate of involvement in recent violent offending behaviour (within the last 12 months). Drake et al reported that while one-third of the regular heroin users reported involvement in recent violent offending behaviour, and half of the regular methamphetamine group reported recent involvement in violent behaviour.

Methamphetamine use and dependence has also been associated with more general forms of criminal behaviour. Gizzi and Gerkin (2010) sought to explore the relationship between methamphetamine use and a variety of crime through examination of the court records and interviews of 200 (155 males and 45 females) offenders in the western Colorado local jails. The sample was broken down into three groups based upon their self-reported use of MA, such that, those who reported MA to be their drug of choice or used MA most often were classified into group A (regular MA users; n=80); group B consisted of those who disclosed that they had at least tried MA (lifetime MA users; n=89) and group C consisted of 31 individual who reported to have never used MA. The authors completed chi-square test and analysis of variances (ANOVAs) with the regular meth users as the fixed factor to explore the relationship between MA use and criminal behaviour. The authors found that 60% of the whole sample reported being intoxicated or high at the time of the offence, with statistical differences between the three groups. Only 44.4% of the non-MA users group C reported being intoxicated, while 60.2% of the lifetime MA users group and 71.2% of the regular MA users group reported being intoxicated at the time of arrest. Exploration of the criminal histories of the regular

MA users revealed more extensive criminal histories when compared to the other two groups of offenders and that regular MA users were most likely to be charged with drug offences and to be involved in property crime. However, based upon content analysis of the interviews and criminal history analysis, Gizzi and Gerkin found no evidence to support the link between MA use and psychopharmacological induced violent crime.

The difficulty that has faced researchers' establishing a causal link between the psychopharmacological effects of amphetamines and involvement in criminal behaviour, has been confounding variables related to pre-morbid risk factors that may otherwise predispose that same individual to behave in a violent behaviour irrespective of amphetamine consumption (McKetin et al., 2014). In an attempt to overcome some the confounding pre-morbid risk factors, McKetin et al (2014) conducted a within-subject (fixed effects) analysis to a longitudinal panel of data from a sample of 278 participants, drawn from the larger Methamphetamine Treatment Evaluation Study (MATES) conducted across two sites in Brisbane and Sydney, Australia. All participants met the criteria for methamphetamine dependence, as outlined in the DSM-IV, were aged over the age of 16 years, and were screened out if they met the criteria for schizophrenia or mania. Drawing upon a within-subjects design means that each participants acts as their own control, which in turn avoids the measurement of confounding variables (e.g. heritable traits, personality, gender, previous adverse life events) that do not changes over the course of the study.

McKetin et al conducted structured interviews with each participant at baseline, then 3 months, 1 year and 3 years either in person or over the phone. Of the 278 participants interviewed at baseline, all participated in a secondary follow-up interview at one year, with 82% being interviewed at the 3 year follow-up period. The interview data required the participants to draw upon recall from the previous month across the measures of violent behaviour, methamphetamine use, other substance use, psychotic symptoms and socio-demographic indices. The time-invariant measures were age, sex, duration of MA use, primary route of administration and childhood conduct disorder.

McKetin et al used a random-effects logit model to assess the relationship between MA use and violent behaviour across time. The results revealed that violent behaviour was 6.2 times more likely to have occurred when the participant reported to have used MA when compared to not using MA. The relationship was found to be dose dependent, such that, low doses (defined as such less than 16 days out of the previous month) of MA were found increase the odds of violence fourfold, however, heavier use produced a 15 fold increase in the odds of involvement in violent behaviour. When adjustments were made for shifts in other drug use and, socio-demographics and psychotic symptoms, the odds of involvement in violent behaviour remained high at 10-fold increase. This meant that, while the experience of psychotic symptoms exacerbated the risk for involvement in violent behaviour, the relationship existed independent of psychotic features or heavy alcohol consumption.

Taken as a whole, McKetin et al concluded that the results support a causal relationship between chronic methamphetamine use and violent behaviour that cannot be accounted for by other pre-morbid risk factors for violence among people who use drugs. While these results support the existence of a causal relationship, the direction of the relationship remains unclear, and further, the mechanisms that underpinned the relationship remained unclear. The authors were unable to confirm whether it was the psychopharmacological effects of acute intoxication or the chronic structural neurological changes that caused the increase in violent behaviour or vice versa.

*Opioids (Heroin)*- Heroin use and dependency has a well-established connection to criminal behaviour (Inciardi, 1979; Ball et al., 1981; Marel et al., 2013). More frequent use of heroin has also been positively associated with the number of arrests and convictions (Stewart et al., 2006). However, the relationship between criminal behaviour and heroin is complex, with a direct causal psychopharmacological link between heroin and criminal behaviour difficult to establish (Marel et al., 2013).

Heroin is an analgesic opioid, with acute effects that are thought to contribute to dependence being states of relaxation and euphoria, in addition to the negative

reinforcement obtained from the alleviating withdrawal symptoms of other substances (Thomlinson et al., 2016). Given the largely sedative acute effects of opioid intoxication, pharmacologically the effects of opioids are not associated with violent behaviour (Boles & Miotto, 2003) and researchers' have repeatedly found that violent behaviour is not common amongst heroin users (Farabee, Joshi, & Anglin, 2001; Haynes, 1998; Kinner et al., 2009). Indeed, moderate doses of opiates, similar to moderate doses of marijuana, have been found to inhibit aggressive responses, and therefore decrease the risk of violent behaviour (Fagan, 1990). However, the results are not straight forward. It has been suggested that when an individual is withdrawing from long term use of opiates, irritability, hostility and other affective symptoms may be amplified, thereby increasing the risk of violent behaviour (Fagan, 1990; Kuhns & Clodfelter, 2009; White & Gorman, 2000). Heroin use and dependency has therefore been found to have a strong and independent association with criminal involvement (Inciardi, 1979; Ball et al., 1981; Marek et al., 2013), aggression, impulsivity and suicide (Bozkurt et al., 2013). Yet the relationship has not been found to be casual, but more likely the result of a third set of common factors that contribute to both substance use and criminal behaviour. For example, individual differences in psychiatric symptoms (Bacskai et al., 2012) and more generalised risk factors for the development of substance use disorders as well as aggression (Roy, 2010; Thomlinson et al., 2016).

*Other substances - designer and synthetic drugs-* The creation of designer substances originated during the 1960's, however there has been a rapid increase in recent years in the use and distribution of hundreds of different varieties of novel synthetic substances. The attraction to these substances is thought to be the intense psychoactive effects, the ease with which the drugs can be distributed legally in retail outlets and online, and the likely lack of detection via routine drug screening methods (Schifano, Orsolini, Papanti & Corkey, 2015). However, the psychopharmacological effect of these substances remains largely unknown and poorly researched (Thomlinson et al., 2016). Synthetic or "designer" drugs are made to be structurally similar, but not

identical to the psychoactive drug upon which they have been based, in an effort to create a legal high (Musselman & Hampton, 2014). Given that the purpose of designer drugs are to replicate the psychoactive responses of the drug they are designed to mimic, an assumption is made that the psychopharmacological relationship to offending behaviour will likewise replicate that of the psychoactive drug (Thomlinson et al., 2016).

Rosenbaum, Carreiro and Babu (2012) explored the acute intoxication effects of the synthetic cathinone “bath salts” (an amphetamine like substance) and found an increase in aggressive behaviour and psychotic like symptoms; a psychopharmacological effect that emulates its psycho-stimulant parent substance. Other case studies (e.g. Coppola & Mondola, 2012; Luciano & Perazella, 2012) and telephone survey data (Penders, Gestring & Velinsky, 2012) have also found an association between synthetic cathinone intoxication and aggressive behaviour, however the scant amount of research explicitly exploring the association has meant that causation is far from established. Other designer substances, such as designer benzodiazepines (e.g. clonazepam, deschloroetizolam, flubromazolam, nifoxipam; Moosmann, King & Auwater, 2015) have been cited as emerging drugs of abuse. Moosman et al reported on the highly variable potency of these synthetic derivatives, may contribute to both unintended overdose, but may also contribute to involvement in criminal behaviour.

The large quantity and variable potency of designer drugs has contributed the lag in research efforts exploring both the pharmacological effects of intoxication and the psychopharmacological effects on resultant behaviour, including criminal behaviour.

*Phencyclidine (PCP)* - Research exploring other illicit substances such as, the effects of Phencyclidine (PCP) has also linked its use to aggressive and assaultive behaviour (Crane, Easton & Devine, 2013; Fagan, 1990; Simonds & Kashani, 1979; Weiss, 2004). PCP was initially synthesised as a dissociative anaesthetic in 1958, however ceased to be used due to the observation that patients were waking up experiencing psychotic symptoms following its use (Weiss, 2004). Acute intoxication on



PCP (also known as “angel dust”, “wet”, “sherm stick” and “embalming fluid”; Weiss, 2004) is associated with a wide variety of psychiatric and physical symptoms, many of which mimic major mental illnesses such as schizophrenia (e.g. hallucinations, delusions, paranoid ideation, pressured speech, grimacing etc). Research conducted during the 1960’s and 1970’s drew a strong psychopharmacological link between PCP intoxication and violent behaviour (Weiss, 2004). However, by the late 1970’s Feldman, Agar and Beschner (1979)’s research revealed that the resultant behaviour from PCP use was highly idiosyncratic and unpredictable. Using an ethnographic research design from a sample that spanned six cities, Feldman et al found that the behaviour associated with PCP use was mediated by geographic region and socio-cultural factors. It was the unpredictable nature of PCP acute and chronic intoxication that increased public fear of the drug and reinforced the view that PCP intoxication caused violent crimes.

Fauman and Fauman (1979) provided empirical support for the PCP- violence link, reporting that PCP use was associated with self-mutilation, unprovoked aggression and homicide. In a more recent study exploring the relationship between PCP use and intimate partner violence, Crane, Easton and Devine (2013) assessed 1926 criminally accused with suspected substance involvement as part of a court mandated drug assessment process in Connecticut. Of the large sample, only 5.7% (109; 94 men and 15 women) met the criteria for a PCP use disorder, with PCP use was found to commonly co-occur with the use of alcohol and cannabis. While the authors found that a PCP use disorder was positively associated with intimate partner violence, violence towards others and more substantial involvement in the legal system, the high rate of poly substance use within the sample limited the extent to which PCP could be directly associated with violence or intimate partner violence more specially (Crane et al., 2013).

*What about poly substance use?*- poly substance use refers to the use of multiple substances at the same time or on close proximity to each other.

Psychopharmacologically, the use of multiple substances at once, raises the issue of drug potentiation. That is, the understanding that consuming multiple substances

amplifies the effects of others in a multiplication rather than additive effect. Historically, research that has attempted to establish causal relationship between drug use and crime has done so by exploring the psychopharmacological effects of one type of substance, thereby ignoring not only the high rate of poly substance use among those who use drugs, but also the confounding effects that poly substance use has on the results obtained. More recently, researchers' have acknowledged that poly substance use may be linked to increased criminal justice involvement (Kopak et al., 2014) and that those who use multiple substances may engage in a different pattern of criminal activity when compared to those do not (Sevigny & Coontz, 2008). In a cluster analysis completed by Sevigny and Coontz (2008), on the SANTA data in Pennsylvania described above, both men and women who were reported to be dependent on more than one substance (e.g. cocaine and alcohol) demonstrated a markedly different pattern of offending, greater levels of socio-economic disadvantage and greater treatment needs. Similarly, Kopak and Hoffman (2014) stated that poly drug users who exhibit signs of drug dependence were more likely to be compelled to engage in acquisitive offending (consistent with the economic motivation model outlined below) to support their drug use needs when compared to someone who is not substance dependent. These results, while acknowledging that an association may exist between the consumption of multiple substances and differing patterns of offending behaviour, remain broad and ambiguous with the direction of the relationship unclear. Those who engage in poly substance use may be those that have greater treatment needs and socio-economic disadvantage; however these same factors may have contributed to initiating the use of multiple substances.

Research that has attempted to disaggregate the influence of consuming additional substances in samples of known drug users has produced variable results with respect to both health outcomes and criminal justice involvement. In an Australian study, Dietze et al (2013) explored health, wellbeing and criminogenic outcomes of alcohol consumption in a sample of 688 Persons Who Inject Drugs (PWID) who participated in

the Melbourne Injecting Drug User Cohort Study. Dietze et al. found that only high levels of alcohol consumption (measured as a score of 7 or greater on the Alcohol Use Disorders Identification Test) were related to the perpetration of violent crime, but not fraud or drug dealing. Further, with respect to health indicators, Dietze et al found an absence of any effect in those PWID who reported concurrent high levels of alcohol consumption after adjustments were made for potential confounders. For those PWID who reported moderate levels of alcohol consumption in that past month, their results across the measures of health, criminogenic and quality of life outcomes did not differ significantly from those who reported abstinence from alcohol consumption. The authors therefore concluded that in PWID, the heavy use of alcohol may not be an important indicator in health outcomes (as measured by overdose and emergency department attendance) or generalised offending behaviour (Dietze et al., 2013). However consistent with other populations, heavy alcohol consumption can be attributed to perpetration of violent behaviour and low life satisfaction.

Another body of research exploring the psychopharmacological effects of poly substance use is with respect to the use or misuse of benzodiazepines and alcohol. Benzodiazepines typically have a sedative effect and have been commonly used in the pharmacological treatment for anxiety, insomnia and acute alcohol withdrawal (Lader, 2011). While sedation is the desired clinical outcome of Benzodiazepine administration, less common outcomes can be paradoxical excitement, disinhibition, loss of impulse control and agitation, all of which may have forensic implications (Lader, 2011; Havnes, Clausen, Brux & Middlethorpe, 2014). The use of benzodiazepines in high doses has been independently linked to an increase in aggressive behaviour (Lundholm et al., 2013), however when consumed with alcohol, there is much greater chance of a disinhibitory psychopharmacological reaction. When consumed with alcohol, higher order cognitive functions such as learning and memory, specifically anterograde amnesia, are more acutely impacted when compared to administration of the benzodiazepine alone (Daderman et al., 2002; Lader, 2011). Despite the potential for a paradoxical reaction

when used with alcohol, it has been found that high doses of benzodiazepines combined with alcohol are commonly administered by poly drug users to deliberately induce a state of sedation and in turn, assist with the experience of withdrawal symptoms (Lader, 2011). The abuse potential of benzodiazepines is therefore high, but the pharmacological interaction between benzodiazepine with substances other than alcohol is not well researched. In his review of the literature, Lader (2011) reported on a limited set of research data (see Oliver & Keen, 2004; Pirnay et al., 2004) that has found an increase in criminal justice involvement and greater overdose risk amongst polydrug users who were involved in opioid maintenance programs and use sedatives as part of their pattern of drug use.

The psychopharmacological effect of poly substance use and crime remains an under-researched area. While there has been a more general acknowledgement that those who use multiple substances at once may be involved in a differing pattern of offending behaviour, there has been little research specification as to how different drugs interact to contribute to different offending behaviour. Like research exploring only one class of drug, the likelihood and severity of any psychopharmacological reaction that leads to violence or aggressive behaviour and other criminal conduct depends on a large range of variables including; the type of drug or drugs consumed, specifically, the purity of the psychoactive ingredient; the amount consumed compared to the individual's size, level of tolerance, rate of metabolising the substance, experience with the drug, setting in which the drug/s are consumed; whether the drug consumed has been adulterated with any other substance or indeed has been consumed deliberately with other substances (producing an interaction effect); the gender of the user; hormonal difference and influences; and finally, individual genetic, biological, social and psychological susceptibilities (Kuhns & Clodfelter, 2009). Additionally, to be able to attribute the resultant violence or offending behaviour to the psychopharmacological influence of ingesting the substance, a close temporal order needs to be established, such that it is clear that the substance was ingested in close proximity to the behaviour observed;

much of the research literature does not clearly establish this link (Kuhns & Clodfelter, 2009).

The research support for the psychopharmacological model is limited and at times contradictory, with the same drug at times, being associated with both an increase and decrease of involvement in violence and other forms of criminal behaviour (e.g. heroin and cannabis). The most extensive empirical support for a direct psychopharmacological causal link between the effects of a substance and involvement in criminal behaviour is for alcohol intoxication and intimate partner violence. However even with the vast amount of empirical support for a causal relationship between alcohol and intimate partner violence, there are complexities to this relationship that induce doubts about the establishment of a direct causal link. Consideration needs to be given to pre-existing distal and proximal risk factors, pharmacological effects, social context, personal expectancy, biological and psychological vulnerabilities (Boles & Miotto, 2003; Hoaken & Stewart, 2003; Lundholm et al., 2013). Additionally, the relationship is undermined somewhat, by the fact that there are many people globally who consume alcohol to the point of intoxication repeatedly over the course of their lifetime. Only a very small percentage of these individuals will become violent during a state of intoxication. For most other illicit substances, a definitive direct psychopharmacological causal link has been difficult to establish and replicate; the interaction effects of other variables such as different classes of drugs, user expectancies, social and cultural norms of use, physiological tolerance, environmental conditions and other extraneous variables have all been found to influence intoxication and the drug users behaviour during intoxication and withdrawal, thereby undermining the direct causal link between drug intoxication and criminal behaviours. Further, researchers' investigating the direct psychopharmacological impact of drugs on violent behaviour and other forms of criminal behaviour have found that some classes of drug (e.g. opiates) produced a sedative effect, thereby reducing the risk for criminal behaviour (McBride & Schwartz, 1990).

### **3.9 Economic motivation model**

The economic motivation model hypothesises that due to the expense of illicit drugs, illicit drug users are rarely able to fund their drug use through legitimate means and therefore must resort to criminal behaviour to obtain the money required to maintain their drug habit (Ball, Rosen, Flueck & Nurco, 1983; McBride & Swartz, 1990; Moyle & Coomber 2015; White & Gorman, 2000). The economic motivation model draws upon the casual chain that illicit drug use engenders urgent economic need, which in turn underpins the drive for illegal earning (Bennett, Halloway & Farrington, 2008; Inciardi & Pottieger, 1994; Thompson & Uggen, 2012; Uggen & Thompson, 2003). It is possible that drug users do have a legitimate source of income, however as Weston and Cole (1973) have succinctly stated, a significant portion of drug users have low levels of legitimate income therefore, “drug users do not commit crimes because drug dependence militates against steady employment; they participate in criminal activity because other means for supporting an extensive drug habit are unavailable for persons with little training, skill, or on the job competence” (p. 1).

Illegal income can be generated from a number of sources; however researchers’ contend that the most common means of generating illegal income is by being involved in drug sales and distribution within the drug economy (Inciardi & Pottieger, 1994; Manzoni et al., 2006; Thompson & Uggen, 2012). This line of thinking follows the rational choice model, in that the individual is aware that where a consensual exchange of drugs can occur, such an exchange is significantly less risky when compared to involvement in other income generating offences (Thompson & Uggen, 2012). From this perspective, involvement in acquisitive offending would only need to occur when the income generated from drug sales is insufficient to fund the individual’s own drug consumption, or indeed, other individual needs (Manzoni et al., 2006; Thompson & Uggen, 2012). Where involvement in acquisitive crimes takes place, the most common types of offences are expected to be theft, burglary, robbery, and prostitution in exchange for drugs or money to purchase drugs (Chaiken & Chaiken, 1990; White & Gorman, 2000). Early researchers’ and policy makers’ were convinced that the

economic motivation model established a causal link between crime and drug use based upon the following findings; that many serious offenders were also drug users and had started using drugs as a juvenile; continued drug use led to addiction or dependence; minority group members were more likely than non-minority group members to be drug users and to be arrested; many drug users became addicted to drug use before they became involved in crime; drug users were more likely than non-drug users to be arrested for property crime and that heroin addicts were the most likely to commit numerous property crimes (Chaiken & Chaiken, 1990).

While the common assumption behind the economic motivation model remains that the drug user is more likely to focus on economically rewarding crime and avoid personal confrontation, violent behaviour may also occur during the drug withdrawal state, due, in part to the emotional dysregulation of the user who is assumed to be in a state of desperation to obtain drugs (McBride & Swartz, 1990). Dietch, Koutsenok and Ruiz (2000) have termed the violence that occurs under this theoretical framework as the economic-impulsive drug-violence connection. Dietch et al proposed that those dependent upon illicit drugs engage in violent crimes such as handbag snatches, as an impulsive attempt to avoid substance withdrawal effects. It is this type of impulsive behaviour that incites public fear and changes the emphasis of the intent of the criminal behaviour from one of opportunity to one of purpose and premeditation. For example, McBride and Swartz (1990) stated that the shift away from the pharmacological explanations of drug induced criminal behaviour to the economic motivation explanation meant that violent acts performed by drug addicted individuals assumed a new meaning. The general public began to view acts of violence by those considered drug dependant, as being performed by predatory drug addicts who were desperate to obtain a drug hit and would do anything, including rob and murder innocent people to acquire the money to do so (Inciardi, 1986; McBride & Swartz, 1990). This view, while grossly exaggerated, was and continues to be, perpetuated by the media and politicians alike with little to no empirical support (McBride & Swartz, 1990).

**Economic theory of criminal behaviour and drug use.** Early research by economists sought to explain participation in criminal activity using a rational individual choice model. The seminal work of Gary Becker (1968) posited that an individual will engage in criminal activity if the expected utility to him of engaging in that activity outweighs the utility of engaging in other (legitimate/legal) activities (Becker, 1968; Witte, 1980). Therefore, people engage in criminal behaviour not because their motivations differ from law abiding citizens, but rather, the costs and benefits associated with criminal behaviour differ from those who choose to engage in law abiding behaviour (Becker, 1968). From this early beginning, the economic model has evolved based upon the presumption that the observed behaviours of individuals is not the inevitable product of underlying social conditions, but rather the result of individual choice that is influenced by perceived consequences (Cook, Machin, Marie, & Mastorbuoni, 2013). In this way, social policy can influence behaviour if the presumed consequences of that behaviour are altered. Economic model's hypothesise that there are six major factors that influence an individual's choice to engage in criminal activity; 1) the probability (or degree of certainty) of the punishment or criminal sanction, 2) the expected severity of that criminal sanction, 3) the expected return to legitimate labour market, 4) the expected return to illegal activity, 5) the level of initial wealth, and 6) the individual's "tastes" (Witte, 1983). Illicit drug use, as a form of criminal behaviour is no exception. Economists have produced a number of different theories to account for drug dependency and associated behaviour. Grossman et al (1998) stated that there are two types of economic theories that account for addictive behaviour: myopic addiction and rational addiction. The myopic addictions models hypothesise that individuals who consume addictive substances are present focussed and largely ignore the potential future consequences of their behaviour. In contrast, the rational addiction model developed by Becker and colleagues argued that individuals do consider future consequences of their behaviour in deciding on the optimal amount of the substance to consume in the present (Grossman et al., 1998).



As Grossman et al. (1998) outline, political regulation of “addictive substances” (i.e. alcohol, cigarettes, marijuana and other illicit drugs) via taxation, age restrictions on use, and bans on consumption, has the impact of raising the price of these substances and creating a black market for their distribution and sale. The creation of a black market that cannot be regulated by taxation or business law in turn, creates an environment whereby individuals may be motivated to engage in non-drug related criminal behaviour to enforce trade arrangements or gain market share (Mocan & Corman, 1998). Grossman et al argue that increases in the price of substances such as alcohol and cigarettes through excise taxes has the impact of decreasing overall use, while the decreasing price of substances caused by legalisation of use has the impact of increasing overall use.

Economists have also investigated the role of expenditure in the areas of crime and drug control in decreasing property crime by illicit drug users. Benson and Rasmussen (1991) state that public policy initiatives such as zero tolerance on drug use and increasing expenditure to curb acquisitive crimes are intimately related to the drugs-crime connection. Benson and Rasmussen argue that there are theoretical explanations as to why increased drug control fails to decrease property crime rates despite the contention that drugs cause crime. First, if drug users finance their drugs through property crime and the amount of drugs needed by the user remains constant, but the amount of drugs available on the streets decreases due to drug control strategies, the price of the illicit drug increases, as does the amount of money needed for the user to maintain the same level of use. This scenario may have the impact of increasing property crime rates as the user requires more money to purchase the same amount of the drug. Second, if policing resources are shifted away from property crime prevention and onto enforcement of drug control strategies, then this too is likely to increase the rate of property crime as acquisitive crimes become more attractive as the likelihood of getting caught decrease (Benson & Rasmussen, 1991). Indeed in the United States, it has been estimated that 56.6% of the costs associated with the use of illegal drug use

was thought to be crime related (Donohue, 2013). Of this estimated percentage, 2/3 of the costs were attributed to lost productivity from incarceration on drug related offences and costs associated with involvement in the criminal justice system (Donohue, 2013). In comparison, health related costs associated with illicit drug use were estimated at only 8.7% of the projected costs. As Donohue points out, from a public expenditure perspective, there is a trade-off between enforcement and health related costs; the more enforcement measures that are publicly funded is likely to result in reduced consumption and associated costs, while simultaneously increasing enforcement related costs.

### **3.10 Empirical research exploring the economic motivation model**

Empirical support for the economic motivation model is largely derived from research pertaining to heroin and crack cocaine use. There is an abundance of international research from areas such as Europe, North America and Australia that has repeatedly found that many heroin dependent individuals are involved in acquisitive offending behaviour such as theft and the resale of stolen property (Allen, 2005; Dobinson & Ward, 1985; Johnson et al., 1985; Maher, Dixon, Hall & Lynskey, 2002; Menes, 2000; Parker et al., 1988; Hammersley et al., 1989; Dorn et al., 1994; Grapendaal et al., 1995). For example, a recent longitudinal analysis was undertaken by the Home Office in the United Kingdom into the heroin epidemic of the 1980s and 1990s and the impact that this epidemic had on crime trends then and now (Morgan, 2014). This analysis revealed that in aggregate, heroin and crack cocaine users committed a large enough number of offenses to be “an important driver of overall crime trends” for the region (p. 3). When specific regions were explored in terms of both the impact of the heroin epidemic and recorded crime statistics, across all regions (i.e. Scotland, England, Ireland), the documented crime peak corresponded with the heroin epidemic affecting that region (Morgan, 2014). At a national level, Morgan used fixed effects regression analysis on a data set derived from the police force which had captured the “Addicts Index” and police crime data for the period of 1981-1996. This analysis found that 40% of the national increase in acquisitive offending from 1981 to the peak crime rate in 1993-

1995 can be attributed to the number of heroin users. As a second component of the analysis, Morgan modelled the number of heroin/ crack cocaine users and their offending over time. This exploratory model found that heroin/ crack cocaine use could account for one-quarter of the rise in acquisitive crime that occurred in England and Wales from 1981- 1995. Further, the model also accounted for between one quarter and one-third of the decline in acquisitive offending as the cohort of heroin/ crack cocaine users aged, engaged with treatment, ceased the use of illicit substances or died (Morgan, 2014).

Examination of the relationship between heroin/ cocaine and criminal behaviour has come from two main bodies of research methodology; penal studies and treatment studies (Allen, 2005). Those researchers' that have used the penal methodology examine the drug consumption patterns of people involved in the criminal justice system and draw upon samples of arrestees or incarcerated offenders (Allen, 2005). There are a number of large scale studies across various geographical locations, such as the United Kingdom (UK), Australia, New Zealand and the United States of America that draw upon arrestee data. In the UK, the New England and Welsh Arrestee Drug Abuse Monitoring Programme (NEW –ADAM) of the Home Office in the United Kingdom is one such longitudinal study. The NEW-ADAM programme was established in 1999 as part of the British government's drug strategy. The national programme of research uses a multi-site approach to interviewing and voluntarily drug testing (urine samples) arrestees (Bennett, 2000). Bennett published the results of the second developmental stage of the results from this longitudinal examination in the year 2000. The urinalysis results revealed that 69% of arrestees across the four sites (Nottingham, Sunderland, South Norwood and Liverpool) tested positive for at least one drug (excluding alcohol), 36% tested positive for multiple drugs, 29% tested positive for opiates, including heroin, 20% tested positive for cocaine, however the most widely used drug was cannabis, with 49% of the sample testing positive for cannabis. More recent results from the NEW-ADAM programme has found that 31% of new arrestees tested positive opiate use (Halloway & Bennett, 2004), and that the annual illegal income of those arrestees who report using

heroin and cocaine was four times higher when compared to the annual illegal income of those arrestees who did not test positive for illicit drugs (Holloway & Bennett, 2004; Holloway et al., 2004).

Within the Australian context, The Australian Institute of Criminology (AIC) has run the Drug Use Monitoring in Australia program (DUMA) for over 16 years and has collected self-report and urinalysis data from over 40,000 police detainees gathered from nine sites across the country (Payne & Gaffney, 2012). Gaffney et al (2010) in their presentation of the annual findings reported that two-thirds of offenders detained by police tested positive to at least one drug, excluding alcohol. Women were found to be more likely to test positive (73% vs. 65%), and just under half of the detainees who disclosed having been involved in offending behaviour within the preceding 12 months, reported to have used drug/s prior to involvement in that offending behaviour. Payne & Gaffney (2012) reported on changes to the DUMA questions that specifically explored detainees attributions (based upon "attributable fractions" developed by Makkai & Temple, 2008) of drug involvement in their offending behaviour. The detainees were asked about role that economic and psychopharmacological factors played in their own drug use and involvement in criminal behaviour. When the attributions made by the detainees were broken down by the type of substance used, the results revealed that 9% attributed the economic motivation to purchase more cannabis as contributing to their involvement in offending behaviour, while 45% of heroin users, 22% of amphetamine users, 3% of illegal benzodiazapine and 5% of ecstasy users attributed economic motivation to their involvement in offending behaviour. (Payne & Gaffney, 2012). Aggregating the data across all drug types revealed that 25% of all the detainees interviewed who reported using illegal drugs, attributed their involvement in the offence for which they were detained at the time of interview, as being due to economic motivation to purchase more drugs. This rate compares to an aggregate rate of 60% of illegal drug users attributing their involvement in offending as being due to psychopharmacological reason (either acute intoxication or being in a state of withdrawal

and experiencing drug cravings). Payne and Gaffney noted that the attributions cited excluded the use of alcohol. Inclusion of alcohol, however increased the psychopharmacological attributions to 40% of the sample who attributed their current involvement in offending behaviour as being due to being high or drunk. Some of the limitations of this research is the lack specificity with respect to the detainees substance use patterns across the spectrum of use. That is, whether the detainees would fulfil the criteria for a substance use disorder, were recreational users or described some other pattern of use.

More recent local exploration of acquisitive offending within Western Australia was conducted as part of the ongoing DUMA program. Gately, Fleming, McGinty & Scott (2014) added an addendum set of questions to those already administered as part of the DUMA project in Perth, Western Australia for a quarterly period of the 2012 data collection. The 69 arrested detainees who self-reported having committed a burglary related offence were asked about their knowledge of burglary activity, irrespective of whether their current arrest related to a burglary offences. Of relevance to the economic motivation model, of the 45 detainees who reported stealing cash or property, Gately et al found that the majority had sold or swapped the goods with a drug dealer (23.1%). However, despite reporting the association, the authors noted that as the questions within the addendum did not specifically relate to the role of alcohol and other drugs in the commission of the burglary offences, the offences could not be directly related to drug use. In the context of Western Australian police statistics showing a steady increase in the rate of burglary and specific burglary over the 5 years preceding Gately et al's study, further exploration of the role of drug use in acquisitive offending behaviour is important.

The New Zealand Drug Abuse Monitoring research programme (NZ-ADAM) draws upon data from 4 different police stations across the country and, like the Australian and UK programmes, interviews individual's detained at the police stations for less than 48 hours at the time the interviewers are present. Wilkins and Sweetsur (2010)

drew upon the data obtained from 2125 participants interviewed by between 2005-2007 to explore the relationship between earnings from acquisitive crime and methamphetamine/ amphetamine and cannabis use. The authors noted the differing patterns of drug consumption in New Zealand (NZ) when compared to other countries such as Australia and the US. Wilkins and Sweetsur stated that the consumption of heroin and cocaine in NZ has been low for several decades, which is understood to be due to the country's geographical isolation and small population. Instead, the amphetamines has been the dominant stimulant used in NZ since the early 2000's (Wilkins & Sweetsur, 2010). The low levels of opioid use was exemplified in their sample of NZ-ADAM participants, where it was found that only 38 of the 2163 interviewed during the study period reported to have used heroin, methadone or morphine for more than 2 days out of the previous 30. With such a small sample of opioid users, meaningful analysis was deemed not to be possible and as such these 38 were removed from the analysis, leaving the sample size of 2125 (87% male, 50% Maori). Respondents were asked about their expenditure on drugs and their sources of income (legal and illegal) in the last 30 days. The authors found that spending on methamphetamine/ amphetamine and spending on cannabis for personal use were both predictive of involvement in property crime on the preceding 30 days. With detainees who had spent money on amphetamines/ methamphetamines found to be 3 times more likely to be involved in property crime, when compared to detainees who had not spent money on methamphetamines/ amphetamines. Those detainees that reported spending a high and medium dollar amount on amphetamines/ methamphetamines, also reported earning a higher dollar amount from involvement in property crimes when compared to those who did not report any expenditure on methamphetamines/ amphetamines. These same results were replicated with respect to money earned from drug dealing, such that those detainees who reported to have spent a high and medium dollar amount on methamphetamines/ amphetamines also reported earning a higher dollar amount from drug dealing and were found to be 6 times more likely to be involved in drug dealing

when compared to detainees who had not spent money on amphetamines. With respect to cannabis use, those detainees who reported spending a high dollar amount on cannabis, also reported earning a higher dollar amount from involvement in acquisitive crimes when compared to those who reported a low level of expenditure on cannabis for personal use. Maori detainees were also found to report a higher mean dollar earning from property crime when compared to non-Maori detainees. Therefore overall, Wilkins and Sweetsur found that level of spending on cannabis and amphetamines for personal use and being of Maori descent were statistically significant predictors of the amount of money earned from property crime in the past 30 days. While this research provides clear evidence in support for the relationship between methamphetamine/amphetamine use and acquisitive offending, the direction of the relationship is less clear. It is possible that involvement in acquisitive offending preceded drug use, in such case, it may be that the crime causes crime model may offer more explanatory power. Again, consistent with the other ADAM and DUMA studies described above, there is no indication of the pattern of use by the participants.

Critics of the large scale arrestee studies described above highlight that the self-report nature of the research methods is subject to recall and non-response bias, that such studies rarely draw upon a control group and often fail to consider confounders such as age (Pierce, Hayhurst, Bird, Hickman, Seddon, Dunn & Millar, 2015). In an effort to address some of the gaps within the existing research literature, Pierce et al., (2015) sought to quantify the relationship between opiate and/ or cocaine use and 2 year offending history in a large cohort of 139,925 offenders who underwent saliva drug testing following arrest in England and Wales between April 2005 and the end of March 2009. The offending histories of the criminally active drug users were compared against a cohort of criminally active non-drug users across the categories of acquisitive, non-acquisitive, serious acquisitive and non-serious acquisitive offences (Pierce et al., 2015). The authors sought to explore the association between testing positive to opioid and/ or cocaine use and previous offending. In order to address confounders within the data set,

the comparisons accounted for gender, age and periods of incarceration. Other researchers' who have drawn upon samples of incarcerated offenders emulate the results outlined above; finding that between 15 – 40% report using heroin prior to their incarceration (Allen, 2005; Weisman et al., 1976; Ford et al., 1975), while many report stealing in order to fund their heroin use (Maher et al., 2002). Therefore, there is significant research support for the basic proposition of the economic motivation model that when the frequency of drug use is increased or decreased, so too is the frequency of crime participation, in particular, acquisitive crime (Inciardi & Pottieger, 1994; Maher et al., 2002; White & Gorman, 2000).

Under the economic motivation model addiction/ dependency plays a key role. Involvement in crime and the amount of criminal activity is hypothesised to be greater after the user becomes addicted to (or dependant on) drugs when compared to before dependency (Gossop, Marsden, Stewart et al., 2000; Stewart & Rolfe, 2000; Nurco et al., 1984; Smith & Stephens, 1976; White & Gorman, 2000). Once the individual becomes dependent upon the substance, it is hypothesised that the individual becomes myopic and focussed only on the present benefits of gaining access to their substance of choice. This myopic focus occurs at the expense of more measured, future orientation decisions that may consider the financial, social and health impacts of engaging in the consumption of the illicit substance (Grossman et al., 1998). Following this line of thinking, one would expect that as drug use intensifies in frequency and severity, leading to dependency, so too criminal activity is likely to fluctuate. Involvement in short-term stints of criminal activity to generate illegal income is hypothesised by Thompson and Uggen (2012) to occur in response to general economic need, opportunity and embeddedness within certain social networks. In their research that explored how illegal income attainment differs between drug sales and other forms of acquisitive offences, Thompson and Uggen found that both forms of illegal income complement each other. In particular, the authors found that when illegal income generated from drug sales increases, so too does income generated from acquisitive offending behaviour, due



predominantly to expanding opportunities from involvement in an increasingly anti-social rather than prosocial network. The influence of cocaine and heroin use was also of note, with Thompson and Uggen stating that the use of both substances had a robust effect on involvement in both forms of illegal earnings. In essence, the motivation to engage in both drug sales and acquisitive offending behaviour according to the Thompson and Uggen was simply due to that being where the money is. Further when heavy heroin and cocaine use created an urgent economic need, drug sales and acquisitive offending was lucrative.

Where individuals report heavy illicit drug use, involvement in drug sales and involvement in acquisitive offending behaviour, it follows then that creating legitimate job opportunities and training are likely to be an effective means through which drug use and crime can be reduced. Early employment and aid programs in America aimed at drug dependent offenders released back into the community, demonstrated mixed efficacy during the 1970s (Uggen & Shannon, 2014). Programs such as the National Supported Work Demonstration program, that ran across nine states between 1975-1979, used a control and job “treatment” condition to explore how supported work placements that specifically targeted hard to employ individuals (i.e. drug dependent offenders) would impact on illicit drug use and criminal involvement (Uggen & Shannon, 2014). Analysis of the results revealed that the supported work program failed to curb illicit drug use, however did result in decreased arrest rates.

Early researchers’ such as Nurco et al (1985) and Ball et al (1983) repeatedly found that heroin users frequently engaged in criminal activity and committed six times as many crimes when using heroin as when those same individuals’ were abstaining from heroin use. Crawford, Washington and Senay (1983) also found a high incidence of criminal activity among their sample of daily heroin users, with 84% of their sample admitting to some level of criminal activity. However, Crawford et al also found that even light heroin users (defined as having only used heroin once or twice in the past), admitted to involvement in a considerable amount of crime, with 60% of the sample

admitting to engaging in criminal activity. In a later study conducted by Stewart et al (2000), the authors again reported the association between heroin and crime, stating that even low rate offenders were still twice as likely to be regular heroin users when compared to the non-crime comparison group. Such results suggest that the need to commit crime to acquire heroin may have particular relevance for those who endorse the most problematic use (Stewart et al., 2000). This assumption has been supported by early research that found heavy users of heroin have to be involved in prolific offending behaviour, however the nature of which is unlikely to result in arrest (Inciardi, 1979; Inciardi & Potteiger, 1986).

While the association between heroin use and involvement in acquisitive offending has significant research support, the nature of the association is less well established. Some authors have conceded that heroin use may not lead to an initiation into a criminal career, but will intensify and perpetuate an existing criminal career (Inciardi & Pottieger, 1991). For example, Inciardi and Pottieger (1994) maintain that the criminal lifestyle evident by young people who use heroin is more acute, dynamic and enduring when compared to those who do not engage in heroin use. Allen (2005), explored the relationship between heroin and crack cocaine use and involvement in street crime; a group of offences consisting of robbery, theft from a person, snatch theft, street related firearm offences and carjacking. Allen interviewed 26 heroin and crack cocaine users in the Manchester area about their involvement with heroin and crack use and acquisitive offending. Allen found that for his sample, involvement in petty criminal behaviour, such as shoplifting, preceded their involvement in illicit drug use and was unrelated to heroin or cocaine use. Further, Allen found that there was no direct causal link between heroin, crack cocaine use and levels of participation in property-related acquisitive crimes, due to the fact that users were able to manage their drug use. Allen argued that involvement in person-related street crimes by those considered heroin or crack cocaine dependent constituted an act of desperation due to the fact that motivation to engage in such crimes was mediated by a strong desire to avoid hurting others by

those who disclosed a history of personal victimisation. Against the background of personal victimisation, Allen found that for his sample, critical moments such as bereavement provided the catalyst for the individuals to use heroin or crack cocaine, which in turn initiated the sequel into “reluctant committal of street crimes” (p. 369).

Overall then, Allen’s research provides support for the association between acquisitive person-related offending behaviour and heroin/ crack cocaine use, in that the participants reported a diversification of offending behaviour with the intensification of the participants use of heroin and cocaine. However, this diversification did not simply occur as a matter of course with increased use of heroin and crack cocaine as a simple cause and effect relationship. Rather, Allen found evidence to suggest that the participants were able to manage and in some cases, avoid further involvement in the criminal justice system with continued drug consumption. The diversification into more violent person-related acquisitive offending behaviour occurred when a personally significant catalyst event occurred (e.g. bereavement, victimisation), drawing upon personal resiliency to cope, which in turn increased the use of heroin/ crack cocaine and increased the likelihood of engaging in street crimes that were inconsistent with previous offending behaviour and contrary the participant’s own moral behavioural standards. Therefore, Allen’s research highlights the complexity of the heroin/ crack cocaine and crime relationship.

Following the basic proposition of the economic motivation model that economic strain of maintaining drug dependence causes involvement in criminal behaviour, drug treatment is the logical means through which a dramatic decrease in drug use and criminal activity could be achieved (Incardi & Pottieger, 1998). It is this reasoning that has become popular among politicians and as a rehabilitative and crime control measure. Governments across the world have adopted drug policies that aim to reduce offending behaviour. For example, in the United Kingdom, the Home Office introduced a policy of drug testing with the express aim of increasing treatment participation (NTA, 2011). The policy involves mandatory saliva testing for opiates and cocaine following

arrest for what is termed a “trigger offence”, which is defined as the following acquisitive offences; theft, robbery, burglary, vehicle theft, in addition to the drug related offences of possession or supply of cocaine or heroin. (Home Office, 2011). Once tested, those found to test positive for cocaine, heroin or both substances are mandated to have an assessment for suitability for inclusion in a drug treatment programme (Pierce et al., 2015). Such policies are founded on the inherent assumption that opioid and cocaine using offenders’ are economically motivated to engage in offending behaviour. Empirical support for this type of policy, and indeed the economic motivation model stem in part, from studies that have drawn upon treatment samples and found a large proportion of those in drug treatment programme disclose involvement in acquisitive offending behaviour (see Best et al., 2001; Gossop et al., 1997; Stewart et al., 2000; Stephens & Ellis, 1975).

Conversely, other researchers’ have drawn upon treatment completers’ to demonstrate a reduction in offending behaviour following successful completion of a drug rehabilitation programme. Gossop et al (2000) reported on their one year follow up study, which followed 753 participants who had completed drug treatment programmes at various locations throughout the United Kingdom. The authors found a significant reduction in the number of acquisitive crimes that participants reported engaging in at one year post treatment for both the high and low rate crime groups (Gossop et al., 2000). Gossop et al reported that heroin was found to be a significant predictor for criminal involvement, with those who had ceased regular heroin use found to be eleven times less likely to be involved in criminal activity when compared to those who had not changed their heroin use patterns. In reporting these findings, it is important to note that Gossop et al found that half of their sample reported not being involved in any acquisitive crime over the previous three months prior to intake into the study. Of those participants that did report being involved in acquisitive crimes, the majority reported their level of involvement to be low rate offending. This means that, consistent with research cited above (e.g. Stewart et al., 2000), a small proportion of the sample (10%) accounted for

the majority of the crime reported (76%; Gossop et al., 2000). A similar pattern has been found to hold true for crack cocaine users (Inciardi & Pottieger, 1994; Miller & Gold, 1994; Stewart et al., 2000). In their study of 200 crack cocaine addicts, Miller and Gold (1994) found that the relationship between cocaine and crime was most notable among daily users, who reported spending 2 – 3 times more in one week when compared to non-daily users. These results were found to hold true independent of the influence of demographic variables.

In a large drug treatment outcome study in the UK, McIntosh, Bloor and Robertson (2007) explored the effect of drug treatment on acquisitive offending in a sample of 1033 participants (69% male; mean age 28 years) who identified as experiencing problematic use of predominantly heroin and partook in the longitudinal Drug Outcome Research in Scotland (DORIS). The DORIS study draws upon participants from a range of treatment facilities around Scotland, including prison based treatment programmes (McIntosh et al., 2007). McIntosh et al conducted follow-up interviews with participants who commenced drug treatment in 2001/2 on 4 occasions (intake, 8, 16 and 33 months) across a 33-month period. The authors used Step-wise logistic regression models to test the effects of some 22 co-variables, in an attempt to ascertain the likelihood of the commission of a further acquisitive offence or being arrested for an acquisitive offence. The follow-up rate of interviews was 70%, with an additional 24 participants data excluded due to being recruited at a needle exchange program, leaving a total of 653 participants for analysis. Of the 653 participants, 35% reported to have engaged in acquisitive offending in the 3 months prior to the interview and 25.3% reported to have been arrested for an acquisitive offence in the 17 months period between interviews (McIntosh et al., 2007).

The authors stated that the most “striking features of the results is the enormous importance of various drug consumption and drug-consumption –related variables in accounting for acquisitive crime” (p.380). To elaborate, participants who reported being abstinent from drug consumption (however may still have reported the use of cannabis)

during the 3 months prior to interview, were found to be 7 times less likely to have committed acquisitive offences when compared to those who reported to have maintained drug use. This relationship was equally as strong across both community and prison based samples. With respect to drug type, heroin use within the previous 3 months was found to be independently associated with both involvement in acquisitive offending and being arrested for it (McIntosh et al., 2007). Other significant factors that were found to predict involvement or arrest for acquisitive offending were being male, younger age (in the community sample only) and the experience of mental health difficulties (arrest outcome only), with treatment-related variables being found to have very little independent association with acquisitive offending. Therefore McIntosh et al concluded that the effects of treatment on acquisitive offending may be indirect and mediated by its effectiveness on drug use. Following this rationale, McIntosh et al stated, consistent with the economic motivation model that the effectiveness of the drug treatment programmes studied is in their ability to reduce illicit drug consumption and thereby reduce the need for participants to engage in acquisitive offending behaviour to fund or sustain this habit.

For some offences, such as prostitution and forgery, Flaherty et al found that a greater number of participants, who reported no drug use at all in the previous month, reported engaging in the aforementioned offences more than any of the other heroin users in the sample. More recently, Stewart, Gossop, Marsden and Rolfe (2000) found that in their sample of over 1000 treatment seeking drug users from across various treatment programmes across England, that half of the participants reported that they had not committed an acquisitive offence. Stewart et al statistically broke the sample down to state that 10% of the sample responsible for three-quarters of the acquisitive offences reported, while the low rate offenders comprised the remaining quarter. In a smaller scale study, Hammersley and Morrison (1987) conducted structured interviews with 28 residents of a long term drug rehabilitation unit in Scotland. The authors found that heroin consumption was only correlated with theft from strangers and businesses.

Heroin consumption was also surprisingly correlated with having a second job.

Hammersley and Morrison asserted that the absence of correlations with such criminal activity as shoplifting or stealing from the family does not fit with the stereotypical image of the heroin user. The authors found that heroin use was not dependent on income or crime and even in the heroin using group, other drugs co-varied with criminal activity.

The authors therefore concluded that it may be misleading to examine the heroin-crime relationship without considering the possible interactions between poly-drug use and crime (Hammersley & Morrison, 1987).

In economic terms, when the drug user switches drugs they are also able to decrease or increase the expense of their drug use. Likewise, when a drug user has surplus income (illegitimate or legitimate) they are likely to increase their use of expensive drugs. Therefore, Hammersley and Morrison (1987) concluded that heroin use, other drug use and criminality were inter-related in such a way that none of these behaviours' can easily be dealt with or understood in isolation. Further, it would seem that the extent of the reported heroin habit does not invariably predict the extent of criminal activity (Hammersley & Morrison, 1987). Collins, Hubbard and Rachal (1985) corroborated this position and found that economic compulsion was an insufficient explanation of the amount of illegal income reported. In Collins et al regression analysis, the authors found that drug expenditure appeared to be controlled by income and not the other way around. Alternatively, perhaps as Hammersley and Morrison contend, "heroin addicts" are less heroin dependent than they would like to believe. In support of this proposition, Johnson (1984) found that heroin consumption was determined by the amount of free cash available on the day of purchase rather than the economic pressure that has stemmed from a need for heroin. Similarly, Flaherty, Kotranski and Fox (1984), who found that overall, in their sample of heroin users that those who reported less than daily use of heroin were more likely to report engaging in criminal activity when compared to those who reported daily heroin use.

While the economic motivation model provides a politically popular view of the drugs-crime relationship, social and personal factors have been found to be equally good predictors of criminal involvement (Stewart et al., 2000). Researchers' have found that high rate criminal offending has been reported by those who do not have a wage as a source of income and those that are unemployed (Stewart et al., 2000). Those that participate in high rates of criminal behaviour have also been found to have greater psychological problems, such as depression and anxiety when compared to non-criminally involved peers (Stewart et al., 2000).

In sum, the empirical research would suggest that while illicit drug use may be a primary cause for initial participation in criminal behaviour for a minority of people, for the vast majority of those who use drugs and commit crime, their use of illicit substances cannot account for their participation in criminal behaviour (Chaiken & Chaiken, 1990). The onset of dependency on illicit substances also does not appear to be casually related to involvement in property crime, rather, substance dependency, and in particular heroin dependency, is often associated with the acceleration of an existing criminal career (Chaiken & Chaiken, 1990).

### **3.11 Systemic Model**

The systemic model focuses on the system of drug distribution and use. Drug dealing is the most omnipresent and enduring crime within the drug community (Hunt, 1990). At some point in their drug use career, users at all levels of the drug use continuum are likely to distribute drugs, either by selling or sharing (Hunt, 1990; Johnson, Kaplan & Schmeidler, 1990). The Systemic Model posits that the system of drug use and distribution is inherently connected with violent crime through the aggressive interactions that occur in the process of drug distribution and use (Coomber, 2015; Goldstein, 1985). The aggressive or hostile environment in which drug distribution, sales and use occur is created and exacerbated by prohibitionist social policies that were developed to curb illicit drug use, which in turn however, creates a "black" or "dark" market (Brown et al., 2012; Coomber, 2015; Jacques, Rosenfield,



Wright & Gemert, 2016). The creation of an illegal “black market” reduces access to formal means of conflict resolution and management (i.e. the law and legal sanctions) and contributes to drug dealers and distributors being heavily reliant on violent means of social control and retaliation (Jacques, Rosenfield, Wright & Gemert, 2016). Within this social climate of illegitimate or illegal business, Goldstein (1985; discussed further in chapter 3) in his seminal work on the drugs/crime nexus provided 8 examples of systemic violence (p.148)

*“1. Disputes over territory between rival drug dealers; 2. Assaults and homicides committed within dealing hierarchies as a means of enforcing normative codes. 3. Robberies of drug dealers and the usually violent retaliation by the dealer or his/her bosses. 4. Elimination of informers. 5. Punishment for selling adulterated or phony drugs. 6. Punishment for failing to pay one’s debts. 7. Disputes over drugs or drug paraphernalia. 8. Robbery violence related to the social ecology of copping areas”.*

Goldstein hypothesised that with ongoing drug use and involvement within the drug market as a dealer, user or commonly both, the risk for the individual to be both a perpetrator and victim of systemic related violence is increased. The victims of systemic violence are therefore; generally those involved in the use and sale of drugs, or are otherwise engaged at some level, in the drug business. However, in some drug markets, systemic violence can also claim collateral victims; such as third parties that happen to be caught up in violence, for example a bystander in a drive by shooting or corrupt government official (Goldstein, 1985; McBride & Swartz, 1990; Reuter, 2009). The following section will discuss the variability of drug market structures, the research evidence for the presence of violence within those markets and factors that influence the how violence may manifest differently across culture and geography.

**Types of drug markets-** Drug markets can be conceptualised as being made up of distribution systems and retail markets (May & Hough, 2004). The drug distribution system refers to the method of importation, manufacturing and then distribution of the drug, while the retail drug market refers to the process of buyers and sellers locating one

another to conduct a drug transaction (May & Hough, 2004; Harocopos & Hough, 2005). Put simply Potter (2009) differentiates drug trafficking, as part of the drug distribution system from drug markets by stating that “drug trafficking occurs globally, but markets are ultimately local” (p.51). While popular culture and early empirical research have tended to present drug markets as largely homogenous, over time and with increase research scrutiny, this view has been found to be inaccurate (Coomber, 2010). Instead, drug markets are more accurately understood as varied in their characteristics, and complexity dependent upon a range of variables including the types of drugs sold, the market level, the market type, the location and culture of the market, the method of transaction, unique characteristics of the players involved in the market, the cultural context of the market (Coomber & Turnbull, 2007; Hough & Natarajan, 2000; Potter, 2009; Taylor & Potter, 2013). The following section will focus predominately on retail level drug markets to describe the research evidence for the variable structures and transactions.

*Structured vs unstructured drug markets-* Structured drug markets are assumed to mimic that of legitimate business and comprise a vertical hierarchy (Desroches, 2007). Like that of legitimate business however, the structure, functions, roles and responsibilities of a structured market is likely to be dynamic, and dependent upon a range of variables including the social-structural forces of the society and culture within which it operates, time, geography, and the types of drug/s manufactured and distributed (Coomber 2015; Reuter, 2016; Small al., 2013). Unstructured or free market distribution system involves many sellers working independently without a structured hierarchy and more ambiguous supply routes (May & Hough, 2004). Early researchers such as Johnson et al (1990) have described the free market distribution network as associated with small street pushers who are highly disorganised and live a chaotic existence with little role definition and high volatility, however as will be discussed below, this description may not be necessarily accurate.

The most widely depicted structured drug distribution system within mainstream western culture is the organised pyramid structure. As the name would suggest, the pyramid structure of drug distribution assumes that large scale importers and traffickers operate at the apex of the pyramid to manufacture and distribute large quantities of illicit drugs through various drug distributors filtering down to street dealers on the lowest tier (Hough & Natarajan, 2000; May & Hough, 2004). The empirical support for the pyramid structure has its origins in the sale and distribution of cocaine in New York City during the 1980's (Coomber 2015; Reuter, 2016). Johnson et al. (1990) provide an example of a "typical" pyramid structure. At the apex level are the growers or producers of the drug (coca farmer, chemist, opium farmer, marijuana grower etc.) who supply the drug to the traffickers (smuggler, drug mule, money launderer etc). The drug trafficker then smuggles the drug into various countries/ states/ counties and redistributes the drug into smaller quantities. The dealers then re-package and, if the stereotype is to be believed, adulterates the drug into retail sized portions to distribute into various regions or neighbourhoods. Some dealers may supervise a number of drug sellers. The drug sellers have the job of making contact with the buyer and are responsible for both the drug and the money. The lowest (and largest) level of the pyramid may also include a range of other low level distributors (steerer, tout, cop-man, look-out, go-between) who assist the seller in making the sale and protect the seller from police or other criminals (Johnson et al., 1990) . More menial tasks involve individuals that perform short-term services such as injecting drugs, running a shooting gallery or bagging drugs that are provided to drug users or sellers for money or drugs. Some authors propose a less complicated structure than that outlined by Johnson et al (1990). Pearson and Hobbs (2001) describe a 4 tier hierarchical structure that denotes a shorter supply chain between the manufacturing and importation of drugs to the retail drug markets, more akin to a "flat pyramid" (p. 8). It has been proposed by Johnson et al (1990) that the vertical organisation structure provides greater protection against police detection, as greater role separation within the drug transaction makes it more difficult for the police to

trace the drug back to the importer. The pyramid hierarchical drug market structure is assumed to be entwined with gangs and organised crime, forms the basis upon which the stereotype of drug distribution is depicted within movies and popular culture and upon which prohibitionist drug policies are developed (Coomber, 2015; Coomber & Maher, 2006; Pearson & Hobbs, 2001). As will be discussed below, accompanying the assumed connection with organised crime is the assumption that those involved in the drug market exhibit a penchant for violence across all levels of the distribution chain (Coomber, 2015).

Other structured drug markets, beyond the pyramid structure, have been depicted within the research literature based upon the various roles completed, tasks undertaken and the overall organisational structure (Desroches, 2007). Natarajan and Belanger (1998) for example, drew upon the court records of 39 drug trafficking organisation in New York City to develop 4 typologies of drug syndicates; freelance networks; family businesses; communal businesses and corporations. Within Natarajan and Belanger's 4 typologies, the family businesses and corporations are the most structured, both of which were described as having a clear hierarchy and division of labour. The difference between the two structures being that the relationships within the family business are based upon family or kinships ties (Natarajan & Belanger, 1998). Later, Pearson and Hobbs (2001) classified drug dealers into four categories; importers, wholesalers, middle market drug brokers and retail level dealers, while Dorn, Levi and King (2005) proposed that drug traffickers could be classified into 3 main typologies; "politico-military" traffickers who operate in failed states and have political aspirations; "business criminals", those that are driven by financial goals, but are risk adverse and "adventurers", those who are predominantly characterised by their willingness to take high risks.

Evidence for structured and hierarchical network of drug distribution is varied, dependent upon the geographical region studied, the participants and study design used and period of time studied (Coomber, 2015; Natarajan, Zanella, & Yu, 2015; Reuter,

2009). Researchers' who have drawn upon samples of convicted drug dealers or smugglers to explore the structure of drug distribution networks, have either described minimal evidence to support a highly structured network of distribution or have reported evidence for a two tiered network; one network that is unstructured or loosely structured and one that is highly structured (perhaps dependent upon on drug distributed, see differentiated markets below). The two fields of thought have their origins in the early work of Reuter and Haaga (1989) and Adler (1985). Reuter and Haaga studied a sample of 41 imprisoned drug traffickers, and found that distribution networks are very rarely "durable and hierarchical enterprises, but consisted rather of temporary and shifting coalitions of dealers" (p. v). While the early ethnographic work of Adler (1985), found that highly structured organisations do exist, dependent upon the substance distributed. Alder studied upper-level marijuana dealers and smugglers, she found little evidence to support the highly structured, business like organisational structure in her sample of marijuana dealers, however proposed that such organisations did exist dependent upon the drug dealt. From Reuter and Haaga's early work, the two tiered model of drug market distribution was replicated. Johnson et al (1990) noted a change in drug distribution systems between Heroin and Cocaine in the United States, such that the use and distribution of heroin was were primarily made up of free-lance sellers, while research on the crack cocaine market described a more organised "vertical organisation structure" that is similar to legitimate business structure, where a variety of people fulfilled a variety of roles (Johnson et al., 1990, p. 21). Inciardi and Pottieger (1991) also found a vertical organisational structure in their study of the Miami Cocaine market using a sample of children and adolescents. More recent research support for a two tiered model can be found in the work of Desroches (2007) who studied 70 convicted drug traffickers in Canada and found the sample to fall within two categories; first, those who reported extensive involvement in a criminal involvement, in addition to drug trafficking; and second, those who reported involvement in legitimate lifestyles, but were also involved in the drug distribution network. Additionally, the United Nations (UN) found

support for a two tiered model in their pilot study of 40 criminal groups across 16 countries, the majority of who were involved in drug smuggling. In this survey, two thirds of the groups surveyed reported a classic hierarchical structure, while only one third of those group surveyed described a loose organisational structure. However when the sources of information about the drug market was explored, it became apparent that different data depictions of the drug market structure was obtained by law enforcement or customs officers when compared to the those involved in drug trafficking. Law enforcement officers were more likely to depict a structured drug market when compared to those involved in the drug market itself.

Another body of research however, supports Alder's (1985) view of a largely fragmented drug distribution system has come from researcher's who have studied samples of convicted drug traffickers across geographical regions. For example Schiray (2001) described the drug distribution market in Sao Paulo as ad hoc, transient and unstable, while research conducted in Kyrgyzstan (Zaitch, 2002), the Netherlands (Paoli, 2002), and the European cities of Milan and Frankfurt (Madi, 2004), have consistently concluded that drug dealing is a fragmented and dynamic business that may rely upon ethnic and kinship relationship to facilitate relationships among smugglers (Benson & Decker, 2010; Desroches, 2007; Reuter, 2009). More recently, Benson and Decker (2010) completed a qualitative analysis of 34 individuals held in federal prison in United States for drug trafficking offences. The authors found little evidence to support the view that drug smugglers work in groups that are consistent with that of legitimate business organisations. Rather, the drug smugglers interviewed described a horizontal structure of loosely connected "nodes" based upon informal associations, such as kinships or shared experiences. Benson and Decker noted consistent with the research described above, that these nodes were highly adaptable to the geographical, social and law enforcement environment in which they operated; a characteristic that contributed to the success of the distribution chain. This work is consistent with the earlier work of Williams (1998) who drew comparisons between drug smuggling and distribution networks to

other group based offenders. Williams argued that greater access to technology has allowed co-offenders, to be more independent without reliance on a greater organisational structure. Therefore, from William's perspective, drug distribution networks (similar to human trafficking, terrorist groups etc.) should be viewed as networks that are loosely connected, both across and within organisations. From a social network perspective, Morselli (2005; 2008) examined a range of criminally based groups, including drug distribution networks and concluded that criminal networks were less centralised and structured than previously believed. He proposed a "flexible order thesis", which meant that while there may be some order or hierarchy within some criminal networks, overall the groups are adaptable and flexible, which is of benefit to the group in terms of distribution of resources and detection of law enforcement (Morselli, 2008).

The research described thus far has relied heavily upon incarcerated drug smugglers to understand and describe drug markets. Critics of drug market typologies that are derived from the use of convicted drug smugglers point out that those participants are likely to have very limited understanding of the upper level organisational structure of the drug syndicate within which they operate and may base their views of the drug market structure on commonly held stereotypes depicted in mainstream media (Coomber, 2007; 2012; 2015; Dorn, Levi & King, 2005; Natarajan, Zanella, & Yu, 2015). From this perspective, there are a range of factors that are likely to impede an individuals knowledge of the organisation structure, such as the limited contact that individuals within the drug syndicate have with each other, that a full understanding of drug organisations are difficult in the context of the vast geographical distances between the areas of production and distribution, and the inherent danger associated with interviewing and disclosing information about drug distribution networks (Natarajan, Zanella, & Yu, 2015). Despite these concerns, the level of consistency across studies would suggest that most modern drug networks of distribution are most accurately described as Natarajan et al (2015) have proposed; "consisting of a large number of

entrepreneurial networks separately engaged in exploiting the lucrative opportunities by the demand for drugs” (p. 410).

*Drug market transactional approach-* Drug retail markets, like legitimate retail business can be analysed on a continuum according to the degree to which they are open or closed markets (Barratt, Ferris, & Winstock, 2016; May & Hough, 2004). May and Hough define open markets as “those that are open to any buyer, with no requirement for prior introduction to the seller and few barriers to access” (p. 550). For a legitimate business, an open market has advantages for both buyers and sellers, in that the customers know where to find the retailer and can trade quality against price, while the retailer is able to gain greater access to potential buyers. For the illicit drug market, an open market may be considered a street market where a seller may offer drugs to passers-by (Coomber, 2015). The access to a greater amount and diversity of buyers however, must be considered against the risks associated with greater visibility, increased vulnerability to police detection, arrest and increased levels of violence (Coomber & Moyle, 2012; Dorn et al., 1992; Jacques, Wright & Allen, 2014; May & Hough, 2004). These open drug market risks often results in the markets to transform into closed drug markets (Harocopos & Hough, 2005). A closed drug market can be defined as one in which sellers and buyers will only do business if they know and trust each other, or if a third party will vouch for them (May & Hough, 2004). These transactions regularly occur in places that are prearranged and considered safe, such as the seller’s own home, a rented house/ property or various inconspicuous outdoor locations (Coomber & Moyle, 2012; Nicholas, 2008).

Transactions within a closed drug market operate within a social network of protection, such that a trust relationship is developed between the buyer and seller and is thought by both parties to offer an added layer of protection; protection with respect to the quality of the product for the purchaser, protection against police intervention and stability of supply and demand (Coomber & Moyle, 2012; 2015; May & Hough, 2004). Within any given area, an open and closed market can operate side by side. For



example, research conducted by Nicholas (2008) drawing upon the Ecstasy and Related Drug Reporting System (EDRS) corroborates the value of closed markets within the distribution of party drugs. Nicholas found that 84% of those who reported using ecstasy in the previous six months had purchased the drug from a friend on at least one occasion (Nicholas, 2008). Half of the participants also reported obtaining ecstasy from a dealer known to them, while 53% reported purchasing the drug from an acquaintance (Nicholas, 2008). Only 18% of the sample reported purchasing ecstasy from an unknown dealer. Closed drug markets have been associated with limited profit margins due to the dealer placing a greater emphasis on the social orientation of the drug transaction, however with the wide distribution of abundant means of mobile and internet communication systems, there is greater access to buyers without the added risk of an open market structure (Coomber 2015; Nicholas, 2008). Therefore, as Coomber (2015) has noted, open drug markets have been declining for some time.

The organisational structure of both distribution and retail drug markets vary substantially, depending upon whether the market is burgeoning, established or declining and on what level of organisation has historically characterised the drug markets of that geographical location (Coomber & Maher, 2006). Where a drug market has been established and is stable, this stability is thought to be highly influential in the level, type and frequency of violence evident within a community (Brownstein et al., 2000). Drug market stability can be measured in terms of the structure of the specific drug market, or the interactions within the market; that is, whether there is any competition that may promote conflict between dealers (Brownstein et al., 2000). From a structural point of view, drug markets that have established routines and relationships, where there is an existing hierarchy and clear boundaries are thought to be more stable and therefore potentially, less violent (Brownstein et al., 2000). In contrast, burgeoning drug markets that are not characterised by any organisational structure, are potentially more violent, as buyers and sellers do not have established roles, and the lines of authority and territory are yet to be established (Brownstein et al., 2000). However, as has been described

above, one of the major problems in attempting to study drug markets is that the structure of dealing organisations are complex, with many people performing different roles in various ways (Johnson et al., 1990; Coomber, 2010). In addition, drug retail markets and distribution chains are having to constantly evolve in response to policing strategies and improved technology (May & Hough, 2004).

*Differential markets*- There an expansive body of research that illustrates the highly differential nature of drug markets, based upon a range of factors, including the type of drug distributed (Alder, 1985; Coomber 2006, 2010, 2015; Dorn et al, 1992; Hough & Natarajan, 2000, Reuter, 2009; Taylor & Potter, 2013). From the decades of research that has attempted to describe and explain the various drug distribution networks over time, across geographical locations and across drug types, what has emerged is the heterogeneity of these drug markets and minimal support for the stereotypes of those involved in the sell, supply and distribution of illicit drugs (Coomber, 2010). While there is evidence that the drug distribution market can be highly organised (i.e. corporate style drug distribution), there is equally as much evidence to suggest that drug markets lack structure (i.e open markets, freelance drug market). Therefore to be a drug dealer does not always equate to high level distribution and lucrative financial rewards. Drug markets have been found to be shaped by social, cultural, political and economic contexts as much as they are by policing strategies (Curtis & Wendel, 2007). As aforementioned, early researchers such as Adler (1985) noticed variations in drug markets dependent upon the type of drug sold or distributed. This finding has been replicated over time. Certain drug markets, such as those who distribute cannabis, have been found to be less violent when compared to that of the crack cocaine or heroin market (Hammersvik, 2014; Room, Fisher, Hall, Lenton & Reuter, 2010; Reuter, 2009). The low levels of violence within the cannabis market may be due to a range of factors, including, but not limited to, the pacifying psychopharmacological effects of cannabis intoxication, the tendency for cannabis to be produced by small scale local growers (rather than large scale importation) and the wide use of the drug amongst the general

population which in turn, influences the culture and values of the local drug market (Coomber 2006; Hammersvik, 2014). However it is not just the type of drug dealt that differentiates drug markets. Coomber (2015) emphasised that “any one drug market is in fact a nest of intersecting and sometimes interconnecting drug markets with differing dynamics dependent on a range of variables” (p. 11). Coomber drew upon his own earlier work (Coomber, 2010; Coomber & Turnbull, 2007) to highlight the point that there are many small scale drug markets that operate outside or on the periphery of the acknowledged drug market within any given culture or community. These small scale drug markets overwhelmingly operate peacefully and will function differently to the drug market proper (Coomber, 2015). An example of such a drug market is the “social supply” market, where friends and acquaintances distribute illicit substances amongst themselves for minimal, if any commercial gain (Coomber & Moyle, 2014; Coomber & Turnbull, 2007; Potter, 2009).

The social supply market is most commonly associated with recreational use amongst consumers of “soft drugs” such as cannabis and “party drugs” (Taylor & Potter, 2013). However, social supply could arguably encapsulate “user dealers” of other illicit substances, such as heroin and crack cocaine, where the user’s only involvement in the criminal justice system is by virtue of the drug sale itself (Coomber & Moyle, 2014). Social supply is inextricably linked to friendship and could be considered a cultural norm within a particular friendship group (Coomber & Turnbull, 2007). The act of sharing or gifting drugs between group members can be perceived as an act of trust and friendship, which strengthens social bonds (Taylor & Potter, 2013). Trust within the social supply network can therefore be viewed as a form of risk management for both parties; for the supplier reducing the likelihood of theft, violence and being reported to police, while at the same time for the receiver, increasing the likelihood of obtaining a product that is of good quality (Potter, 2009; Taylor & Potter, 2013). Those that share and distribute drugs have been found to separate themselves from the more deviant label of a “drug

dealer”, instead perceiving their distribution of drugs as a benevolent act of friendship (Taylor & Potter, 2013).

Within the many types of drug markets of any given area, those who populate the market are just as important as the drug sold in shaping the culture of the markets, how the transactions take place and level of violence that occurs (Coomber, 2010, 2015). Drug markets that are populated by middle-class dealers, women, youth, those who use and also deal, those who sell and supply drugs online (cryptomarkets) or those who sell and distribute recreational drugs through social networks are all likely to vary significantly in how transactions take place (open vs closed vs social supply vs hybrid transactions), and the level and type of systemic violence (Barratt, Ferris & Winstock, 2016; Coomber, 2015). Likewise, there is fluidity between those who populate different types of drug markets. Taylor and Potter (2013) explored the transition from those who engage in the social supply market into the commercial drug market proper. In their small qualitative study of 13 drug dealers in the UK town of Rivertown, the participants described drifting into the commercial or drug market proper through initially being part of the social supply network. Importantly, the friendships and connections made in the social supply network were relied upon in establishing a commercial network of distribution, irrespective of the drug sold. This meant that trust and social bonds were just as important in the commercial drug markets, with transactions described as occurring within a closed market structure with little to no violence.

Consistent with the differentiated market view, Taylor and Potter found that different drugs were associated with different drug market structures, such that the cannabis drug market was described as more predictable and hierarchical when compared the MDMA and Ketamine drug markets. Taylor and Potter concluded that while the social supply market is certainly distinct from commercial drug markets and dealing, being involved in the social supply of drugs may be an important step in becoming involved in the sale of drugs within drug market proper.

Perhaps another important step to becoming involved in the drug market proper is problem drug use. The “user-dealer” has been identified within the empirical research literature over time and relates to a “conceptual cross-over” between those who use drugs and supply drugs predominately to fund their own use (Moyle & Coomber, 2015, p. 538). Importantly, the supply of drugs is thought to be driven by compulsive drug use behaviour, such that as Coomber (2006) postulated, the user-dealer is first and foremost a drug user and a dealer second. In a similar manner to the “drift” described in Taylor and Potter’s (2013) research between social supply and the drug market proper, user-dealers are thought to operate initially in the social supply market, drawing on friendships and social bonds to source and on-sell illicit substances.

Moyle and Coomber (2015) described the user-dealer as dominating the crack cocaine and heroin retail level markets in their research conducted on the South West of England. This finding is consistent with earlier research identifying dealing as a preferred means of funding an individual’s drug habit, which is commonly viewed as less risky and easier than acquisitive crime (Bennett & Halloway, 2009; Small et al., 2013; Hunt, 1990; Johnson, Kaplan & Schmeidler, 1990). Moyle and Coomber developed 3 user-dealer typologies; the dealers apprentice; the opportunist and the nominated buyer. Each typology represented a different relationship to an economically motivated seller within the drug market proper. For example, the dealers’ apprentice was conceptualised as an individual with a close relationship to a commercial supplier who in turn was provided a large quantity of drugs to sell on that dealers behalf. While the opportunist may also be provided with a larger quantity of drugs to distribute, however the regularity of on-selling is not consistent. The opportunist may therefore become aware of the ability to purchase a larger quantity of drugs and take the opportunity as a means to subsidise other illegitimate means of funding their own drug use (Moyle and Coomber, 2015). Finally the nominated buyer is a user-dealer who earns their own drugs by purchasing on behalf of a group of users, who in turn gift a portion of the drugs as payment for the transaction. Overall, Moyle and Coomber concluded that the sample of user-dealer’s interviewed

were motivated by their own substance of choice, rather than economic reward. Drug dealing was normalised within social context in which the participants interacted, was easily adapted into their everyday routine of drug sourcing and use, and was perceived as a means through which morally reprehensible criminal behaviour and violence can be avoided (Moyle and Coomber, 2015).

The definition around what constitutes the drug market proper is becoming increasingly difficult with the strong emergence of surface web and cryptomarkets. Cryptomarkets defined by Martin (2014) as “online forum(s) where goods and services are exchanged between parties who use digital encryption to conceal their identities” (pp. 2-3), again challenges what the research literature defines as a drug market, how drug transactions take place and the inherent presumption of systemic violence (Barratt, Ferris & Winstock, 2016). Aldridge and Decary-Hetu (2016) and others (Tzanetakis et al., 2016) describe cryptomarkets as akin to a virtual broker that links together wholesalers with retail-level distributors. However, not all users purchase drugs in a wholesale amount, the retail-level cryptomarket is well established with the emergence of many online speciality vendor (i.e. specialising in the sale and distribution of one or two drug types), and multi-vendor drug market places that distribute drugs globally (Aldridge & Decary-Hetu, 2016).

Cryptomarkets have been described by Aldridge and Decary-Hetu (2016) as “anonymously open”. Drug vendors are able to advertise and interact with unknown customers in a geographically unrestricted space and build establish trust via the very opposite means relied upon in face to face transactions; anonymity in identity, geographical location via encrypted communication, openly advertised customer feedback and exchange via virtual currencies (Aldridge & Decary-Hetu, 2016; Martin 2014; Tzanetakis, Kamphausen, Werse & von Laufenberg, 2016). However, other authors, such as Barratt et al., (2016) claim that cryptomarkets are best compared with and described as closed markets. Barratt et al base this assertion on their analysis of 3794 participants who completed the Global Drug Survey about their experiences of

purchasing drugs through cryptomarkets in the preceding 12 months. In this survey, Cryptomarket users overwhelmingly reported closed market sources (a friend or known dealer) as their preferred supply source should they not be able to access their preferred substance through the cryptomarket.

Irrespective of whether Cryptomarkets are described as open anonymous or a closed market, such markets have the potential to replace or at the very least, change the landscape of offline street level retail markets through anonymous trade across locales, yet cryptomarkets represent only a very small fraction of the global drug trade (Aldridge & Decary-Heto, 2016). Aldridge and Decary-Heto (2016) evaluated the extent to which cryptomarkets are operating as a wholesale marketplace by exploring the volume of orders by monetary value (bitcoins were converted to US dollars) on Silk Road 1 for a discrete period of time (13-15 September 2013). The authors created 4 arbitrary categories of drug listings based upon price and defined a wholesale transaction (that is, one that will be on sold for profit or re-distributed for minimal profit via social supply) as occurring in sales over \$1000 USD. From the data collected, Aldridge & Derary-Heto estimated that approximately one quarter of the revenue generated on Silk Road 1 was from wholesale priced transactions, with ecstasy, herbal cannabis and other “party” psychedelic drugs most likely to be purchased at wholesale levels. The vast majority of revenue (43%) was generated by listing within the \$100-\$500 USD range, which was assumed for the purposes of the study to be for personal use or shared use.

With the vast majority of cryptomarkets revenue being generated for personal or shared use, it becomes important to understand the features of the market that attract sales. Barratt et al. (2014) analysed anonymous online survey data collected from 9470 participants in the United Kingdom, Australia and the USA with respect to the purchases they had made on the now decommissioned cryptomarket, Silk Road (version 1). The participants reported purchasing illicit drugs from cryptomarkets due to the wide array of substances on offer, the substances were of greater quality, the purchase was convenient, cryptomarkets offer a system of dispute resolution and the purchaser was

able to draw upon the vendor rating system to select a reliable vendor (Barratt et al., 2014). The most frequent types of substances distributed or “diffused” was found to be MDMA/ ecstasy, cannabis and LSD. These results were consistent with those obtained by Barratt et al (2016), Van Hout and Bingham (2013) and longitudinal research completed by Soska & Christin (2013). While cryptomarkets offer a range of protective factors when compared to street retail markets, Barratt et al (2016) also identified a range of issues that were unique to cyptomarkets, including, losing money due to volatile currency markets, market seizure/ scam/ theft, customs seizure of the product, being required to pay for the product before receiving it, having to wait extended periods of time before receiving the product and fraud associated with paying for a product that the participant did not receive. The emergence of a new drug markets and methods of trade requires new investigations into what constitutes systemic violence. While direct physical violence within a cryptomarket is unlikely, cyber bullying, stalking or fraud may be examples of cryptomarket systemic violence. More research is required to explore the dynamics and ramifications of these emerging drug markets.

*Systemic violence and drug market structure-* Drug markets and violence are often inextricably linked by policy makers, the media and within the early research literature. Coomber (2015) and others (Gossop, 2007; Reuter, 2009; Schneider, 2013), have highlighted the impact that the inaccurate and sensationalised view of drug markets portrayed by the media have on understanding and researching drug distribution and drug market operations. Research conducted over several decades has not universally supported the inextricable and inevitable link between violence and different drug markets over time and geography.

*Structured drug markets and violence-* Synonymous with structured drug markets is organised crime. As stipulated by Goldstein (1985), violence can come from a number of sources, however most attention given to violence generated by competition amongst sellers and between groups with respect to selling territory, commonly referred to as turf wars (Johnson et al., 1990; Friman, 2009; Reuter, 2009). This type of violence



is repeatedly shown within the media and is based primarily upon early research and events that have occurred within the United States and more specifically, New York City. In New York City, during the early 1960s, Johnson, Golub and Dunlap (2000) stated that many drug users were commonly involved in gangs, whereby violent behaviour brought about honour and prestige. However, as more drug users discovered heroin and began using heroin regularly, involvement in gangs, gang activity, fights and assaults virtually disappeared (Johnson, Golub & Dunlap, 2000). Instead, the availability of heroin and money for heroin became vitally important. Therefore, while physical fights over heroin and money may erupt, these altercations were no longer over turf or gang honour (Johnson, Golub & Dunlap, 2000). However, this trend shifted again with the rise of crack cocaine in the 1980s (Johnson, Golub & Dunlap, 2000).

By 1988, Johnson, Golub and Dunlap stated that most of the drug related violence that occurred in New York City was systemic and not related to the psychopharmacological effects of crack cocaine or any economic motivation. Goldstein, Brownstein, Ryan and Bellucci (1997) examined the circumstances of 218 drug related homicides investigated by the New York Police Department (NYPD) in 1988. Goldstein et al (1997) found that three quarters of the homicides studied could be classified as systemic in nature. Only 14% of the homicides were judged by the authors to be psychopharmacological and 5 % were classified as economic-compulsive (Goldstein et al., 1997; Goldstein, 1998). The high level of violence evident within the crack cocaine market of the 1980's was, according to Reuter (2009) attributable to a combination of 4 main factors; first, the youth of the participants. The sale and distribution of crack cocaine during that period was completed by young participants. Therefore, drawing upon the well-established age-crime curve (Hirschi, 1969) that is, violent crime peaks during the ages of 18-22, Reuter surmised that youth played an important role. Second, the value of the drugs themselves meant that buyers may be willing to resort to situational violence to ascertain the drug for use or on-sale. Third, intensified law enforcement may have resulted in increased suspicion during drug transactions and

concern that others within the drug market may be informing the authorities in an effort to secure reduced penalties for themselves. And fourth, the indirect consequences of the drug use. Here Reuter points to the psychopharmacological effects of the drug during both intoxication and withdrawal, which may increase the predilection towards violence from both the user and in response, the seller.

In an effort to demonstrate the innumerable factors that influence violence within drug markets, Reuter (2009) explored the variables associated with the prolific violence and in particular, homicides attributed to the high level Mexican drug markets in 2007 – 2008. Unlike local drug markets where conflict may erupt over specific territory or the right to dominate sales in a particular area or demographic, the international drug trafficking markets are thought to be competing for the rights to control certain channels of importation and distribution through paying off corrupt officials (Reuter, 2009).

Within Mexico, it has been claimed that a number of drug cartels compete for control over importation routes into the United States. In 2007-2008, Reuter reported that there was a dramatic increase in the number of homicide deaths directly attributable to the high level drug market; however a substantial amount of the victims were not drug dealers or users. Instead, many of the victims were reporters, corrupt officials, singers and opponents of the drug trade. The stark difference in the victims of violence, when compared to other local drug markets where victims are most commonly those actively involved in the drug market proper, is, in Reuter's opinion, directly attributable to the policing and enforcement policies of the Mexican government. The disruption to the established high end drug markets that occurred with the imprisonment or death of cartel leaders, mass sacking of corrupt officials, contributed to each cartel fighting for control and market share. Here the pattern of violence perpetrated against the state appeared to have two aims, violence against criminal justice personal directly involved in attempts to curtail the drug trade and a more broad politically motivated violence that aimed perhaps to attack the integrity of the state (Friman, 2009). Reuter concluded that violence within illegal markets in general and drug markets in particular, is not common.

Rather, specific factors are required to generate the high level of violence evident in Mexico during 2007-2008 and New York during the 1980's. The high levels of violence evident in both drug markets were limited in time and space and not a more general feature of the drug markets in operation within those areas over time; a finding that is perhaps consistent with the views of Pearson and Hobbs (2001) and others (Friman, 2009), that it is drug market instability that contributes to violence.

There is mounting evidence to suggest that drug markets are not inherently violent. In their exploration of middle level drug markets in the United Kingdom Pearson and Hobbs (2001) found little evidence to support the occurrence of "turf wars", or violent disputes over geographical territory. To the contrary, Pearson and Hobbs found that in the middle level drug market of London, geographical territory was largely meaningless. Where threats of violence and intimidation did occur, Pearson and Hobbs found that it involved serious and high level players who were anxious about market territory. That is, those sellers who were attempting to sell their product at a lower price, or were attempting to gain access to importers at a higher level, thereby attempting to progress above other sellers. Where violence or intimidation occurred at the importation level of the drug market, kidnapping and hostage taking was evident. Such behaviour was found to occur, at times, on an international level. For example, one supplier may kidnap a family member of another supplier who resides in Columbia until money has been repaid etc. Other types of kidnapping and hostage taking reported by Pearson and Hobbs involved taking the drug dealer themselves and requiring family to pay the debt or taking expensive commodities owned by the dealer in debt until the debt is repaid, or kidnapping with the intent to extort money from rival drug dealing organisations. However, not all violence reported by Pearson and Hobbs had an instrumental purpose. The authors found that in some cases, kidnapping and torture had occurred with the primary purpose of reinforcing the reputation of a certain drug dealing organisation; a finding that is similar to that of Johnson et al (1990) and later, Reuter (2009) with respect to international drug importation.

*Systemic violence and the open drug market-* Open drug markets have long been associated with the most pervasive systemic violence. As described above, the structure of an open drug market is such that the seller engages in a transaction with an unknown buyer, in a space that may be visible or unsecure. Such a transaction is therefore assumed to offer little by way of consumer or seller protection, with drug sales thought to occur in an environment of suspicion, and where violence is the only means of conflict resolution. Early empirical research support for the high level of violence within open drug markets has again come from the cocaine market in New York City during the 1980's. In a more recent Australian study, Coomber and Maher (2006) sought to study the notorious and well-established open heroin drug markets of two Sydney locations; Cabramatta and Kings Cross. Both markets studied varied in their cultural makeup, with Cabramatta being predominantly of Asian descent and Kings Cross predominantly Anglo Saxon. Coomber and Maher interviewed 32 drug dealers (16 from each area; 4 women, 28 men, mean age 26 in Cabramatta and 32 in Kings Cross) over a three month period about their experiences of selling drugs, the organisation of the drug market, their experiences of drug related violence, assessment of drug quality and adulteration practices. In both areas, the stereotype of large underground organisations that control the importation, sale and distribution of heroin and cocaine was largely unsubstantiated (Coomber & Maher, 2006). Instead, the authors found that the sale of heroin across both locations was predominantly done by small freelance dealers and small level units run by entrepreneurs who were predominantly user-dealers.

The level of violence was reported to be low by these street-level drug dealers. The participants expressed a sense of being protected from any violence that may have been associated with the areas in which they deal, stating that they maintain a good relationship with other dealers and with their clientele that is free from violence (Coomber & Maher, 2006). The drug dealers interviewed reported little to no exposure to violence in their everyday activities or as a result of their participation in the drug market (Coomber & Maher, 2006). Coomber and Maher concluded that the drug market within

any one location is highly fluid and despite the vast differences in the ethnic makeup of Cabramatta and King Cross, the heroin market across both locations demonstrated more similarities than differences. However there are more than one drug market within each of these locations and the dynamics of these markets change from location to location and from time to time with changes to the level and type of organisation, the players in the markets, the goods to sell and the wider social environment (Coomber & Maher, 2006).

Violence within the open drug market is assumed to occur on a number of levels. Beyond territorial disputes between groups of sellers, individual level violence within the sale and distribution of drugs can occur between any number of participants; between dealer and user; between users; within distribution networks; between members of the public and dealers etc. The inherent assumption of violence evident at the individual dealer- buyer level is the economic and personal value of the drug as a commodity and the assumption that the sale of drugs is one of the most economically lucrative crimes (Johnson, Kaplan & Schmeidler, 1990). If it is to be assumed that the drug sale is akin to a business transaction, then it is could also be assumed that the dealer attempts to sell the poorest quality drug at the highest possible price, while the buyer attempts to obtain the highest quality drug for the lowest possible price (McBride & Swartz, 1990). The transaction therefore is thought to occur in a context of suspicion and the potential for a violent reaction (Agar, 1973; Johnson, Williams, Dei & Sanabria, 1990) as the buyer fears getting poor quality drugs, and the seller fears getting his drugs stolen by the user (McBride & Swartz, 1990). From this perspective, it is assumed that as both parties are engaging in an illegal activity, each party is a threat to the other (Hunt, 1990; Johnson et al., 1990). Without the normal routes of formal social control (i.e. legal avenues of dispute resolution), informal measures of control become more attractive. The use of aggression and violence is thought to provide a sense of justice and has the potential to protect the dealer or seller against further affronts by incapacitating the other party and perhaps providing the opportunity for financial compensation through the re-acquisition

of the drugs or other property (Jacques et al., 2016; Jacques, Wright & Allen, 2014; Johnson et al., 1990; Pearson & Hobbs, 2001).

Aside from an actual physical assault, intimidation and the threats of violence can be used on an individual level through less direct means, such as the purchasing of weapons and the employment of those with a known record of past violent behaviour (Johnson et al., 1990; Pearson & Hobbs, 2001; 2003). Threats and actual use of violence between the individual dealer and buyer may be an implicit assumption, however the actual level of violence used within individual freelance seller and buyer transactions has been reported to be lower than commonly portrayed in the media (Pearson & Hobbs, 2001; 2003; Reuter, 2009). Indeed, recent research suggests that the vast majority of drug deals do not routinely entail a threat of violence; rather, it is more common for dealers to be small time purveyors who attempt to sell to friends, family and acquaintances only, thereby approximating a more closed market structure and a decline in open markets (Seffrin & Domahidi, 2014). In a market where there are plenty of drugs to be sold and buyers to purchase those drugs, violence is unnecessary. Violence within the drug market attracts police attention, leaves traces back to the aggressor and opens the door for retaliation, as such; violence is strictly bad for business, especially when the drug seller is part of a larger gang or drug distribution network where police attention could jeopardize profits (Pearson & Hobbs, 2001; Thompson & Uggen, 2012). Rather than violence being common place between buyer and seller, it may be that inter-addict violence could be considered a by-product of market dysfunction, instability or an indication that law enforcement has disrupted the drug network or organisation (Block, 1983; Pearson & Hobbs, 2001).

As within all drug market structures and operations, context matters. It is largely undisputed within the research literature that open-air or street corner drug dealing markets, tend to take hold in communities that are least able to keep them out; communities where there is a high rate of poverty, a low aggregate socio-economic status, violence and high residential instability (Dunlap & Townes, 2016; Ford &

Beveridge, 2004; Goldstein, 1985; Martinez, Rosenfeld & Mares, 2008; McBride & McCoy, 1981; McBride & Swartz, 1990). In the United States, these neighbourhoods are typically poor inner city suburbs where young people are provided with limited economic opportunities and poor skills training (McBride & Swartz, 1990). The lack of social infrastructure and legitimate employment opportunities within poorer communities in the United States has been associated with entry into drug selling and distribution (Ford & Beveridge, 2004). In such neighbourhoods, where people are socially and economically oppressed, an underground economy is often developed whereby young people's status and position in society may be determined by their ability and willingness to use violence to control and get what they want from others (Dunlap & Townes, 2016; McBride & Swartz, 1990; Wolfgang, 1967). As such, when inter-addict violence occurs within this context, it is not unique to drug users, but rather is systematically a part of a broader context of violence (McBride & Swartz, 1990).

At the macro level, the systemic model proposes that illegal drug markets create community disorganisation; however the reverse could also be true. Community disorganisation impacts on the norms and behaviours of community members, and is associated with an increase in crimes that may not be directly related to the selling or distribution of drugs (White & Gorman, 2000). Other factors are also likely to be relevant with respect to the relationship between community disorganisation, illicit drug markets and violence, including community disruption from natural disasters. Dunlap and Townes (2016) reported on the disruption to the drug markets of New Orleans, Houston and Galverston, from hurricanes Gustav and Ike in September 2008. All three cities were identified as having a large open air street-based drug market that occurred within the context of a large portion of socially and economically disadvantaged communities where violence and homicide rates were amongst the highest in the United States. While participants from all three cities reported high levels of community violence and systemic violence in particular prior to the Hurricanes, there was an escalation in violent interactions between drug distributors and users that corresponded with the sense of

urgency to leave the city or purchase enough illicit substance to last the duration of the hurricane. Once the hurricanes had passed, the supply routes for some substances were impacted, infrastructure was depleted and policing activity was increased to curb acquisitive crime and violence. Despite these factors, the illicit drug markets were found to diversify and adapt, to draw upon previously established patterns of behaviour and conduct norms, namely to re-establish open air markets in new locations and draw upon the use of violence to establish a reputation and secure territory (Dunlap & Townes, 2016).

Therefore, while social instability, socio-economic disadvantage and political upheaval can contribute to the development of street drug markets (Johnson, Goulb & Dunlap, 2000), and as Reuter (2009) outlines, high rates of violence within higher level drug distribution, so to can a myriad of other external factors, such as natural disasters. What become evident are the adaptability and dynamic nature of drug markets and the culturally based behavioural norms that are drawn upon to acclimatize and overcome obstacles of operation. It is possible that while systemic violence is not a universal experience of open drug markets across time and space, that once it does become a prominent feature of any drug market, in that violence becomes a behavioural norm, it may be very difficult to curd or stop (Reuter, 2009).

*Differential markets and systemic violence-* Beyond classification of whether the drug market examined is structured, unstructured, open, closed or some other hybrid version are characteristics related to the location and who sells the drugs. Reuter (2009) stated that markets can be characterised as local markets if resident buyers purchase from resident sellers. Export markets can be considered those in which resident seller distribute drugs to non-residents; while an import market is one where non-residents sell drugs to resident of the community. Each type of market is assumed to have a different potential for violence (Reuter, 2009). Local markets are thought to discourage violence on both an interpersonal and territorial level due to the small and personal nature of the market where product and buyer reputation is important (Reuter, 2009). On the other



hand, larger scale export and import market may create the environment for territorial disputes over market share. Overwhelmingly however, there are more factors at play that contribute to violence within any given drug market and these relate to the product sold, the culture and socio-political climate within which the drug market/s operate. Research has therefore turned towards more in depth analysis of specific geographical locations and the factors that shape local drug markets.

In a qualitative study Small *et al.* (2013) sought to explore how injecting drug user's involvement in the Vancouver's Downtown Eastside (DTES) drug market shapes their experience of systemic violence. Small *et al.* completed semi structured interviews with 10 (4 females and 6 males; age range 28 – 66) participants who were deemed to have had extensive involvement in the DTES drug market. These participants were recruited from the larger Vancouver Injection Drug User Study and were interviewed about their experiences dealing drugs, their perception of the benefits and hazards associated with the drug distribution and their own understanding and experience of systemic violence. Small *et al.* described the drug market of DTES as comprised of a high level of street based drug sales, some of which included the sale of heroin, crystal methyl amphetamine, cocaine powder, crack or rock and a range of prescription medication (e.g. benzodiazepine, opioids, including morphine). From the interviews completed, the participants described the DTES drug market as comprised of both an open market (e.g. drug sales occurred in public spaces between individuals who are unknown to each other), and a closed segment, where sales are completed inside designated rooms or where a small number of shops operate as a front for drug sales (Small *et al.*, 2013). The participants described their role in selling drugs through the drug market as variable, from occupying all roles within a corporate style sales structure, to freelance and opportunistic sales. Those participants involved in corporate sales, described working for a "boss" as a worker within a team who sold drugs under supervision. Many of the participants described being involved in both freelance and opportunistic drug sales. Freelance sales referred to the independent acquisition and

sale of drugs, while opportunistic sales referred to the participants acting as an agent for other users, whereby they would purchase drugs on other users behalf and make a small profit. Small *et al* reported that all of the participants interviewed were motivated to engage in drug sales to support their own drug dependency.

When describing their perception of the hazards associated with their involvement in the drug market, the participants described the primary hazards as being interactions with the police (Small et al., 2013). Interestingly, Small et al reported that the participants perceived their encounters with the police as the key source of drug market violence, in that some described being kicked, punched and beaten during dealing-related police encounters. Following hazards associated with police encounters and apprehension, the participants described being the victim of acquisitive crime (i.e. robbery, burglary) and retaliatory violence that stemmed from such acquisitive crimes as the most common form of systemic violence. Other potential dangers associated with drug sales were identified as being related to the participants struggle to restrict and manage their own drug use. Being the victim of systemic violence was reportedly common when the participant consumed the drugs meant for sale under a corporate structure drug market sale or when on-selling drugs on consignment. Under both circumstances, the participants described the violence that is likely to ensue when they were not able to provide the “boss” with the expected financial reward.

For some of the participants in Small *et al*'s study, drug market violence was perceived to be an omnipresent threat and daily reality of their interactions within the drug market. However, other participants described systemic violence as rare, and reported that violence was avoided so as to reduce the likelihood of detection from police (Small et al., 2013). Taken as a whole, Small et al concluded that injecting drug users participation in the drug market evolved over time, but remained a primary means through which they were able to access drugs for personal consumption. Consistent with the views of May and Hough (2004), Small *et al* emphasized a risk environment perspective of systemic violence. This perspective emphasises that drug market

violence can be understood by a combination of the unregulated nature of the drug market and the lack of legitimate dispute resolution mechanisms that stem from political, legal and economic forces perpetuate systemic violence within the drug market and injecting drug users involvement in the sale and supply of drugs.

The systemic model of drug use and crime participation predicts that changes to the drug market, such as drug availability, price, substance purity and popularity, will directly impact on drug user's involvement in crime and their consumption of illicit substances. Researchers' from Australia explored these types of changes as they transpired in the illegal heroin market in Sydney in 2001. At this time, Degenhardt, Conry, Gillmor and Collins (2005) reported that a shortage of heroin resulted in dramatic changes in the drug market. This shortage reportedly followed a number of years of readily accessible high grade heroin. Degenhardt et al. studied the effects of the heroin shortage on the patterns of drug distribution, consumption, and changes in acquisitive crime or otherwise.

The authors drew upon Police data in New South Wales (NSW) to complete a time –series analysis, in addition to interviews from 71 informants from the NSW law enforcement and health agencies, and 53 heroin users to explore the changes to the drug markets following the reduction of heroin. Degenhardt et al found that where high level distribution of certain classes of drugs (e.g. heroin, methyl-amphetamine, and cocaine) were managed separately by various gangs or organised crime groups, the heroin shortage appeared to result in more collaboration between the distribution groups. Whereas, for those groups that engaged in mid-level distribution, the heroin shortage resulted in a diversification away from heroin into other classes of drugs. Those considered to be low-level distributors of illicit drugs were found to engage in more mobile and covert means of drug dealing. Overall therefore, Degenhardt et al. found that the quantity and visibility of the street-level drug dealer decreased; a trend that continued over time in the overall visibility of drug dealing within NSW. Coinciding with a reduction in the number of drug users being apprehended and charged with heroin possession

was an increase in those arrested for the possession and use of cocaine. This trend suggested that in the absence of heroin, those who used drugs may not have desisted from use, but diversified from heroin use to that of cocaine.

In relation to criminal activity, Degenhardt et al found an overall reduction in the quantity of theft charges during the peak of the heroin shortage; however this was accompanied by transient increase in robbery offences. The authors hypothesised that the shift in criminal activity co-occurred with a change in illicit drug consumption, such that the motivation for involvement in criminal behaviour remained consistent, however the increased use of cocaine was found to be associated with an increase in violent crime. This finding could be accounted for by a number of factors; first, that the psychopharmacological influence of cocaine on the individual user is such that violence is the by-product of cocaine intoxication; second, as suggested by Johnson et al (2000) in their research undertaken in New York City, that cocaine is associated with high intensity, high frequency use, which in turn contributed to the drug distribution network that is highly competitive and characterised by violence; third, in accordance with McElrath et al's (1997) routine activity theory of crime, that the reduced visibility of the drug trade described by Degenhardt et al combined with associated changes in the aforementioned drug use patterns, the frequency with which cocaine is sought and associated market changes may have resulted in more motivated offenders and attractive targets for the use of violence or fourth; consistent with view of Block (1983) that the increase in the use of violence in Sydney at that time simply reflected the disruption to the illicit drug market, thereby increasing the vulnerability of those operating in this market. Therefore, while Degenhardt et al.'s correlation between changes to the availability of one drug (in this case heroin) to an increase in use of another (i.e. cocaine) and a subsequent increase of violence, on the surface appears to be direct correlation, upon further exploration this finding is far more intricate and can be explained from a number of different perspectives.

Drug markets are highly variable, context specific and characterised best by diversity rather than homogeneity. So to the level of systemic violence evident within drug markets across the world is context specific and dependent upon a range of factors related to the socio-political climate, culture, drug being supplied, participants operating within the drug market/s, time, geography, method of distribution, level of involvement with organised crime, and style of transaction (Coomber & Turnbull, 2007; Hough & Natarajan, 2000; Moyle & Coomber, 2015; Moyle & Coomber, 2016; Potter, 2009, Taylor & Potter, 2013). There is little empirical evidence to support the pervasive or inevitably violent nature of drug transactions and distribution across all drug markets and all patterns of use.

Where community level systemic violence is evident, it is argued that such violence may be the rest of more wide ranging social disadvantage and oppression rather than directly attributable to drug transactions or the drug market more generally. Indeed there is an abundance of research that has documented the absence of violence within numerous drug markets, such as the social supply drug market, especially where the drugs distributed are considered “soft” and the use normalised within a specific cultural and social group (Moyle & Coomber, 2015). Further, within the user-dealer literature, there is a paucity of evidence for reliance on violence during drug transactions; indeed, there is some evidence to suggest that drug distribution protects against the use of violence as an alternative means to generate an income for personal drug use that may otherwise have been gained from engagement in acquisitive crime, including robberies. However it is clear that violence can and does occur within certain drug markets at certain times. Reuter (2009) poignantly describes the pervasive use of violence within the high level drug distribution networks of Mexico during 2007-2008 and the cocaine markets of New York during the 1980's. As Friman (2009) suggests however, violence at this level distribution and between organised crime syndicates, can be considered a selective tool to secure market regulation and supply routes that is time limited and functional. Overall then, as Pearson and Hobbs (2001) have observed,

violence within any given drug market may be a sign of market dysfunction, rather than normal market function.

The theoretical models that have been the focus of this chapter are those that were initially derived from early research that sought to explain the drugs-crime relationship as a somewhat simplistic causal relationship. Over time, with greater research interest and sophistication in research methodology came an increased understanding of the nuances and influences that affect the nature of the drug-crime relationship. As has been evident within the literature reviewed for each of the theoretical models including the drug use causes crime, crime causes drug use, economic motivation, psychopharmacological model and systemic model a direct causal relationship is difficult to reliably establish. Instead, individual variations in criminal behaviour and drug use across cultures, geography, time, gender, age and numerous other variables, have led to the development of more nuanced and complex theoretical models. These more contemporary models will be outlined in chapter 4.

## Chapter 4

### Multi-faceted models of the drugs-crime relationship

The emergence of more sophisticated models and theories to account for the drugs-crime relationship has been a product of the researchers' acknowledgement of the complexity of the drugs-crime relationship. The theories and models reviewed in chapter 3 have been criticised for being largely "pharmacologically deterministic" (Moyle & Coomber, 2016; p 3.) and reducing the complex drugs-crime association into a simplistic cause and effect relationship. Over time other facets of how the relationship develops, under what conditions it is maintained and by who have emerged. While some researchers' have drawn together facets of the established theoretical models, others have attempted to explore the drugs-crime relationship from a different perspective and therefore offer an alternative explanation. While it is acknowledged that a large range of theories and models have been proposed over time, this chapter will focus on 3 models; 1) Goldstein's tripartite model; 2) the deviant careers or trajectories model; 3) the relationship between drugs and crime specialisation

#### 4.1 Tripartite Framework

One of the earliest and arguably, one of the most influential models that attempted to use an analytic framework to better understand the direct and circuitous relationship between drugs and violence was Goldstein's (1985) tripartite conceptual framework (Curtis & Wendel, 2007; Dickinson, 2015). Goldstein based the tripartite framework upon three separate empirical investigations that drew upon samples from a wide range of populations between 1976 and 1984 (Goldstein, 1979; Goldstein, 1985). The tripartite framework proposed that drugs and violence are related in three possible ways; the psychopharmacological, the economically compulsive and the systemic (Goldstein, 1985). In this way, Goldstein's model effectively drew together three of the existing theoretical explanations described in Chapter 3 (i.e. psychopharmacological model, the economic motivation model and the systemic model), to offer a more nuanced view of the drugs-crime relationship that paid attention to the influence of context rather

than pharmacology. Each of the three models that comprise the tripartite framework are conceptualised as ideal types that are thought to overlap at times, while still maintaining the heuristic integrity of the model (Goldstein, 1985). For example, if an individual commits an acquisitive crime to purchase drugs, then the act can be classified as economic compulsive; if however, in preparation for committing the act, the individual ingests alcohol to give them courage, then psychopharmacological violence can also form part of the act. Therefore, according to Goldstein, the benefit of a conceptual framework where the constituent parts overlap is that the framework allows for event/s to be broken down. In this way Goldstein argued that different forms of drug related violence can be related to different types of substances, different motivations of the perpetrators, different types of victims and the differential influence of social context. The emphasis that Goldstein placed on social context within which drug use and distribution takes place is evident in his conclusion that “*systemic violence is normatively embedded in the social and economic networks of drug users and sellers. Drug use, the drug business, and the violence connected to both of these phenomena are all aspects of the same general life style*” (p. 170).

#### **4.2 Research using the tripartite framework.**

Goldstein’s tripartite framework has been credited with inspiring a “*generation of scholarly work exploring drugs-related violence*” (Dickinson, 2016; p. 67); however as would be expected, the early work of validating and applying the tripartite framework being completed by Goldstein and his colleagues. In his initial paper outlining the tripartite framework, Goldstein identified deficits within the national data collection methods in being able to identify the etiological role that drug use and trafficking may play in violent crime statistics. From this basis, Goldstein and others (e.g. Gropper, 1985; Graham, 1987) commenced research into how drug use and trafficking influenced homicide rates across America. In a series of early validation studies (see Goldstein 1986; Goldstein, Bellucci, Spunt & Miller, 1991; Goldstein, Brownstein, Ryan, & Bellucci, 1989; Spunt, Goldstein, Bellucci & Miller, 1990a, 1990b), Goldstein stated that the



tripartite framework held promise in being able to achieve a uniform understanding of drug related violence generally, and drug related homicide in particular (Goldstein, Brownstein & Ryan, 1992). As an example of the proposed explanatory power of the tripartite framework Brownstein and Goldstein (1990) used the framework to develop 10 typologies of drug related homicides. The authors drew upon data from existing police records for all drug-related criminal homicides (defined as murder and non-negligent manslaughter,  $n = 129$ ) that occurred within New York State, but outside New York City in 1984. The results from this analysis led to the classification of 91 (70.5%) of the 129 drug related homicide cases as primary (i.e. the intention of the act was to kill the victim) and 38 (29.5%) being classified as secondary homicides (the victims death was a by-product of the offenders behaviour; Brownstein & Goldstein, 1990). In accordance with the tripartite framework (Goldstein, 1985), 76 (58.9%) of drug related homicides were classified as psychopharmacological, 27 cases (20.9%) were classified as systemic, 4 cases (3.1%) were classified as economic compulsive and 18 cases (14%) were classified as multidimensional (Brownstein & Goldstein, 1990).

When analysing the two classification models together, the authors found that primary homicides predominated among the psychopharmacological (85.5%) and multidimensional (77.8%) cases, while secondary homicides were most common among the systemic (57.3%), economic compulsive (100%) and other drug-related cases (75%; Brownstein & Goldstein, 1990). Correspondingly, psychopharmacological cases dominated among the primary homicides (71.4%) and systemic cases were the most frequent among the secondary homicides (42.1%). Of the 10 typologies described by Brownstein and Goldstein (1990), the primary/ psychopharmacological was the most common in the 129 cases studied, with 50% of cases classified under this typology. The next most frequent classification was the secondary/ systemic type, with 12% falling under this classification, and the third most common category was the primary/ multidimensional, with 10% of drug related homicides classified under this typology (Brownstein & Goldstein, 1990). Brownstein and Goldstein stated that the complex

nature of homicides is reflected in the complex and multifaceted nature of their proposed typologies.

The findings of Brownstein and Goldstein (1990) were replicated to some extent, by Goldstein, Brownstein and Ryan (1992) who analysed data collected by police on homicides within New York City in 1984 and eight months of 1988. Overall, Goldstein et al concluded that the data collected by police was insufficient to allow for categorisation of homicide according to the tripartite framework. However, of the data that could be classified, Goldstein et al found that the two most common types of drug-related homicides were psychopharmacological and systemic, with very few homicides classified as economic-compulsive. Goldstein et al's analyses of these data sets challenged some of the common stereotypes associated with drug use and violence. For example, the authors found, first, that psychopharmacological homicides were most commonly related to the use of alcohol and not illicit drugs. Second, that there was little evidence to suggest that drug users were engaging in predatory violence to gain access to money to purchase drugs (economic-compulsive). And third, that heroin was not significantly related to homicides in New York City, but rather the use of cocaine and alcohol. Further, where cocaine was identified as being related to the homicide, it was most commonly associated with systemic violence through the trafficking of cocaine.

More recent research conducted by Varano, McCluskey, Patchin and Bynum (2004) sought to test the tripartite framework on a sample of 175 homicide cases that occurred in the city of Detroit between December 1999 and December 2002. Varano et al coded these cases based upon 3 categories; no relationship to drugs (50%); cases where evidence of drug use, sales or purchase was found (31%) and those cases where drug provided a direct motivation for the homicide (19%). The authors noted that their classification of the homicides was missing the psychopharmacological aspect of the tripartite framework, due to the difficulty experienced in trying to directly attribute the psychopharmacological effects of the substance to the homicide retrospectively from file data. As Varano et al., noted, "It's impossible to determine if the violence was a cause of

the drug use or incidental to its use” (p. 377); a common criticism of the retrospective research undertaken in classifying homicides based upon the tripartite framework. Analysis of the situational and contextual features of the homicides under investigation found that drug markets were not significantly related to drug homicides. Other peripheral and contextual factors found to be relevant were the age of the victim, the victim’s own involvement in the use of drugs and drug market, in addition to the availability of guns. Indeed, Varano et al. concluded that the most notable finding of their research was the variability of factors that contribute to both drug and non-drug related homicides, in addition to the significant role that firearms play in the homicides studied, thereby stating that it was the drugs/guns nexus that should be focus for policy makers.

Beyond research attempting to classify and explain the drugs-homicide nexus through the application of the tripartite framework, other researchers’ have applied the framework to young offenders (Brunelle, Brochu & Cousineau, 2000), incarcerated offenders’ (Pernanen, Cou, Cousineau, Brochu & Fu Sun, 2002), general population surveys (Menard & Michalic, 2001) and more recently drug treatment samples (Erickson, MacDonald & Hathaway, 2009). The mode and method of applying the framework has varied, with some modifications of the original framework made by researchers’ to suit the population studied. For example, drawing upon qualitative survey questionnaire data from 571 participants of a voluntary drug treatment group in Ontario, Erickson et al (2009) asked participants to describe their experience with violence over the last year. This resulted in 269 self-reported incidents of violence that were coded in accordance with the tripartite model. The authors found that poly-substance use was the norm amongst the sample, and 80% described the psychopharmacological link between drug use on their mood and behaviour as most strongly related to the violent incident described. Systemic factors were reported in 12% of cases, while economic motivation was only reported in 8% of violent incidents. In classifying economic motivational factors as contributing to violence, the authors vastly extended what is classified as economically motivated, such that “any description of violence erupting around scarcity

of alcohol and drugs among intimates". This definition therefore included verbal arguments over running out of drugs, money for drugs and not sharing drugs equally amongst those known partner/ friends and relatives. Such as broad description diluted the original intent of the economic motivation model as described by Goldstein (1985) of drug related violence, which according to Erickson et al, is appropriate for the sample population who were described as "well off (financially) and motivated to attend drug treatment" (p. 752). Taken as a whole, Erickson et al concluded that the tripartite model had applicability in being able to understand the experience of violence by participants engaged in drug treatment, who were not ordinarily involved within the criminal justice system.

In a narrative application of the tripartite framework, Copes, Hochstetler & Sandberg (2015) interviewed 30 prisoners' detained in Louisiana about the decision-making strategies used during their offences of stealing cars with force. The authors found that the interview data obtained supported the tripartite framework, in that the participants narratives provided evidence for all three relationships. The emergent themes from the narrative analysis were *it wasn't the real me; expected violence in drug areas and addicts are deserving victims* corresponded to the psychopharmacological, economic compulsive and systemic violence conceptualisations of the relationship between the participants drug use and involvement in violent car theft. While the participants narratives supported the tripartite framework, the authors found that the participants conceptualisations of the drugs-violence connection demonstrated acculturated ways of describing the psychopharmacological effects of drugs and subcultural understandings of the drug world and those within it (Copes, Hohstetler & Sandberg, 2015).

Criticisms of the Goldstein's tripartite framework have been varied. Stevens (2011) asserted that the very framework itself was not validated or empirically tested. In providing his view of the contribution of the tripartite framework to the mutually reinforcing relationship between drug policy and the drugs cause crime stereotype,

Stevens criticised the early validation studies of the tripartite framework, such as Goldstein et al (1989) for a lack of empirical testing of the framework itself. He opined that Goldstein and colleagues commenced their research on the basis that the framework was “assumed to be valid” and proceeded to categorised homicide crimes to fit the framework. In Stevens’ opinion, Goldstein and colleagues demonstrated a high degree of circularity in their reasoning, whereby some homicides offense were misclassified or forced into the tripartite framework when this may not have been a logical or natural fit (Stevens, 2011). Further, Stevens criticised these early studies for failing to take into account contextual factors associated with New York City at the time of the study; namely that there was a high level of crack cocaine use and high rates of violence, conditions which have not been replicated since. Curtis and Wendel (2007) have also criticised the results obtained by Goldstein and colleagues, highlighting the conflicting results that Goldstein obtained with respect to the relative percentage of each type of violence under the tripartite framework. Indeed Curtis and Wendel opine that despite the tripartite framework being touted as perceptive and pioneering, more than 20 years later, few researchers’ have sought to improve or critically examine Goldstein’s original model.

Putting to one side criticisms about the development and validation of the framework itself, some researchers’ have praised the tripartite framework for stepping away from a deterministic bio-pharmacological understanding of the drugs-violence relationships to take into account contextual factors. For example Coomber (2015) acknowledged the advancements that Goldstein’s later work (Goldstein, 1997) had done in providing a more complex understanding of the contexts in which systemic drug related violence occurred, even if the tripartite framework was based upon the unique combination of factors particular to New York City during the 1980s and 1990s which may not be generalizable to other contexts. Further, Coomber (2015) highlighted the dimensional understanding of economically compulsive violence relationship under the tripartite framework. Coomber highlighted that Goldstein’s framework acknowledged the

variability and dimensional understanding of the drugs-violence relationship, such that Goldstein recognized that only *some (and not all)* dependent drug users may commit violent crimes for the purpose of gaining access to economic resources for additional drugs. However other researchers' disagree. Curtis and Wendel (2007) maintained that the implication from Goldstein's early research was that it was the drug itself, rather than the social context or the nature of the relationship between the victim and perpetrator that contributed to at least the systemic violence component of the tripartite framework.

The tripartite framework's focus on context and the outcomes of the drugs-violence relationship may have come at the expense of gaining an understanding the individual drug users experience and the idiosyncratic intrinsic factors that may either contribute to involvement in or desistance from drug use and violent behaviour (Copes, Hochstetler & Sandberg, 2015). The tripartite framework fails to take into account pre-drug use violence histories (Coomber, 2015), and while it may be useful to characterise discrete criminal offences with respect to the motivations that may have contributed to that offence, the mechanisms, decision and experiences that link that particular individual to the violent behaviour remains unknown (Copes, Hochstetler & Sandberg, 2015). Therefore the focus on the events or outcomes of the drugs-violence relationship provides a static look at the criminal behaviour, offering little by way of explanation of the evolutionary nature of deviant behaviour over time (Brunelle, Brochu & Cousineau, 2000). It is therefore unknown, whether the tripartite framework is equally applicable over time, across drugs and various types of criminal behaviour.

Goldstein's tripartite framework was one of the first attempts to provide a more complex and nuanced understanding of the drug-violence relationship by combining three of the already established theories (i.e economic motivation model, systemic model and psychopharmacological model) that have attempted to explain the drugs-violence connection. Goldstein's framework has been praised for acknowledging the context in which the drugs-violence connection occurs and the dimensional nature of the relationship and that at times, reasons for involvement in drug use and violence can

overlap amongst the three models. Criticisms of the tripartite framework point out that the framework places too much weight on the outcomes of drugs-violence relationships at a discrete period of time, at the expense of an understanding of the unique idiosyncratic factors that contribute to initiation into, maintenance and desistance from involvement in the drugs-violence or drugs-crime relationship. Further, critics maintained that the tripartite continued to rely too heavily on a pharmacologically deterministic understanding of the drugs-violence relationships.

### 4.3 Criminal Careers Framework

The conceptualisation of criminal behaviour as a “career” was initiated in 1986 with the publication of the National Academy of Science report *Criminal Careers and Career Criminals* (Blumstein et al., 1986). Understanding involvement in criminal behaviour over time as a “career” provided a theory free, conceptual framework to guide empirical inquiry to focus on an individual’s sequence of offences and fluctuations in involvement in crime over time (Gottfredson & Hirschi, 2016; Sullivan & Piquero, 2016). The careers paradigm made the call for researchers’ to draw upon the use of longitudinal research methodology to define the characteristics of the offences committed by an individual (Gottfredson & Hirschi, 2016). A criminal career therefore, refers to “the longitudinal sequence of offences committed by an offender who has a detectable rate of offending over some period” (Blumstein, Cohen & Farrington, 1988; p. 2). This means that the study of a criminal career involves discussion of the *onset* of the criminal career, the *participation* rate, the *frequency* of crime, *escalation*, *desistence* or end of the career and *persistence* of a career that endures over time (Blumstein, et al, 1988; Chaiken & Chaiken, 1990; DeLisi & Piquero, 2011). The use of the term “career” in this context refers to the individual’s involvement in crime over a certain period, and not necessarily that the criminal behaviour becomes a source of income (Blumstein et al, 1988).

Derived from the criminal careers paradigm is the concept of the career criminal. This term is used to describe an individual who participates in a high rate of serious offending over an extended period of time (Blumstein, Cohen & Farrington, 1988). The

main area of enquiry for those deemed to be career criminals are the patterns and sequences of offences overtime to allow for enquiry into the parameters of the criminal career (Gottfredson & Hirschi, 2016). Therefore emanating from the careers paradigm was an increased interest in the importance of age of onset in involvement in criminal behaviour (Moffitt, 1993) and desistance (e.g. Giordano, Cernkocih and Rudolph, 2002; Laub & Sampson, 2003), both factors considered important in variable ways for policy development and crime prevention (Gottfredson & Hirschi, 2016). Research into the careers paradigm has acknowledged the variability in the length of the criminal career, with most described as truncated and intermittent (Piquero, 2004), and fewer found to be life-long (DeLisi & Piquero, 2011). The type and parameters of a criminal career are known to be inextricably linked to contextual factors, life circumstances and biosocial development across the lifespan (DeLisi & Piquero, 2011), including substance use. Indeed, the pattern of an individual's use of drugs over time has also been conceptualised as a drug use career (Roussell & Omori, 2016). While some authors synonymising drug use with deviancy and dysfunction, (e.g. Hser et al., 2007), others have argued that a drug use career can be generalised to describe the pattern of drug use over time for people as they age, mature, adapt and change (Roussell & Omori, 2016). Where the use of drugs is identified as an influential factor that shapes the course and trajectory of an individual's criminal careers, the careers paradigm has been used to explore the drugs-crime relationship.

The relationship between drug use and crime has been demonstrated to be chronic rather than acute, and is often conceptualised and forming part of a more general deviant lifestyle (Ball et al., 1983; Chaiken & Chaiken 1982; Hanlon et al., 1989; Sullivan & Hamilton, 2007). The empirical research literature has started to turn away from taxonomic classifications, in favour of a system that allows for the consideration of the relationship between crime and drug use longitudinally. The careers paradigm attempts to achieve this goal by examining the drugs-crime relationship over time against the backdrop of a chronic deviant lifestyle (Sullivan & Hamilton, 2007). Therefore, career



based explanations of the drugs-crime association attempts to explain vacillations in the use or abuse of substances and involvement in criminal behaviour. With its focus on onset, persistence escalation and desistance, consideration is given to the effects of periods of use and abstinence as they relate to the nexus between the individual, their drug use and social factors (Sullivan & Hamilton, 2007). The career perspective has allowed researchers' to measure and discuss aspects of crime and drug use that were previously not considered important. It is the ability to disaggregate elements of crime and drug use that has been appealing to researchers'. As Blumstein et al (1988) point out the atheoretical nature of the concept allows for the exploration of various casual explanations to be studied and developed at different points in the criminal and drug use career of the offender. For example, causal factors that may be influential in the individual's initiation into drug use may not be influential during a period of desistance from crime or drug use.

Chaiken and Chaiken (1990) outline the evolving discourse under the careers model with reference to the study of criminal careers. At one end of the spectrum, a criminal career could involve just one criminal act, while at the opposite end of the spectrum are "career criminals", that is, those who commit serious offences at high rates for an extended period of time (Blumstein, Cohen & Farrington, 1988). Within the research literature that attempts to explain continuity and persistence in offending behaviour, debate has surfaced regarding those theories that emphasise the heterogeneity of the population versus those theories that emphasise state dependence explanations (Brame et al., 2005; Nagin & Paternoster, 2000; Paternoster et al., 1997). Theories that focus on the heterogeneity of the population, explain continuity and persistence in offending behaviour as a static process, whereby continuity is attributed to an underlying propensity to engage in criminal behaviour that is evident early in life (Cernkovich & Giordano, 2001; Nagin & Paternoster, 2000; Paternoster et al., 1997; Rousell & Omori, 2016).

An example of a heterogeneity theory is Gottfredson and Hirschi's (1990) self-control theory, that argues that the propensity to engage in criminal behaviour, hypothesised as low self-control, is established early in life, is stable over time, varies in intensity across the population and operates across time so that with increasing age, the propensity towards involvement in crime decreases naturally (Livingston, Stewart, Allard & Ogilive, 2008). In contrast, state dependent theories view continuity in criminal behaviour as a dynamic process. Such theories view continuity in offending behaviour as occurring out of the contagion effect of previous criminal and non-criminal behaviour, which transform various life conditions and alter the probability of engaging in offending behaviour (Nagin & Paternoster, 2000). State dependent theories emphasise the variable nature of criminal behaviour and the cumulative effect that various factors have on the probability of engaging in offending behaviour at any one point in time (Livingston, Stewart, Allard & Ogilive, 2008; Nagin & Paternoster, 2000). An example of a state dependent theory is that of Thornberry's (2005) interactional theory. Thornberry postulated that involvement in criminal behaviour weakens the offender's attachment to pro-social individuals and organisations, which in turn leads to an increased likelihood of further involvement in offending behaviour (Livingston, Stewart, Allard & Ogilive, 2008; Thornberry, 2005).

From a different perspective, Laub and Sampson (2006) developed life-course perspective criminology that explored age-graded informal social control, such as pro-social attachment, influence both desistence and persistence in crime and drug use. The life-course perspective encompasses continuity and change in criminal involvement as a function of multiple factors across multiple pathways and within multiple contexts (Sampson & Laub, 2016). In particular Laub and Sampson (2006) explored factors such as such as age, maturity and "turning points", described as events within an individual's life that increases conformity to mainstream pro-social values and reduces transgressive behaviour, including drug use. Involvement in crime and drug use across the lifespan then would depend on choices of the individual, the accumulation of turning points (e.g.

marriage, employment) in conjunction with the social context in which the individual interacts and resides (Laub & Sampson, 2006). Therefore as a trajectory model, Laub and Sampson's model acknowledged that trajectories of use can be idiosyncratic, with periods of desistence from drug use and criminal behaviour defined to a large extent by life events such as marriage and long term employment.

These same areas of investigation are important in the study of drug use careers. This point is highlighted by Prichard and Payne (2005) in their study of juvenile offenders, whereby the authors pointed out that their sample considered the term "regular use" to indicate different frequency rates when applied to different types of drugs. For example, regular cannabis, amphetamine and inhalant use was reported by the youth to constitute repeated daily use, while regular alcohol use was reported to constitute drinking once to several times per week and regular ecstasy use amounted to monthly use (Prichard & Payne, 2005). Research has consistently found that substance use and initiation into harder drugs increases in the late teens and early twenties (Prichard & Payne, 2005). When investigating the onset of criminal offending, Prichard and Payne found in their sample of juvenile offenders that offending began within a critical two year period from the ages of 11 - 14 years. The mean age of onset for juvenile offenders who later went on to become regular offenders was found to be 11 years, with the onset of regular offending occurring 18 months after initiation into offending behaviour (Prichard & Payne, 2005). When investigating the types of crimes that the juveniles engaged in, Prichard and Payne found that stealing occurred first followed by vandalism, then burglary and assault. While these results provide a cross sectional snapshot of young offenders, it is not possible to ascertain which young people went on to persist with their drug use and offending behaviour across the life course.

Early research that did attempt to explore fluctuations in the involvement in crime and drug use over time was conducted by Stephens and Ellis (1975). Stephens and Ellis attempted to describe the drug use and crime trends in 4 cohorts of drug dependent males aged between 24- 25 years males (47% Black, 26% white and 27% Puerto-Rican)

who were criminally committed to the New York State Addiction Control Commission (NYSACC) between the months of March and April on four consecutive years, 1969 (n = 82), 1970 (n = 104), 1971 (n = 300) and 1972 (n = 103). The authors were interested in describing changes that occur in criminal activity across the addiction career and the temporal ordering of the drugs-crime relationship. In order to achieve this, the authors broke down the participants arrest records into the following categories; arrests for crimes against the person (robbery, rape, murder, assault), arrests for crimes against property (burglary, forgery, larceny etc.), arrests for drug offences (possession or sale of drugs, possession or sale of drug paraphernalia etc.) and arrests for other crimes (bribery, gambling, resisting arrest) to investigate changes in offending patterns over time.

In an analysis of arrest percentages for all participants, Stephens and Ellis found that over  $\frac{3}{4}$  of all arrests for each of the four cohorts were for drug and property offences, followed by offences against the person then other offences. While some fluctuations in the rate of arrests across the four cohorts over the 4 years were found, crimes against the person were the only offence for which the percentage of arrests increased across the four cohorts (Stephens & Ellis, 1975). This result was replicated when the data analysed drew upon those considered drug dependant, again a steady increase in the amount of drug addicts arrested for crimes against the person was found along with a steady decline in those arrests for drug offences. However, in this analysis a steady decline in the amount of drug addicts arrested for property crimes was found, while the other crime category remained steady (Stephens & Ellis, 1975). In order to clarify the nature of increase in crimes against the person, Stephens and Ellis conducted a secondary analysis on the types of charges that comprised the arrest in the category of crimes against the person. These analyses revealed that for 85% of arrests, charges were also laid for property offences. Therefore, Stephens and Ellis point out that the number of offences against the person without any other category of offence was small (approximately 10%).

Stephens and Ellis also sought to investigate if the criminal activity of their sample changed since the onset of their period of addiction. To achieve this goal, the authors coded the arrest history for the 217 males in the 1971 cohort across a five year period. Stephens and Ellis found that over the five year period that arrests for drug offences increased while arrests for property offences decreased. Drug and property crimes were found to be much more frequent than crimes against the person and other crimes, and while the numbers of arrests for each succeeding year increased, the increase in arrests were more pronounced for drug and property offences (Stephens & Ellis, 1975). Finally, Stephens and Ellis sought to investigate the temporal ordering of the drugs-crime relationship and found that as the length of drug abuse increased, the likelihood of being arrested prior to drug use decreased. Conversely, as the length of drug abuse decreased, the likelihood of arrest prior to drug use increased. When types of crimes were investigated, very little difference was found between participation in the other crime category before and after drug use. Drug related arrests increased after drug use and 1/5 of the sample were found to have committed a property offence prior to beginning to use drugs (Stephens & Ellis, 1975). The authors concluded that while a strong relationship existed between drug abuse and criminal arrests, in that once drug abuse began, the likelihood of arrest increased, Stephen and Ellis could not conclude that drug abuse caused criminal behaviour as 37% of their sample had been arrested prior to using drugs. Overall, Stephens and Ellis concluded that while those participants who were drug dependant were found to become progressively more criminal as their addiction career progresses, the types of crimes committed remains relatively constant. Further, any changes that occurred in the offence types were likely to be the result of changes to the street culture or drug market, rather than intrinsic to the individual themselves.

The early research of Stephens and Ellis (1971) attempted to provide a longitudinal perspective using a cross sectional methodology, relying on arrest trends. Like much of the research of this area investigating the drugs-crime connection, Stephen

and Ellis failed to provide definitions of their use of terms such as “drug abuse”, “drug addict”, “addiction career” and “narcotics”.

Some the of these criticisms were addressed in the research conducted by Hanlon, Norco, Kinlock and Duszynski (1990) who studied the drug use and criminal careers of 132 white (n=61), Hispanic (n=23), and black (n=48) men who had enrolled in methadone maintenance and detoxification programs in the Baltimore and New York areas between May and April in 1984. Hanlon et al defined a period of addiction as consisting of the use of opiates while residing within the community for at least four days per week for a period of at least one month. All participants completed structured interviews, during which they were questioned about their drug use and criminal activity beginning from their pre addiction period (defined as two years prior to their first period of addiction), through each period of addiction and non-addiction in chronological order (Hanlon et al., 1990). Hanlon et al therefore deemed the addiction career to extend from the time of each participant’s first period of addiction until the time that each participant entered the treatment program they were enrolled in at the time of the study. Criminal activity was measured from self-report data using the crime days per year at risk concept, whereby a crime day was defined as a 24 hour period in which an individual commits one or more crimes of a specific type (Hanlon et al., 1990).

Hanlon et al classified crime types into five categories including theft, violence, drug distribution, confidence games/ forgery and other crimes. For each participant Hanlon et al calculated the rate of commission of crimes in each category from the pre-addiction period through each successive addiction and non-addiction period. Each participant was asked to provide information about the amount of narcotic and non-narcotic drugs consumed during periods of pre-addiction, addiction and non-addiction. Narcotic drugs were defined to include heroin, methadone, morphine, liquid codeine, Dilaudid, Demerol, and Percodan. Non-narcotic drugs included amphetamines, cocaine, Valium, barbiturates, PCP, other hallucinogens, inhalants and Quaalude (Hanlon et al., 1990).

The data analysis revealed that use of some of the drugs described above was too infrequent to perform any meaningful analysis (Hanlon et al., 1990). Therefore the authors restricted their analysis to describing the rates of drug use for heroin, illicit methadone, cocaine, marijuana, and Valium. The authors found that on average the addiction career for this sample of men lasted 15 years, with the average length of the first period of addiction being a little less than two years (range= 1 month to 8 ½ years) and the last period of addiction was on average a little less than 2 years (range = 1 month – 7 years). During the addiction career the number of addiction periods, as defined by the study, ranged from 3 - 9 per participant with an average of 4 - 5 addiction periods and 3 non-addiction periods (Hanlon et al., 1990). When these data were analysed by race, the black sample of men were found to be significantly older when compared to the white and Hispanic sample, however there was no significant difference in the number or duration of addiction and non-addiction periods (Hanlon et al., 1990). The analysis of variance for criminal activity revealed that in the first three periods of addiction there was a significant reduction in the amount of crime days per year with each successive period of addiction for all measures except the con games/ forgery measure (Hanlon et al., 1990). There was little variation between racial groups in relation to criminal activity except a high prevalence of "other criminal activity" such as gambling and illegal operations in the black sample (Hanlon et al., 1990).

Hanlon et al explored the drug use patterns across the first three addiction periods, and found that the use of cocaine and illegal methadone showed a significant increase in use over the three addiction periods. However for the use of marijuana, the opposite was the case, a significant decrease in use was found over the first three addiction periods (Hanlon et al., 1990). In each of these cases, the greatest discrepancy in use was found between use in the first and third addiction period. Hanlon et al also found significant race by period interaction for cocaine. Here it was found that in the white sample, an increase in the use of cocaine was followed by a levelling off with subsequent addiction periods. In the Hispanic and black sample, cocaine use was found

to sharply increase in the third period of addiction. The difference between the races were found to involve the less exclusive use of heroin by the white sample that followed an increased use of marijuana across all three addiction periods, while in the Hispanic and black sample, the sharp rise in cocaine use was coincident with a decrease in the use of marijuana (Hanlon et al., 1990). This race by period interaction was no longer significant in the analysis between the first and last period of addiction.

The results of the analysis between the first and last period of addiction in relation to criminal activity revealed a significant reduction in the amount of criminal activity for all measures except con games/ forgery. These reductions were found to be as great as a 50% reduction in the amount of crime days per year for the last addiction period when compared to the first addiction period (Hanlon et al., 1990). The authors stated that for the 88 participants in their sample that conceded to having experienced more than three addiction periods in their addiction career, there was every indication that the reduction in criminal activity would continue to decline with each successive addiction periods. In the final analysis of variance for criminal activity and drug use across the three measured non addiction periods revealed a reduction in criminal activity across all non-addiction periods, although this reduction did not reach significance.

In discussing their findings, Hanlon et al point out that the decrease in criminal activity across successive periods of addiction was surprising, and was not accompanied by a corresponding significant decline in criminal activity during periods of non-addiction. Hanlon et al stated that the amount of criminal activity that their sample engaged in was inordinately high during their first period of addiction. The authors hypothesised that maturation could account for a drop in criminal activity across time, as could proficiency. In order to investigate their hypothesis, Hanlon et al assessed the average income produced from criminal activity from the first when compared with the last period of addiction. Hanlon et al found that the amount of income generated had decreased by approximately 60%. This meant that participants were not only participating in less criminal activity, but the criminal activity that they were engaged in was less profitable.



Another surprising finding was sharp decrease in criminal activity of the Hispanic sample during periods of non-addiction. Hanlon et al stated that the Hispanic sample was found to have a nine-fold increase in criminal activity when compared to their pre-addiction period. This increase was succeeded by a sharp decrease in criminal activity during the samples first period of non-addiction. By the third period of non-addiction, the Hispanic sample was found to be participating in no crime days involving theft, violence or con games/ forgery. Instead, their low level criminal behaviour constituted drug dealing and other criminal activity such as book keeping.

In discussing the results of the participants drug use over the addiction career, Hanlon et al highlighted the most significant trend over time was the increased use of illicit methadone, particularly in the white sample. Hanlon et al hypothesised that this increase in illicit methadone over both addiction and non-addiction periods could be attributed to an increase number of methadone treatment programs in operation since the 1960's. This has meant that a greater amount of methadone has become available to obtain both legally and illegally. Another striking trend was the increased use of cocaine over time for all three races across all periods of addiction and non-addiction. However, significantly greater increases were found among the black and Hispanic sample when compared with the white sample. Hanlon et al pointed out that these trends in cocaine use parallel an increased use of cocaine in the general public from the mid to late 1970s until the early 1980s. Overall, Hanlon et al provided research that investigated longitudinally, the addiction and intertwining criminal career of the sampled men. The most obvious limitations to their study are the retrospective nature of the study and limitations to the recollection of the participants as to how long each period of addiction and non-addiction lasted and the detail of how many crimes were committed on each day of those addiction and non-addiction periods.

Criminal careers, drugs use careers and drugs-crime trajectories demarcate researchers' attempts to examining long-term patterns of offending and involvement in other deviant behaviour such as drug use. While some authors (e.g. Laub and Sampson

2003; Sampson and Laub 1993, 2005) highlight the influence of social bonds across the life course as contributing to an individual's initiation, maintenance and desistance from involvement in crime and deviant behaviour, others' highlight the importance that the development of self-regulatory skills play on the later development of criminal involvement and deviant lifestyles. Longitudinal models have attempted to explore and describe the heterogeneity that exists amongst the population of those involved in offending behaviour, describe changes that occur over time as individuals' age and capture the intermittency of offending frequency over the lifespan (Bushway & Tahmount, 2016). However, the body of research that has explored the trajectory and career models has been criticised for failing to explore the within individual patterns of intermittent involvement in criminal behaviour over time (Bushway & Tahmount, 2016). From this perspective more explicit exploration of patterns of drug use and intermittent crime involvement is required.

#### **4.4 Drug of choice and crime specialisation**

Empirical interest in the concept of criminal specialisation was re-ignited from the research undertaken in the careers paradigm outlined above. The seminal work of Blumstein et al (1986) called for research attention to shift away from defining general principles of involvement in offending behaviour, to focus on the exceptions, one of which were those individuals who displayed chronic involvement in serious criminal behaviour (Gottfredson & Hirschi, 2016). Early research had already identified a small but significant tendency for some offenders' to specialise in certain types of antisocial behaviour at discrete times, influenced by opportunity and social contexts (Blumstein & Cohen, 1979; De Lisi et al., 2011). However, the vast majority of empirical evidence supported crime versatility, that is the offender's antisocial behaviour occurred across contexts and offence types (Blumstein, Cohen, Das & Moirta, 1988; Bursik, 1980; Kempf, 1987; De Lisi et al., 2011; Piquero, 2000; Piquero et al., 1999), essentially reinforcing the idea that antisocial behaviour is structured by life circumstance and general processes (Deane, Armstrong & Felson, 2005; De Lisi et al., 2011). In their review of the literature

on the careers paradigm from 2000-2011, DeLisi and Piquero, (2011) concluded that while there is some evidence of short-term offence specialisation, this occurs within the broader context of offence versatility. Indeed DeLisi and Piquero stated that “the preponderance of offenders, and by preponderance, we mean virtually all offenders, are generalists” (p. 291).

Other researchers however, acknowledge that both versatility and specialisation can form part of an individual’s criminal career (De Lisi et al., 2011; McGloin et al., 2009). Indeed McGloin et al. (2009) caution that the body of research demonstrating offender versatility offers a preliminary conclusion only and that further exploration is required of those who do demonstrate criminal specialisation. McGloin et al (2009) stated that “there are indications that some offenders’ do specialise in the short term, and some preliminary evidence of transitioning among categories” (p. 17). The point perhaps made by McGloin et al is that alternative research methodologies applied to the sample of versatile offenders may produce different results with respect to specialisation; a view endorsed by Deane, Armstrong and Felson (2005).

Deane et al argue that the versatility found in the type of offending behaviour measured and that fact that offending behaviour across this spectrum is positively correlated with each other obscures that results in favour of versatility. Deane et al argue that when an alternative methodology, marginal logit modelling was applied to their sample derived from the Add Health longitudinal survey of school aged adolescents (n = 15,629) from grade 7 -12, offence specification was supported across the nine offence response categories. Deane et al found that violent offenders’ were more likely to engage in additional violent offences, nonviolent offenders’ were more likely to engage in additional nonviolent offences. Additionally, depending on the type of violent offence, the authors found either no offence generalisation between violent and nonviolent offending nor was generalisation was present; the effect size was weak compared to the effects obtained for specialisation. Other researchers’ have found evidence for specialisation amongst forensic psychiatric patients convicted of arson (Lindberg et al.,

2005), burglary (Schwaner, 2000), acquisitive property crime (Shover 1996; Tunnell, 2006), intimate partner violence (Bouffard et al., 2008; Moffitt et al., 2000), violent interpersonal offending (Schwaner, 1998) and drug use (Armstrong, 2008). Gender, age and arrest onset difference in crime specialisation were found by De Lisi et al. (2011), in their study of 500 adult habitual criminals. Male habitual offenders were found to be more likely to specialise in aggravated assault, stealing motor vehicles, and vagrancy, while female habitual offenders were more likely to specialise in fraud and theft. With respect to age, De Lisi et al. finding supported earlier contentions that with increased age comes greater specialisation, while earlier age of onset was associated with specialisation in theft, burglary and steal motor vehicle. When drug use is considered as a part of an established relationship, rather than an act of crime itself, the concept of crime and drug specialisation adopts a slightly different line of enquiry.

Early research into the drugs-crime connection has been criticised for the lack of specification about both the types of crimes that the individual engages in and their drug of choice (Farabee et al., 2001). The terminology of a "drug of choice" carries with it the implication of important differences in the aetiology, symptomatology and treatment philosophy that are likely to vary as a function of the drug that the individual chooses to use (Walters, 1994). Additionally, the amount and type of social rule breaking or rule bending is likely to vary as a function of the type of drug that the individual uses (Walters, 1992). In an effort to explore criminal activity of those who also use substances, a substantial body of research has focussed on examining the probability of being arrested or committing a criminal act after using any substance (French et al., 2000). It has been argued that just as drugs vary in their psychoactive properties, so too does the impact of different drugs on one's behaviour. From a psychopharmacological perspective, White and Gorman (2000) drew a comparison between heroin and crack cocaine. The authors hypothesised that as the intoxicating effects of heroin are felt for several hours, heroin users would be less active in their pursuit of more heroin when compared to users of crack cocaine who may only feel the effects of the crack cocaine for several minutes.

This means that the user is required to acquire more crack cocaine at a higher rate to re-establish a state of intoxication when compared to a heroin user. The assumption is that the crack cocaine user is likely to be more active and motivated to commit predatory crime in the pursuit of the drug several times a day when compared to the heroin user. Following this line of thinking, research has attempted to identify those types of crimes that drug users commit while using particular drugs.

Early research investigating the types of crimes that drug users engage in has produced mixed results. Ellinwood (1971) examined 13 case histories of people who had committed homicide while intoxicated on amphetamines. Ellinwood concluded that the homicides were related to an amphetamine induced delusional process or state of emotional liability. However, the amphetamine use itself was not found to be the most important causal agent. Greenburg (1976) reviewed 8 studies relating to criminality in drug using populations and found that 7 of the studies found no difference in the types of crimes committed by those using amphetamines and those using other types of drugs. In addition, there was mixed results as to whether the drug using groups differed in their crime participation when compared to the non-drug using group. While Incardi and Pottieger (1994) found in their sample of crack cocaine users that they reported to have committed their first offence at a much younger age and were more likely to be involved in the drug trade when compared to their sample of heroin users. For those who identified that heroin was their drug of choice, the established trend in the data was that the male users were more likely to have ever been incarcerated when compared to female users; this same trend was replicated between the genders of crack cocaine users (Incardi & Pottieger, 1994).

In a more recent Australian study that surveyed 789 inmates (657 male, 132 female and 235 Aboriginal offenders), the only positive association between drug of choice and specific crimes committed was between alcohol and violent crime (Butler, Levy, Dolan & Kaldor, 2003). Butler et al found that "harmful or hazardous" alcohol use as defined by the World Health Organisation's Alcohol Use Disorders Identification Test

(AUDIT) was associated with an increased risk of incarceration for a violent crime compared with offenders who were classified as using safe levels of alcohol. The authors also discovered that property offenders were more likely to report a history of intravenous drug use. However, the type of drug injected was found to be less important than the route of administration. Therefore, Butler et al could not specify between types of drugs injected and the impact of this drug on the criminal activity. While in the Netherlands, Oteo Perez et al., (2014) found that amongst their sample of 1039 regular crack cocaine users that the most frequent criminal activity engaged in during the previous 30 day period was selling drugs (68.9%), followed by property crime (68.9%), with only a small proportion involved in violent crime (9.7%).

When attempting to disaggregate the relationship between drug of choice and crime specialisation, Greenburg (1976) stated that research using cross sectional data, such as that reviewed above, may be misleading due to the dynamics of drug use across the lifespan. This criticism is supported by research conducted on juvenile offenders by Prichard and Payne (2005). In their sample of 467 detained youth aged between 11 and 17, Prichard and Payne found extreme homogeneity in the types of offences committed. The authors reported that the juvenile offenders' were difficult to categorise into types of crimes regularly committed as all offenders self-reported committing 5 - 7 different types of crimes, with very few youths reporting engaging in only one type of offence (Prichard & Payne, 2005). Such findings highlight the point made by Greenburg (1976), that crime specialisation is likely to be a product of ongoing involvement in criminal activity and a natural consequence of maturation and aging. For example ongoing cognitive development, reaching the age required to obtain a driver's license, acquiring a bank account and ongoing life experiences are some of the factors that are hypothesised to contribute to the development of crime and/ or drug specialisation (Prichard & Payne, 2005).

One of the most extensive longitudinal studies exploring drug use continuity and crime involvement across the lifespan is that of Jennings et al (2016). Jennings et al

(2016) drew upon a sample of 411 males from South London who were part of the Cambridge Study in Delinquent Development to investigate the association between drug use continuity over the lifespan, with respect to patterns of use, and involvement in both nonviolent and violence crime from adolescence to age 50 years. The participants were initially interviewed at age 8 years in 1961/1962 and have been interviewed at various points across their lifespan, with the most recent interviews being completed at age 48 years. Across the sample, 4 categories of drug use were reported; non-drug use; adolescent limited; adult limited and juvenile and adult drug users.

While the authors found that just over half of the sample reported no drug use, for those that did report drug use during adolescence, 45.4% of them reported continuity of drug use into adulthood. Unsurprisingly, those who reported continuity of drug use from adolescence to adulthood were also found to be at highest risk for accumulating nonviolent and violent offence convictions by age 50 (Jennings et al., 2016). These findings were found to be robust even when consideration was given to relevant early childhood and environmental risk factors were taken into account. When comparing the drug use categories to those who did not use drugs, Jennings et al. found that those participants who reported drug use during adolescence only or to have commenced drug use during adulthood only were 3 times more likely to be convicted for a nonviolent conviction by age 50, while those who reported drug use across adolescence and adulthood, were 6 times more likely to be convicted of a nonviolent and violent offence by age 50.

The research by Jennings et al (2016) sought to extend the empirical inquiry beyond the use of simple drug and crime prevalence measures to explore the frequency and intensity of drug use. The results obtained emulate that of previous researchers' such as Farabee et al (2001) who utilised a nationally representative sample in the United States to estimate the relationship between chronic drug use and various criminal activities. Farabee et al found that the severity of drug use was significantly related to the probability of engaging in criminal activity of either the predatory or acquisitive

nature. Earlier, Chaiken and Chaiken (1990) found that offenders' who regularly engage in high frequency poly substance use commit crimes at a significantly higher rate and over longer periods of time when compared to drug using offenders who demonstrate a pattern of use of less frequency and intensity. Despite research finding acknowledging the high frequency of drug use is associated with increased amounts of offending behaviour, there has been little empirical investigation into whether career criminal or those with a long standing criminal career choose particular drugs to enable their involvement in particular criminal behaviour.

There is now consensus among contemporary researchers' that the drugs-crime relationship cannot be adequately explained as a simplistic causal relationship. Instead, over time, researchers' have identified a myriad of factors that are thought to influence involvement in the drugs-crime relationship. Theories that have attempted to explain the drugs-crime relationship as an association have drawn upon various facets of individual growth and development, family, community, politics, financial and geography to draw out factors that are likely to influence involvement in both behaviours (drug use and criminal behaviour). One of the most influential of the early analytic frameworks was Goldstein's (1985) tripartite framework, which sought to understand that direct and circuitous relationship between drug use and criminal behaviour. While this framework sought to describe the drug use-violence link explicitly, the framework has been applied through evolving empirical research to explain the link between drug use and other forms of criminal conduct. While Goldstein's work was applauded for stepping outside the bio-pharmacological understanding of the drugs-violence relationship to include context and the dimensionality of drug use, the framework was also criticised for being largely deterministic by focussing on outcome of the drugs-violence relationship rather than the evolving nature of the relationship and the individual themselves. The largely cross sectional research base upon which the tripartite framework was validated, raised questions as to whether the framework would be applicable longitudinally.



The push for a more nuanced understanding of the drugs-crime relationship over time was influenced to a large extent by the conceptualisation of the criminal career. Career based explanations of the drugs-crime relationship began to explore the vacillations of the relationship within and between individuals over time. Terminology such as onset, persistence, escalations and desistence were derived from this area of research and attempted to explain how the drugs-crime relationship evolves and changes throughout the life course. Additionally, researchers started to explore the types of crimes committed by individuals and whether those who engage in criminal behaviour specialise or are more likely to be generalist offenders. While there is consensus that those who are involved in drug use across the lifespan from adolescence to adulthood are more likely to be involved in both nonviolent and violent offending behaviour, there is a gap in the empirical research literature exploring how certain drugs of choice may be used to enable certain offences over time.

## Chapter Five

### 5.1 The drugs-crime relationship and “Race”

The research literature has found inconsistent evidence pertaining to the nature of the drugs-crime relationship when using different population groups. Such inconsistencies imply that the relationship may operate differently in different racial/cultural groups (Bennett & Halloway, 2006; Welte, Zhang & Wieczorek, 2001). Between group differences are an important aspect of the drugs-crime relationship to explore. Theories that are developed with the aim of explaining the drugs-crime association are of limited applicability and utility if such theories cannot account for the experiences of various cultures and races within the country in which they were developed. This chapter will provide a brief overview of international research findings with respect to differences in drug use and criminal behaviour patterns amongst people of varying ethnicity, followed by a more specific focus on local Australian research that explores the varying patterns of drug use and criminal behaviour amongst Aboriginal and non-aboriginal populations.

Race and culture has a profound effect on early socialisation, identity formation and opportunity, all of which are significant correlates to the development of self, self-control and involvement with substance abuse (De Li, 2005). In the United States, research investigating the influence of race on the drugs-crime connection has repeatedly found that race remains one of the strongest correlates of deviant and criminal behaviour (De Li, 2005). With respect to drug use, race has been described as “one of the most distinguishing characteristics of drug use, especially in urban areas” (Cooper et al., 2012), and has been observed to be influential in the involvement, prosecution, and punishment of drug use and related behaviours (De Li, 2005; Hawkins, 1995; Kennedy, 1997; McNeely & Pope, 1981). Despite race being identified as an important indicator to the involvement of deviant and related behaviours, behavioural scientists differ in their definition of race (De Li, 2005). Like other authors (De Li, 2005) who have investigated the influence of race on deviant and criminal behaviours, this

study will utilise a definition of race as a social construction. Adopting this definition emphasises two dimensions; race embodies a set of cultural and social experiences shared by a group of people, and race represents a means by which “we” can identify ourselves from “them” (De Li, 2005).

Similar to other western countries, states, provinces, cities and towns, Australia and Western Australia incarcerate a disproportionate amount of the indigenous population when compared to the non-indigenous population. Within Western Australia, Aboriginal people comprise 3.6% of the state’s population. In 2002 approximately 47% of detained youth identified as Indigenous, proportionate to the Australian population this figure meant that an indigenous youth was 19 times more likely to be incarcerated than their Anglo-Saxon counterpart (Prichard & Payne, 2005). By 2015, Amnesty International reported that Indigenous youth in Western Australia are 52 times more likely when compared to their non-indigenous counterparts, to be detained in a youth detention facility (Amnesty, 2015). Further, the Amnesty report found that while young people aged 10-17 years comprise only 6% of the Western Australian population, Indigenous youth make up three quarters of the detention centre population (Amnesty, 2015). The Western Australian adult prisons house over 5000 prisoners, 38% of which identify as Aboriginal<sup>1</sup>.

These prison population statistics accord with research conducted with the adult prison population such as the DUCO studies (Johnson, 2004; Makkai & Payne, 2003), who reported that one quarter of their sample self-identified as Indigenous, compared with only 2% of Australia’s population identifying as Indigenous (ABS, 2004). Aboriginal adults therefore, remain the single largest minority population within the Western Australian prison system. The issue therefore is not whether the problem of drug use and criminal behaviour exists in different racial communities, but rather how the relationship between drug use and crime is mediated, shaped or influenced by race and

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<sup>1</sup> Statistics taken from the Department for Corrective Services Quick reference statistics for 31 May 2015- Adult prisoners in custody

culture. As Spohn (2015) asserts “Researchers’ have moved beyond asking does race matter, to attempting to identify the circumstances and contexts in which race matters” (p. 91). From this perspective, the current research aims to explore whether the existing theories within the research literature can account for the relationship between drugs and crime in the largest minority groups housed in Western Australian prison population- Indigenous males.

## **5.2 International research exploration of racial differences in drug use and offending behaviour**

For over 100 years racial differences and discrimination has been observed in the arrest, judicial processing and sentencing of different racial groups across the globe (Spohn, 2015). Over time the pervasive overt and systematic racism of the early colonial laws and judicial processes in Western countries, like America, Canada, New Zealand, United Kingdom and Australia has been moderated and largely eliminated, however most would concur that significant disparities and inequities remain (Spohn, 2015; Rempel et al., 2015). Such inequalities are seen across the spectrum of disadvantage, from explicit discrimination, to implicit bias or the enactment of laws and practices that have disparate effects on different racial groups (Spohn, 2015). Some may argue that disparity in sentencing between racial groups does not always equate to discrimination, but rather indicates that discrimination may exist (Garland, Spohn & Wodahl, 2008). Racial disparity in crime rates is observed internationally. As Rempel et al (2015) have pointed out; the crime rate in many western countries has decreased over the last 3 decades, however the crime rates for Canadian Aboriginals and other Black populations in countries such as in the United States and New Zealand have decreased at a slower rate when compared to other majority groups (see Weatherburn, 2008; Weatherburn and Snowball, 2008; Brame et al., 2014). The racial disparity in crime rates appears to accompany other facets of social and economic disadvantage. For example, in the US Black and Hispanic males who are young and unemployed have been found to be incarcerated more harshly when compared to similarly situated white males, even when

the severity of the offence is accounted for; a finding that suggests some of the specific social forces that accompany racial discrimination when it does occur (Kansel, 2005; Spohn, 2000). From a theoretical perspective, prominent criminological theories that have attempted to explain the persistently observed racial disparities within the criminal justice system; first, critical race theory posits that racism is deeply embedded within the laws and criminal justice policies, which in turn serves to reinforce socially constructed hierarchies based upon race, socioeconomic status, and gender; second, Conflict theory maintains that race and socioeconomic status are important aspects of social control. This means that despite society being comprised of numerous cultures with competing values and perspectives, that the government or state use authority to protect the interests of the dominant racial group to control other minority groups (Spohn, 2015); third, attribution theory points to the micro-level stereotypes and race-linked perceptions of the individuals in positions of making legal or criminal justice decisions. As stated by Steffensmeier, Jeffery and Kramer (1998), race, age and gender influence the criminal justice process and outcomes “because of images or attributions relating to these statuses to membership in social groups thought to be dangerous or crime prone” (p. 768).

In-depth exploration of the factors that contribute to the differential treatment of racial minorities by the criminal justice system was ignited by the landmark studies of Blumstein (1982). In his series of studies, Blumstein hypothesised that if no discrimination existed within the criminal justice system following arrest, then all racial groups would be imprisoned for a crime in the same distribution as they were arrested (Garlan, Spohn & Wodahl, 2008). Blumstein went further to develop an equation that explained the racial disproportionality based upon the ratio of expected racial distribution of the prison population (i.e. the fraction of those arrested of different ethnic backgrounds) divided by the actual observed ratio of different ethnicities incarcerated (Garlan et al., 2008). Blumstein’s (1982) study utilised data from the 1974 Department of Justice survey of state prison inmates and the 1974 Uniform Crime Reports to analyse

violent, property and drug related offences. Drawing upon both data sources, Blumstein estimated that 42.7% of the prison population would be expected to identify as black, however the actual percentage of black people incarcerated in 1974 was 48.3%. Using his disproportionality equation, Blumstein found that 80% of the actual incarceration disproportionality for all crimes studied was attributable to black people's higher involvement in arrests (Blumstein, 1982; Garlan et al., 2008). By extension, Blumstein opined that 20% of the difference in incarceration rates for black versus white people in 1974 could be attributed to discriminatory treatment (Garlan et al., 2008).

Blumstein extended his research by including a second set of survey data from the 1979 inmate survey and the uniform crime reports for each year between 1970 and 1979. The data for this ten year time period revealed that the expected percentage of black inmates ranged from 39-44%. Blumstein again approximated that 80% of the disproportionality in the prison population was due to differential involvement in arrest (Garlan et al., 2008). Further analysis by Blumstein into the degree of racial disproportionality of incarceration by crime type on this data set revealed that disproportionality that was unrelated to arrest was greater for less serious crimes. For example, the disproportionality for violent crimes not explained by disproportionality at was 2.8%; 15.6% for burglary; 33.1% for property offences, however the highest level of unexplained disproportionality was for drug offense at 48.9%. In a later follow-up study Blumstein (1993) used the same calculation procedure and found similar strikingly results, with 76% of racial differences in incarceration attributable to differential involvement in arrest, despite the prison population having expanded dramatically since his earlier research. The calculation methods used by Blumstein (now colloquially known as the Blumstein method) has been criticised from two main perspective, first, for the reliance on the Uniform Crime Reports to indicate criminal involvement. As Garlan et al (2008) point out, such statistics may provide an accurate reflection of serious offending behaviour (e.g murder and other crimes of personal violence), they may be a less accurate measure of less serious offences such as theft and drug related crime.

Garlan et al therefore state that the reliance on the Uniform Crime Records may actually provide an indication of racial disparity in incarceration following arrest and be less indicative of the amount of discrimination in the time between the actual criminal act and the sentence of incarceration. The second criticism of Blumstein's calculation methodology pertains to the use of the inmate criminal surveys, rather than actual prison admissions data (Garlan et al., 2008). Garloan et al assert that the reliance on the survey data may confound some of the results due to the inclusion of prisoners serving lengthy sentences, rather than focussing solely on those arrested and recently incarcerated. Other authors have attempted to improve on these methodological flaws (see Langan, 1985 for example), by drawing upon victimisation, however have not been able to demonstrate an appreciable difference or improvement on the findings, but rather have replicated that of Blumstein's findings.

Empirical support for the findings of Blumstein in relation to differential arrest rates for ethnic minorities has developed over time and across geographic locations. Research exploring the racial disparities in arrest, prosecution and incarceration for drug related offences requires exploration of a number of interrelated factors, including patterns of drug consumption within the general population. In the US general population, research exploring the drug use patterns of racial and ethnic minorities have repeatedly found these minority groups to be affected by cocaine and heroin, whereas studies have consistently found that the majority of methamphetamine users are white (Fox & Rodriguez, 2014; Hunt 2006; Hunt et al., 2006; Kyle & Hansell, 2005; Rodriguez et al., 2005). When data is examined from those seeking treatment for drug use and medical attention from emergency departments, it has been found that Blacks are more likely to seek treatment and medical attention or cocaine use, while whites are most likely to seek treatment and medical assistance for methamphetamine and heroin use (Cooper et al., 2012). However this pattern of drug use is less consistent when using data from those involved in the criminal justice system.

Drug use patterns of arrestees using arrestee surveys have found lower overall prevalence of drug use amongst ethnic minorities (Bennett & Edwards, 2016). In other countries such as South Africa, results reported by Parry et al (2004) from urinalysis tests completed on arrestees from Cape Town, Durban and Gauteng province found that white arrestees were more likely when compared to non-white arrestees to test positive for any illicit drug (67% white, 64% "colored", 38% African, 48% Indian/ Asian). Further, when the individual patterns of drug use were explored, it was found that white arrestees were more likely to test positive for cocaine, amphetamines and opiates, while non-white arrestees were more likely to test positive for cannabis, mandrax and benzodiazepine use (Parry et al., 2004). A similar finding was reported by Cooper et al (2012) and later Fox and Rodriguez (2014) both of who drew upon data drawn from the Arrestee Drug Abuse Monitoring (ADAM) program in the US and found that methamphetamines was most likely to be used by white arrestees who resided in areas with less structural disadvantage. Cooper et al reported that Black and Latino arrestees were more likely when compared to white arrestees to test positive for marijuana, cocaine and opiates than methamphetamines. Further, Rox and Rodriguez reported that arrestees who were found to use methamphetamine were more likely to have committed a nonviolent offence.

Other US ADAM research has reported that whites and Asian/ Pacific Islanders disclose the highest rate of methamphetamine use, followed by Hispanic and African American Arrestees (National Institute on Drug Abuse, 2003). Apart from arrestee data, researchers' have also drawn upon samples of prisoners to explore racial difference in illicit drug use amongst those involved in the criminal justice system. Research conducted within the United Kingdom prison system reveals a similar race-drug relationship. Budd et al (2005) reported on their findings from the Criminology Survey of prisoners in England and Wales that white prisoners' were more likely than black and Asian prisoners to have used an illicit drug (74% compared to 64% and 50%, respectively). Additionally, white prisoners' who completed the surveys were found to be



more likely to use heroin, crack or cocaine, to have injected the drug and to have experienced difficulty desisting from use when compared to Asian and black respondents. In the United States, Data collected from the Bureau of Justice Statistics Survey of Inmates in State and Federal Correctional facilities revealed that White inmates were twice as likely as Latino and 20 times more likely than Black inmates to use methamphetamine (Cooper et al., 2012).

Having regard to consistent research data within the US that ethnic minorities are at higher risk for drug sanctioning when compared to white populations (e.g. Blumstein, 1993; Golub, Johnson & Dunlap, 2007; Goode, 2002, Tonry, 1995), Spohn (2015) asserts that there are 3 possible explanations for racial disparities observed in drug arrests and prosecutions; first, the black people consume drugs at a higher rate when compared to white people; second, that black people sell and manufacture drugs at a higher rate when compared to white people or third, that police arrest black people for drug offences in a disproportionately high number to their actual involvement in drug consumption and distribution. Spohn argues that the available research evidence gathered from a range of sources, including nationally representative longitudinal studies of household drug consumption patterns (some of which is reviewed above) do not support either of the first two explanations. Rather, Spohn attributes the disparity to policing practices that concentrate on socio-economically disadvantaged urban areas, where drug use and distribution is more visible, in combination with what Tonry (1995) and others (e.g. Mitchell & Caudy, 2015) has described as racial profiling. Indeed, it has been argued that America's "war on drugs", while targeting the entire population has disproportionately targeted the African American population. Mitchell and Caudy (2015) reported that an African American is 4.5 times more likely to be arrested for a drug possession offence when compared to their white counterpart. Spohn (2015) demonstrated the longevity and fluctuating nature of the racial disparity through the use of longitudinal data from 1980-2009 obtained from the US Department of Justice, Bureau of Justice Statistics in 2011. This data revealed that from 1980 to 2006 the arrest rate

for drug possession increased by 135% for whites and by 271% for blacks. With respect to drug trafficking, in 1980, blacks were four times more likely to be arrested for manufacturing or selling drugs when compared to whites, by 1989, this disparity increased to blacks being 7 times more likely, which held constant through to 2003. By 2009, Blacks were four times more likely when compared to whites to be arrested for manufacturing or selling drugs (Sophn, 2015). However racial differences in drug use and offending behaviour are not straight forward. Mitchell and Caudy (2015) highlight the “racial crossover effect” (p. 294) evident within large scale national aggregate measures of drug use prevalence within the United States. The racial crossover effect refers to the consistent finding that the relationship between race and drug offending varies by age. Within the United States, black youth have been found to be less likely to use illicit substances when compared to their Hispanic and white counterparts, whereas black adults aged 25 years and older are more likely to use illicit substances when compared to white or Hispanic adult counterparts (Mitchell & Caudy, 2015). In Canada, Rempel et al (2015) found that Aboriginal offender populations had higher sentencing rates and a greater proportion of the Aboriginal offender population was young and female when compared to other ethnic group.

Another confounding variable with respect to racial disparity in the arrest and incarceration of those who use drugs and commit drug related offences is geography. Blumstein’s (1993) results found large variations in the figure of racial disproportionality in incarceration across states, suggesting that national aggregate rates of racial disproportionality cannot be used to accurately reflect the racial disproportionality of the states. Further, as Weidner and Frase (2003) point out, it is possible that state-level studies of racial disproportionality in incarceration are also likely to mask the variability between counties of that state. The variability between states and counties with respect to racial disproportionality in arrest, sentencing and imprisonment likely reflects a range of social, political and legal factors, all of which contribute implicitly and explicitly, to the outcomes observed.

It is clear that race heavily influences patterns of drug use, arrest rates, incarceration and, by extension the drugs-crime relationships. Racial differences in patterns of drug use and involvement in criminal behaviour are further moderated by factors such as age, geographic location and other socio-political factors. The variability in racial disproportionality observed by Blumstein (1993) and others (e.g. Garland et al, 2008; Weidner & Frase, 2008) between states and counties of America, adds support to the value of conducting a nuanced exploration of the drug-crime relationship as it manifests within different ethnic minorities and across different geographical locations. The following section will outline the available the research evidence for the pattern of drug use and crime within the largest minority group in Australian and Western Australian prisons, the Aboriginal people.

### **5.3 Drug use and offending in the Australian Aboriginal population**

In Australia, alcohol, illicit drug use and crime have presented as much of a problem to the Indigenous/ Aboriginal communities, as they have to other minority groups and the “white” or Anglo-Saxon communities. However, consistent with data from the US and other western countries, within the Australian criminal justice system, Indigenous people are grossly over represented in all stages of arrest, sentencing and imprisonment within both juvenile and adult prisons. Also similar to other western countries, there are a myriad of factors that contribute to and maintain this overrepresentation, one factor may be the pattern of illicit drug and alcohol use within Aboriginal communities.

From a prevalence perspective, the Australian Bureau of Statistics (ABS) reported that illicit drug experimentation is more common among urban dwelling Aboriginal communities when compared to their non-aboriginal counterparts, with 50% having ever tried at least one illicit drug (compared with 38% of the general community) and 24% having used an illicit drug in the last twelve months (compared to 15% of the general population; ABS). When rates of alcohol use are considered, the National

Aboriginal and Torres Strait Islander Social Survey (NATSISS)<sup>2</sup> in 2002 estimated that 15% of Aboriginal Australian's used alcohol at risky levels, while the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)<sup>3</sup> in 2004 estimated that 16% reported high risk alcohol consumption (Wilson, Stearne, Gray & Sherry, 2010). In the 2012-13 NATSIHS survey results, 72% of Aboriginal and Torres Strait Islander people aged over 15 years reported that they had consumed alcohol in the last 12 months, with 18% reporting that they consumed more than 2 standard drinks per day, which in turn, exceeded the lifetime risk guidelines; a rate not statistically different from non-Indigenous Australians.

When illicit substance use was explored, in 2012-2013 the NATSIHS data revealed that 22.3% of Aboriginal and Torres Strait Islander people aged over 15 years reported that they had consumed an illicit substance in the previous year. The most commonly reported illicit substance was Marijuana, with 18.7% reporting use within the previous 12 months. Data from the National Drug Strategy Household Survey (NDSHS), also a triennial survey, estimated that for Indigenous Australians, 39% could be classified within the short term high risk category of alcohol consumption, while 23% could be classified within the long-term high risk consumption category. For the non-indigenous Australian's, 21% were categorised in the short term high risk category, while only 10% were categorised in the long term high risk category for alcohol consumption. Further data collected in the 2003 Australian Burden of Disease Study estimated that alcohol related harm accounts for 6% of the total burden of disease and injury for the Aboriginal and Torres Strait Islander people (Vos, Baker, Stanley & Lopez, 2007).

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<sup>2</sup> The NATSISS is a national survey conducted every 3 years by the Australian Bureau of Statistics as part of an established program of data collection that monitors the social and economic well-being of Australia's Aboriginal and Torres Strait Islander population. Households are selected at random across Australia and commences by an interviewer collecting demographic information in relation to the residents of the household. A sub-sample of the household is then interviewed personally.

<sup>3</sup> The NATSIHS is a survey conducted by the Australian Bureau of Statistics that includes a representative sample of approximately 13,000 Aboriginal and Torres Strait Islander people from remote and non-remote regions of Australia.

Based upon these national drug use surveys, Wilson et al (2010) estimated that the harmful use of alcohol by Indigenous Australians' is approximately twice as great as that found in non-indigenous counterparts. Similar findings were reported by Wilkes, Gray, Siggers, Casey and Stearne (2010) who found that in 2004, the rate of illicit drug use, or the use of licit drugs in a harmful manner, was twice as prevalent in Aboriginal people when compared to non-Aboriginal people across all classes of drugs. This high rate of illicit substance use is attributed to many adverse health and social outcomes. In Western Australia, between 1994- 2000, Wilkes et al reported that the crude rate of hospital admission for ailments directly attributed to psycho-stimulants use and drug induced psychoses increased eight-fold from 2.8 to 22.4 per 10 000 person years among Aboriginal males. For Aboriginal females, Wilkes et al reported a rate increase of 3.6 times, from 4.3 to 15.5.

The rates of drug use in the Aboriginal communities compared to non-aboriginal Australians cited above are consistent with international research on the prevalence of drug use in other indigenous communities around the world. For example, the prevalence of cannabis use is higher among Canada's First National Population (aged over 18 years), when compared to other Canadians (aged over 15 years; 26.7% vs. 14.1%; Adalf et al., 2004), among North America's Indigenous population when compared to other American's (aged 12 years and over; 13.5% vs 10.6%) and among Maori populations when compared to other non-Maori New Zealanders (aged 13-65 years; 20.8% vs 14%; Lee et al., 2009). While prevalence estimates of alcohol and illicit drug consumption provided by these national surveys are vital to identifying the scope of the issue and planning for therapeutic and harm reduction interventions, such national population estimates mask nuances of use within regional areas and other geographical variations. Additionally, prevalence studies offer little by way of explanation to understand the social, cultural and political factors that surround patterns of use (Wilson et al., 2010).

In order to explore differences in drug use patterns, it is necessary to explore the prevalence of drug use in urban, rural and remote communities independently. Clough et al (2004) investigated the patterns and associated harms of Cannabis use in two Aboriginal communities in Arnhem Land, in the Northern Territory of Australia (located approximately 550kms east of Darwin). The widespread use of cannabis in the remote communities of the Northern Territory is not thought to have commenced until the 1990's. This assertion is based upon survey reports completed in the 1980's unable to detect any cannabis use in remote Aboriginal communities (Clough et al., 2004). However by 1999, cannabis use in the remote Arnhem Land Aboriginal communities was estimated to have increased to 55% of males and 13% of females. By 2002, these figures increased to up to 76% of males and 34% of females reported using cannabis on a regular basis (Clough et al., 2004). Clough et al used stratified random sampling to select a sample from two population rolls prepared for each community. Similar numbers of people were selected from six, four year age bands, which produced a sample population of 336 people (169 males, 167 females); equating to 28% of the population of the two communities aged between 13 and 36 years. Clough et al sought to make estimates of the lifetime prevalence of cannabis use, in addition to rates of current use and the impact of this use in economic terms. The authors noted that the Aboriginal communities studied had self-imposed restrictions on the sale and use of alcohol, that was managed and enforced under the Northern Territory Liquor Act. It was acknowledged that regulations such as those under the Liquor Act are thought to alter the pattern alcohol consumption such that, those who use, tend to do so in a binge pattern of use based upon alcohol accessibility. This is contextually important when categorising harmful and socially accepted levels of consumption.

From the data obtained from the proxy interview assessments completed by health workers, Clough et al (2004) classified 69% of the male sample and 26% of female sample as lifetime prevalent cannabis users. Of those who were classified as being lifetime users, 67% of males and 22% of females reported ongoing cannabis use;

patterns of poly substance use were found in over half of those males and females aged over 20 years of age that were classified as lifetime prevalent users, with a history of known solvent sniffing reported by the healthcare workers. The majority of males across all age categories were known to use both alcohol and cannabis. These figures obtained from the healthcare workers were compared to participants who were interviewed opportunistically. The authors found that the crude estimate of lifetime cannabis use, based upon self-report data, was higher than that estimated by the health workers, particularly for women. For males, 76% were classified and lifetime cannabis users and 69% of females were likewise classified as lifetime users. With respect to current use, 68% of the males reported current cannabis use (consistent with health workers estimates), and 68% of the females reported current use; a figure that was 3 times greater than the estimates of the health workers in their proxy assessments.

Clough et al (2004) explored the impact of the participants cannabis and other substance use on various facets of health and community functioning. Those participants who reported current cannabis use, also reported less involvement in education and training, were more likely to report weight loss and seeking medical attention for their cannabis use. In terms of economic costs to the community, Clough et al., found that the price of cannabis in the communities studied remained fixed at \$A50.00. Participants reported purchasing 1 -2 packets per week of cannabis, which equated to approximately 31-62% of the mean weekly income, estimated to be \$A160 per week. The cost of cannabis in these communities was found to be 12 times greater than cannabis purchased elsewhere in the Northern Territory.

Taken as a whole, Clough et al (2004) reported that the proportion of indigenous males reporting current cannabis use (67%) in their study was found to be almost double that reported by the male population of similar age groups in the Northern Territory who reported cannabis use within the last 12 months. Further, the rate of cannabis use in the Northern Territory was found to be 1.7 times greater for males of similar age categories when compared to males across other Australian jurisdictions. For females, the

proportion of current cannabis users (22%) was comparable to rates reported in other Australian jurisdictions, and lower than the rates of current cannabis use reported for the Northern Territory. When considering the amount of alcohol consumption reported by the participants, Clough et al found that even the largest amount reportedly consumed (600 g/ month) equated to approximately one quarter of the average monthly amount reported per capita in other Indigenous communities in the Northern Territory, most likely reflecting the impact of alcohol restrictions imposed by the community. The close association between cannabis use and the use of other substances, in particular, solvent (most commonly petrol) sniffing evident within the Arnhem Land communities studied represents a challenge to the physical and mental health of the population.

Extending upon the research of Clough et al. (2004) is the work of Lee et al (2015). Lee and colleagues sought to specifically examine the link between cannabis use and involvement in violent physical trauma, as measured by community medical records. The authors drew upon the data sample used by Clough et al (2004), which forms part of a larger longitudinal data set (2001-2006) from 3 communities within Arnhem Land, Northern Territory, Australia. As described above, the three communities are documented to have a high prevalence of high frequency cannabis use, in addition to alcohol restrictions. Lee et al examined a random sample of 264 community members, aged 14-42 years of age who were randomly selected from community rolls over the study data collection periods in 2001 and 2004. The two data sources were analysed; the data drawn from the informant interviews with respect to the participants known use of cannabis and alcohol, in addition to inspection of clinic medical records for the same 264 individuals' for presentation related to the involvement in trauma between January 2004 to June 2006 (Lee et al, 2015).

The results revealed that 1 in 3 people of the random sample presented to the medical clinic with injuries sustained during an accidental or violent trauma over the 2.5 year study period. Within the sample studied, 64.8% of the sample was known to use cannabis (based upon the proxy interview data). Of the individuals' who presented to the



medical clinic as a result of the experience of violent trauma, 9 in 10 were known current cannabis users. After adjusting for confounding factors such as age, sex and current known alcohol use, cannabis users were reported as 4 times more likely to present to a medical clinic with violent trauma when compared to non-cannabis users. Cannabis users were also more likely when compared to non-users, to be injured by a weapon. The economic, cultural, medical and social burden of substance use across remote Aboriginal communities of Australia is undeniable. Drug use patterns of Aboriginal people is a multifaceted phenomenon that should be understood from the interplay of biological, psychological and social factors at an individual level, and cultural, political and economic factors at a family and community level (Nasir et al., 2016). An understanding of these contextual factors also provides the basis for understanding the drugs-crime relationship as it manifests in Aboriginal people.

Legislatively, Aboriginal people were restricted in their access to and use of alcohol throughout every State and Territory of Australia. It was not until 1964 that Aboriginal people were granted the right to drink liquor in Western Australia, and later still in other states (d'Abbs, 1989). However, it was not until the 1970s when the policy of assimilation changed to one of self-determination, that the restrictions placed on Aboriginal people were removed with respect to access to alcohol from both a policy and practical perspective (d'Abbs, 1989). It was therefore, not until the end of the 1970's that Aboriginal people throughout Australia had full access to liquor (d'Abbs, 1989). The prohibition and restrictions placed on Aboriginal people with respect to alcohol has contributed to the view of some that the consumption of alcohol is an expression of equality and citizenship in the face of past discrimination (Brady, 1989). Therefore, the choice to drink alcohol for some transformed into a civil "right". However, as with any behaviour, the consumption of and dependence on alcohol requires a process of learning. The process of learning about alcohol consumption has been hypothesised to be different for Aboriginal men and women. Historically, Aboriginal men learnt drinking habits from hard binge drinking white stockmen, while Aboriginal women, who worked for

white women the majority of who were missionaries' or pastoralists' wives, tended not to drink alcohol (Brady, 1989). This view arguably holds less explanatory power now than it did in the years following the lifting of prohibition; however the importance of learning the rules and boundaries of alcohol and other drug consumption remains an important issue.

In the seminal work of MacAndrew and Edgerton (1969) in their book titled *Drunken Compartment*, the authors argued that the behaviour that follows after drinking has taken place are determined to a large degree by what society determines as permissible drunken compartment. MacAndrew and Edgerton provided evidence to suggest that even highly inebriated individuals are able to observe limits and rules. Therefore, is it that Aboriginal people have a high tolerance for drunken compartment that accounts for the seemingly high degree of alcohol misuse in Aboriginal communities? Some researchers' would argue in the affirmative. Brady and Palmer (1984) stated at the time of their research that among some traditionally-oriented Aboriginal people, held the view that those who commit anti-social and violent acts while intoxicated are not responsible for their actions. Instead, while in the state of intoxication the individual is thought to be crazy or mad (Brady & Palmer, 1984). Such views have, in some instances, led to the practice of avoiding intoxicated individuals and appeasing their needs out of a fear of confrontation (Brady & Palmer, 1984).

Another perspective is offered by O'Connor (1984) who outlined the problems of alcohol use and misuse in fringe camps and settlements of Central Australia. In his description of the numerous social problems that were directly attributable to alcohol misuse and dependence, O'Connor questioned the utility of conceptualising drug dependence as a disease when the majority and in some areas, the totality of the population were engaged in what he considered to be harmful levels of drinking. O'Connor makes the point that the classification systems used to make a diagnosis of alcohol dependence make it necessary to place an individual's drinking and drug use in the context of their culture. O'Connor stated that in those "*fringe camps where heavy*

*alcohol consumption has become a way of life, the individual is not behaving in a culturally inappropriate or deviant manner when he drinks to excess” (p. 179).*

The difference that O'Connor observed between the research literatures classification of alcohol dependence and the dependence that he observed in Central Australia was that, the former is an individual dependence and the later, a group based dependence. O'Connor labels this group alcohol dependence as “contingent drunkenness”. By contingent, O'Connor stated that the group drunkenness is contingent upon the correct physical and social environment. That is, alcohol had become a central object of exchange, and the excessive use of alcohol had become the expected behaviour when people socialize and meet. Drinking groups are established and defined by tribal and kin affiliation. Alcohol becomes the central point around which interpersonal relations, social interactions and repayments centre (O'Connor, 1984). O'Connor provided examples of witnessing people outside the fringe community who were able to abstain from drinking alcohol or consume alcohol in a controlled manner. When that individual returned to the fringe community, their involvement in heavy alcohol consumption resumed. For those in the fringe community who choose not to engage in alcohol consumption, O'Connor stated that they also choose to be socially outcast. To be sober or abstinent in the community meant that the individual could have a physical, but not a social presence. O'Connor commented that “for a people who are brought up to expect close proximity of kin and interactions with family and friends as a desirable value, such a penalty is harsh” (p. 181).

Research exploring the community and family factors within which some individual's substance use provides the context for understanding the body of drug use prevalence studies undertaken with incarcerated Aboriginal populations. Early research conducted by Duckworth, Foley-Jones, Low and Maller (1982) sought to investigate the extent of alcohol use among aboriginal prison inmates in the north of Western Australia. Duckworth et al found that of the 96 prisoners who participated in the study, 74% classified themselves as being “very drunk” at the time of their offence. A further 18% of

the sample stated that they had been drinking before the offence occurred but did not classify themselves as drunk, while only 8% of the participants in the sample indicated that they were sober at the time of the offence (Duckworth et al., 1982).

Less dramatic results were obtained in a similar study conducted in New South Wales by Butler, Levy, Dolan and Kaldor (2003) who also surveyed incarcerated Aboriginal prisoners, 28% of whom reported being intoxicated during the commission of their index offence compared to only 11% of non-Aboriginal prisoners' reported being intoxicated during the commission of their index offence. Other survey research such as that completed by McDonald (1992) who conducted a national survey of Aboriginal people detained by police in each state and territory, found that 46% were detained by police for public drunkenness. Similar findings were reported by Hall, Hunter and Spargo (1994) who examined a sample of Aboriginal people from the Kimberley region in Western Australia and discovered that the risk of an Aboriginal person being detained in police lock-up increased significantly by the amount of alcohol consumed and the frequency of that consumption, even after controlling for age and gender.

Indermaur (1989) sought to measure and report on the alcohol use patterns of prisoners in Western Australian prisons. Indermaur interviewed 926 recently received prisoners at the seven Perth metropolitan prisons for the four months of June through to September in 1987. Indermaur's sample was interviewed using the Short Michigan Alcoholism Screening Test (SMAST; Selzer et al 1975), which was collated with information gained from a routine medical assessment, examination of prisoners' file material and information from a professional case assessment conducted by Clinical Psychologists employed by the Department of Corrective Services. The results revealed that 30% of men and 36% of women were classified as reporting a hazardous pattern of alcohol consumption (consuming between 28 and 42 standard drinks per week), while another 27% of men and 16% of women classified as consuming harmful levels of alcohol regularly (consuming more than 42 standard drinks per week). Overall, the SMAST classified 48.5% of the sample as alcohol dependent (Indermaur, 1989).

When investigating variables that could impact on the pattern of alcohol use within the sample, Indermaur found no significant difference for age, however race accounted for the largest discrepancy between groups. Specifically, 42.4% of Aboriginal participants were classified in the hazardous category compared with only 25% of non-Aboriginal participants (Indermaur, 1989). Interestingly, significant differences were found in the proportion of heavy alcohol users between prisons, with the minimum security prison containing the largest proportion of heavy drinkers at 34.3%. Those participants who were found to be repeat offenders were also found to be significantly more likely to be classified as consuming alcohol in a hazardous manner (Indermaur, 1989). Indermaur also investigated the association between alcohol and crime in what he termed an “alcohol-crime disability” (p. 23). Indermaur classified those who had consumed more than ten alcoholic drinks prior to committing their last offence or having reported being charged with one or more drink driving charge as having an “alcohol-crime disability”. Of the sample studied, 65.2% were regarded as having an alcohol-crime disability according to Indermaur’s criteria; with 52% of the sample drinking alcohol immediately prior to committing their last offence. Most of this 52% also reported consuming ten or more alcoholic drinks prior to committing the offence for which they were incarcerated (Indermaur, 1989).

The results from the early research described above outlining the prevalence of alcohol and illicit drug consumption amongst incarcerated Aboriginal offenders are striking and appear to document and appear to document a strong or even causal association between drugs and crime. However Weatherburn and Snowball (2008) caution that studies must control for the influence of the economic and social factors, such as unemployment, and associated welfare dependency, poverty, in addition to poor health and education outcomes. One particularly important variable to explore is removal from their natural family (Dobson & Hunter, 2006). Studies that do not control of these variables risk the results obtained being more reflective of social disadvantage than alcohol abuse due to the strong association between social disadvantage with

alcohol abuse and dependency. Research into factors associated with social disadvantage within minority groups around the world have outlined the high prevalence of socially disorganised communities that are often characterised by high unemployment, high poverty, easy access to the illegitimate drug market, and a lack of formal and informal social control (Anderson, 1990; De Li, 2005; Wilson, 1987).

One of the first studies to control for a range of social disadvantage factors with Aboriginal population was that of Hunter (2001). Hunter drew upon the 1994 NATSIS data and regressed the risk of arrest in the preceding 5 years against a number of social factors including; age, gender unemployment, educational attainment, unemployment, alcohol use, proximity to the police station and residential location, i.e rural, urban or remote, the level of government intervention, such as removal for their nuclear family and household overcrowding. While Hunter found that all of these social factors were predictive of arrest, consistent with other research, the strongest marginal effects were found for being male, unemployed and having consumed alcohol on at least one occasion. These factors were found to increase the risk of arrest by 13 percentage points. As Weatherburn and Snowball (2008) opine, the significance of Hunter's (2001) results is the finding that factors associated with social disadvantage are important independent risk factors for Aboriginal contact with the justice system.

Later, similar survey data from the NATSISS was used by Weatherburn, Snowball and Hunter (2006) to explore the relationship between alcohol consumption, the risk of arrest and imprisonment for Aboriginal people. Similar to the work of Hunter (2001), Weatherburn, Snowball and Hunter (2006) found that the risk of arrest and imprisonment were significantly higher for those who reported to have consumed alcohol. Those who reported falling in the high-risk alcohol consumer were found to be at 2.6 times greater risk of arrest when compared to those who were not, independent of other risk factors. Other socially disadvantageous risk factors identified pertained to respondents who reported within the previous 12 months they were unemployed, under financial stress or were welfare dependent. Additional factors that increased the risk of

imprisonment or arrest pertained to having limited social contact, poor school achievement or who lived within a single-parent household.

A more nuanced exploration of social factors associated with Aboriginal contact with the criminal justice involvement and recidivism drawing was completed by Weatherburn and Snowball (2008). The authors drew upon the 2002 NATSISS survey data to explore the number of arrests in the preceding 5 years for the 8523 adult respondents' national wide. The results showed that alcohol and illicit drug use were powerful independent correlates of arrests, and frequency of re-arrest for the Aboriginal respondents, even after a range of factors associated with social and economic disadvantage were controlled. Interestingly, Weatherburn and Snowball found that some of the social and economic factors that were associated with involvement in the criminal justice system did not predict the frequency of contact or arrest over the five years. For example, the regions of residence, level of crime within the community in which the respondent resided, being a member of the stolen generation, the experience of financial stress in the preceding 12 months and education attainment were all factors associated with ever being involved in the criminal justice system, but not frequency of contact (Weatherburn & Snowball, 2008). The finding that illicit drug use was a strong correlate of involvement with the criminal justice system is somewhat preliminary in this study due to the nature of the survey that requested a dichotomous response from the respondent of having ever used illicit substances or not.

Other factors of social disadvantage such as the disintegration of the family and kinship networks of the Aboriginal population of Australia have been widely attributed to the use of Alcohol and other drugs. Indeed, as with their non-indigenous counterparts, family breakdown, neglect, family substance use and abuse are significant risk factors for the development of substance use and criminal behaviour in Aboriginal youth (Prichard & Payne, 2005). Consistent with the early research outlined above that documents the influence of community and family contextual factors in individual substance use patterns, Prichard and Payne reported that indigenous youth reported

higher rates of family substance abuse. Specifically, Indigenous youth were twice as likely to report that their siblings abused substances and indicated distinctly higher rates of maternal substance abuse (Prichard & Payne, 2005).

In their examination into the differences in criminal behaviour between a sample of indigenous and non-indigenous participants, Pritchard and Payne reported a statistically significant differences in the types of crimes that indigenous youth received a term of incarcerated, when compared to their non-indigenous counterparts. More than two thirds of the non-indigenous sample reported a violent offence to be their most serious crime, in comparison to half the indigenous sample. While the indigenous sample reported lower rates of violent offences, they reported greater rates of acquisitive crimes; 50% of indigenous offenders reported being detained on a burglary charge, compared with one third of non-indigenous youth. 25% of indigenous youth had been detained for an assault or robbery charge compared with 42% of non-indigenous youth detained for assault and 37% for robbery (Prichard & Payne, 2005). When the participants were asked to self-report rates of ever committing a burglary and identifying as regularly committing burglary, 92% of indigenous youth reported ever committing a burglary, compared with 72% of non-indigenous youth. While, 70% of indigenous youth identified as committing burglary on a regular basis compared with 57% of non-indigenous youth (Prichard & Payne, 2005).

When comparing drug use, Prichard and Payne reported similar substance use patterns between their indigenous and non-indigenous sample. The indigenous sample reported slightly higher rates of cannabis and inhalants use, although these differences were not significantly different. Both the indigenous and non-indigenous sample also reported similar rates of poly substance use. The only statistically significant differences between the indigenous and non-indigenous sample was found in the use of amphetamines and ecstasy. 27% of non-indigenous participants had tried amphetamines compared with 16% of indigenous youth. In relation to ecstasy, five times



as many non-indigenous youth had tried ecstasy when compared with indigenous youth (Prichard & Payne, 2005).

Prichard and Payne (2005) attempted to establish a causal link between the indigenous youth drug use and crime participation. In order to achieve this, the authors asked each participant a small series of open ended questions regarding their understanding of the cause of their offending behaviour. Prichard and Payne reported that 35% of indigenous youth in their sample attributed their offending behaviour to substance use. Within this 35%, the most common attribution made were being intoxicated at the time of the offence, being a daily substance user at the time of the offence and self-reporting substance use as an explanation for their offending behaviour (Prichard & Payne, 2005). Similar results were found for the non-indigenous sample, with 29% of the offences that resulted in detention being attributed to substance use, with again intoxication and daily substance use at the time of the offence most commonly reported (Prichard & Payne, 2005). Interestingly, Prichard and Payne reported that indigenous youth were more likely than non-indigenous youth to have initiated criminal behaviour before their first use of a substance. More specifically, substance use preceded offending for one in three non-indigenous youth compared with one in five indigenous youth. This finding led the authors to suggest that for juvenile offenders, substances appear to play a more important role in the criminal careers of non-indigenous youth than for indigenous youth (Prichard & Payne, 2005).

There is consensus among criminological, epidemiological, health and psychological research data that Aboriginal people are grossly over represented within the criminal justice system, have poorer health outcomes across all measures when compared to their non-Aboriginal counterparts, and engage in substance use and misuse at a greater rate when compared to non-Aboriginal Australians. Early research described differing patterns of substance use dependent upon geographical location (i.e. urban versus rural areas), however over time, researchers' have reported that the spread of

illicit substances has now permeated even remote Aboriginal communities. Such researchers' report alcohol and illicit substance misuse at alarmingly high rates. The pattern of drug use and misuse within the Aboriginal population has its origin in the socio-political history of Australian society and the treatment of Aboriginal people within the wider community. Similarly, research has consistently found that Aboriginal people are grossly overrepresented within the criminal justice system at a rate that is one of the highest in the world. Again the factors that underpin this gross overrepresentation have its origin in the socio-political history of Australian society and the ongoing social legacy of cultural disruption, family fragmentation, poverty and socio-political standing within the wider community. Consistent with international researchers' that have drawn upon culturally diverse populations, there is a lack of consensus as to whether the nuances of drug use and crime patterns evident within the Aboriginal communities of Australia are adequately accounted for within the current theories and explanations of the drugs-crime relationship.

## Chapter Six

### 6.1 Methodological approach of Study One and Study Two

From a phenomenological perspective, I aimed to explore and reveal the links between drug use and involvement in crime that exist over the life course of incarcerated adult male offenders in Western Australia. Like many human behaviours, an individual's involvement in drug use and criminal behaviour is a complex social phenomena. Therefore to achieve the research aims, it was necessary to choose a dynamic and interactive approach to data collection and analysis. I have based my research on the participants' personal perceptions regarding their lived experiences. I have emphasised the subjective logic and meaning that the participants placed on the events, experiences, feelings, environments and contexts that they have confronted throughout their life to the time of interview. Therefore, this research is aimed at discerning the comprehension that these adult offenders have acquired over time to understand their involvement in the drugs-crime relationship over the course of their lives. The nuances of their relationship to both activities separately and together are compared and contrasted to the dominant theories, with discussion and comment made where these models offer a good fit for the experiences of the participants. Where such theories do not adequately explain the experiences of the participants, an alternative theory is offered.

With the research aims in mind, a qualitative research approach was used in both Study One and Study Two. The qualitative methodology chosen is consistent with the narrative under analysis approach as described by Leary (2014). That is, I sought to gain the participants perceptions and understandings of how the drugs-crime relationship commenced, changed, ceased and re-commenced over their life course trajectory. The participants were invited to provide an autobiographical recount of these experiences during interview with me, as the primary method of data collection. The benefit of drawing upon an autobiographical approach to data collection, as outlined by Brunelle, Brochu & Cousineau (2000), is that it allows for tracking and exploring life events and how these life events were understood by the participant. Autobiographical narratives

are an effective data collection method for validating the voices and experiences of marginalised groups, as it is assumed that the narrative lived, told, and anticipated by the participants have occurred within an evolving cultural and social context that is not only different from the dominant culture and society, but also different from one ethnicity to the next (Leavy, 2014). As a collective group of participants, incarcerated adult male offenders are considered to be a marginalised group. The gathering of facts about the participant's life during the interview, and extrapolating data about possible connections between the individual's drug use and offending behaviour is enriched further through gaining additional information about feelings and reactions attached to each life event discussed. It is acknowledged that each participant in telling his story has reframed, relived, retold and revised their own life stories over time in a search for coherence, meaning and continuity in their lives (Leavy, 2014). Each participant's evolving life narrative is subjective and it is acknowledged that the accuracy of life events and the sequence in which these events occurred may have diminished over time. In acknowledging the limits to data objectivity, I also acknowledge that I have adopted a relativist ontological position (Guba & Lincoln, 1994). This research is based upon the understanding that there is no objective reality or "truth", but rather multiple realities all of which are influenced by context (Mills, Bonner, & Francis, 2006).

During interview, by re-telling their stories during this research, the participants will develop a shared understanding with me as a researcher. As pointed out by Riessman (2008), I as researcher, will ultimately shape and influence the manner in which the story is told through my own style of interacting, questioning and by the pre-determined areas of inquiry. Additionally, the context in which the interviews (i.e. a prison setting) take place will ultimately shape the responses of the participants, either at a conscious or unconscious level. This may mean that should the same participants be interviewed in a different setting (e.g. their home or community setting) different information or an alternative perspective may be offered. Therefore the epistemological position taken is one of constructivism that emphasises the subjective interrelationship

between me as researcher and the participants in constructing meaning out of the narratives offered (Mills, Bonner & Francis, 2006). During the interactive process of gathering and analysing the narrative data, I therefore acknowledge that I became part of the research as an author of a reconstruction of meaning and experience, as opposed to an objective observer of the participants (Mills, Bonner & Francis, 2006). As Charmaz (1995) asserts, the interaction between the participants and the researcher produces the data and contributes to the subsequent meanings placed on that data.

Consistent with the aims of the research, the ontological and epistemological perspective taken, I have drawn upon the grounded theory method of analysis as described by Strauss (1987) and Strauss and Corbin (1990; 1998). The foundation of grounded theory is symbolic interactionism (Kearney, 1994). That is, human behaviour is developmental; people interact with the social/ environmental matrix based upon their individual symbolic understandings and continually adjust their behaviour based upon their evolving perceptions of the environment around them (Dollen Mullen, 2006; Kearney, 1994). The social matrix and the behaviour of those within it, is believed to be influenced by a socially derived concept of self, others and groups (Dollen Mullen, 2006). Therefore, the narratives told by each of the men provides an insight not only into the meaning they place on their own experiences, but also about the social and cultural processes within which they interact (Reissman, 2000). The interpretation that the individual places on events, situations, and facts and what these interpretations mean to the individual is crucial to understanding the motives behind behaviour (Dollen Mullen, 2006; Kearney, 1994). This means that in order to understand an individual's interpretation of events and behaviours, it is necessary to represent that individual in their own terms (Lofland, 1984). Autobiographical narrative offers a rich source of data; however Hussein et al (2014) and Glaser (1978) before them highlight the potential for methodological error from drawing upon interviews as a primary source of data collection. In an effort to reduce the potential for methodological error, I have also

included the use of behavioural observations made during my time within the prison setting and consultation with prison staff if required, for some participants.

There are multiple methodological approaches to grounded theory development. I have adopted the interpretation of Strauss and Corbin (1998) and others (e.g. Charmaz, 1995) in researching and reviewing the empirical research as an additional source of data that can contribute to theory development. The process of theory development is considered to be an act of constructing from multiple sources of data (research literature included) an explanatory system that integrates various concepts and relationships (Strauss & Corbin, 1998). The theory that is developed is therefore an interpretation based upon the multiple narratives, and realities of the participants', in addition to the understanding of the research literature as integrated and adopted by me as a researcher (Strauss & Corbin, 1994). From this perspective, the literature reviewed, arguably increases theoretical sensitivity by providing examples of similar constructs or relationships that guide data analysis (Mills, Bonner & Francis, 2006).

With the aim of understanding the development, maintenance and desistance of drug use, criminal behaviour and involvement in both activities, I drew upon a sample of incarcerated offenders whose involvement within the criminal justice system was known to be associated with drug use. Within the Western Australian prison system, the largest proportion of incarcerated offenders is non-aboriginal adult males. The Western Australian prison system also has a significant overrepresentation of Aboriginal adult males compared to their proportion within the general population. In the context of the dominant theories, frameworks and understandings within the research literature that explain the drug-crime connection (as reviewed above in chapter 3) were developed predominately on adult males, it seemed a natural fit to conduct this exploratory study on an adult male sample. Study Two drew upon a sample of incarcerated Aboriginal males in response to the significant overrepresentation of this population in the Western Australian prison system, in addition to the research evidence acknowledging the significant influence that cultural factors play in the development, maintenance and

desistance from involvement the drugs-crime relationship. It is acknowledged that the experiences of these incarcerated males are likely to be different and varied from those of incarcerated women, youth and those from other culturally and linguistically diverse backgrounds.

### **Procedure**

Consistent with the grounded theory approach, a non-probabilistic theoretical sampling technique was used to examine the drugs-crime relationship in the population of adult male offenders incarcerated in Western Australia. The initial step to determine the sample sizes in Study One and Study Two was to engage in the process of purposive sampling through the development of a pre-determined set of selection criteria based upon the following characteristics; any sentenced male incarcerated offender who had been imprisoned for a period of six months or less; had been a known drug user, as determined by having previously been assessed as suitable for entry into a drug treatment program or who had a current substance abuse alert on the Total Offender Management System (TOMS; a database used by the DCS to manage information about offenders) and had been sentenced for at least one non-drug related offence on the current term of imprisonment. This selection criterion was provided to the Department for Corrective Services (DCS) to generate a list of potential participants within both the maximum security prison facility, Casuarina Prison and medium security prison facility, Acacia Prison. In an effort to reduce any potential psychological harm or distress to the participants who consented to engage in the interview process, potential participants were excluded if he was at known risk for suicide, exhibited psychiatric symptoms or had been detained for a period of greater than six months. The decision to limit the inclusion criteria to those who had only been incarcerated for 6 months or less was to assist in the participant's recollection of recent factors that have contributed to their involvement in both drug use and criminal behaviour.

Once the initial sample population had been identified by DCS within each prison facility, a theoretical sampling approach was adopted to ensure that theoretical

saturation was achieved (Glaser & Strauss, 1967; Higginbottom, 2004; Morse, 1994; Webb & Kevern, 2000). Theoretical saturation was deemed to have been achieved once no new themes or ideas were put forth during the interviews. The final sample across the two studies was 34. Study One comprised of 22 non-aboriginal participants (see Study One participants section) and Study Two comprised of 11 Aboriginal males (see Study Two participants section). Consistent with the grounded theory approach, data collection and analysis occurred simultaneously. Each interview took between 20 and 90 minutes to complete and were conducted within the official visits area of Casuarina maximum security prison, located 30 kilometres south of Perth and the education block of Acacia medium security prison. Acacia prison is one of two privately managed prisons in Western Australia and is located approximately 50 kilometres east of Perth central business district.

Each interview across both Study One and Study Two was transcribed contemporaneously by hand due to security constraints that did not allow for audio tape recording of interviews within the prison facility. By commencing the interview with the same open ended questions (see Appendix 3 for interview schedule); I permitted respondents time and space to spontaneously tell their narrative. The remainder of the interview was guided by the participants' story and as analysis progressed, the codes and categories that emerged from other participants' lived experiences and narratives. Each participant was encouraged to expand upon certain themes with the assistance of minimal prompts, and reflective observations, in addition to explanatory and temporal type probes to increase the depth and richness of the data obtained. With this in mind, I devised a range of additional questions, probes and prompts (as outlined in Appendix 3), however not all of the participants were asked these questions in the linear fashion suggested by the interview schedule. Where limited information was offered by the participant, additional probing questions were asked so as to develop a more phenomenological understanding of the topic under discussion or themes not yet raised that were deemed important to the study's aims.



Each interview was re-transcribed and the resultant transcript went through a dual process of analysis, with the primary focus being on content analysis through open coding. Open coding is a process of analysis whereby discrete concepts (e.g. events, feelings, actions etc.) are identified within the transcript of each participant and grouped together under a conceptual category (Dollen Mullen, 2006; Kearney, 1994). This allowed for the information obtained to be reduced throughout the study period and afterwards. In each study (i.e. Study One and Study Two), the within case analysis of each interview was conducted by reading and re-reading the transcripts, engaging in open coding by breaking down the interview transcripts line by line, and creating preliminary notes and memo's (i.e. informal notes on the conceptualising that emerged from each transcript). The benefits to this type of constant analysis are the ability to generate concepts through inductive logic and constant comparison (Hussein et al., 2014).

Subsequent to the process of within case analysis, a cross-case analysis from subsequent interviews was considered and focussed on points of convergence and divergence of the data. Areas of convergence were incorporated into the analysis to generate citations that were deemed to be the best representation of the concepts and relationships in the emergent theory. Points of divergence were noted and data from subsequent interviews were considered as to whether the points of divergent could become another theme. Sequential analysis was also undertaken, in an effort to develop an understanding of the course of events for the participants and the repercussions of these events for the participants across the lifespan. Each emergent conceptual category was considered on its own merit and against other instances, events and interpretations in a process of constant comparative analysis (Kearney, 1994). Throughout the comparative analysis, explanations for differences between categories were sought and categories were related to one another such that a theoretical interaction began to emerge from the data. As Hussein et al (2014) contend the systemic

approach to data analysis in using the grounded theory approach increases rigor and trustworthiness of the emerging theory.

## Chapter Seven

### Study One

#### 7.1 Participants

Based upon these selection criteria, the Department for Corrective Services (DCS) in Western Australia compiled a list of 30 non-Aboriginal incarcerated offenders who matched the selection criteria. Of these 30 offenders, 7 participants were found to have either relocated to alternative prison settings or released from custody at the time of interview, while one participant elected not to participate. Therefore, 22 non indigenous incarcerated male offenders participated in a semi-structured interview regarding their personal history of drug use and involvement in criminal behaviour. Each participant was provided with information about the project (participant information; see Appendix 1) and signed informed consent (see Appendix 2) was gained from each participant prior to the commencement of the interview. Table 1 outlines the demographics of the sample.

Table 1 Demographic Data

Number of participants	22
Age range	22- 44 years
Mean age	31.6 years
Range of self-Reported drug related charges	1- 150
Mean number of self-reported drug related charges	18
Total number of participants where their Index offence was drug related	18
Mean age at first drug use	16.7 years

Age range of first use	8 – 35 years
Mean age of first offence	16 years
Age range of first offence	8 – 36 years

## 7.2 Results

The process of coding described above (see methodology section) resulted in eight core categories which are the basis for the emergent conceptual theory. Table 2 outlines the core categories and the corresponding codes that emerged from the within case thematic analysis, sequential and across case comparative analysis of the open codes across participants. The core categories are presented in the manner in which the participants described and came to understand their experiences, that is, as an evolutionary process across the lifespan; from early initiation and experimentation to more sustained investment in the drugs-crime lifestyle.

### **Core categories and corresponding codes.**

As can be seen from Table Two, eight Core categories (in bold) emerged from the data. Each is presented with their corresponding codes.

#### Table 2 Core Categories and Corresponding Codes (indented)

##### **Psychological vulnerabilities**

- Susceptibility to experience boredom
- Susceptibility to peer influence
- Poor coping and decision making skills
- Dysfunctional evaluation of self-efficacy
- Inability to delay gratification
- Mental illness

##### **Drive for Power, Money, Sex and Self worth**

- Physical pleasure, wild sex and great parties
- Powerful self when high juxtaposed to inadequate self when sober

Inability to tolerate normality and routine

Material possessions define self

### **Drug use and offending behaviour led to family exclusion**

Family support protective when accepted

Family support conditional on being sober and crime free

### **Shifting attributions of blame**

Drug entitlement

Personification of the drug

Attribution bias

### **Volition retained**

Uses different drugs to regulate and enhance the effects of other drugs

Choose when and how to commit offences

Ability to desist

Drug lifestyle chosen over an existing pro-social lifestyle

### **Belonging and mastery achieved through drug use and criminal behaviour**

Development of moral and behavioural codes of conduct

Distances self from other pro-social groups

Drug distribution and criminal behaviour becomes a career

### **Psychological Vulnerabilities**

The first core category related to the participants understanding of their initiation into both drug use and criminal behaviour. For most of the participants, this initial use occurred during late childhood or early adolescence. With the benefit of hindsight; the participants attributed their initiation into drug use and criminal behaviour as occurring due to early psychological vulnerabilities that they believed to be innate and enduring over time. The vulnerabilities described by the participants related to deficits in the development of self- regulation including an inability to cope with stress, inability to delay

gratification, difficulty sustaining attention and concentration, distractibility and a susceptibility to emotional and/ or psychological distress. The codes that fit into this core theoretical category are inextricably linked and emerged from the data as contributing factors during period of initiation, continued involvement and after periods of cessation, re-engagement into the use of alcohol and other drugs and criminal behaviour.

*Susceptibility to experience boredom*

Many of the participants directly attributed boredom as the reason for initiation into drug use and criminal behaviour.

*“Boredom.....just bored at night and doing things (crime)” (participant 12)*

*“I am trying to break the boredom” (participant 9)*

For these participants, the experience of boredom was reported as aversive, frequent, enduring over time, and across the developmental trajectory. During periods of initiation into early drug use and offending behaviour, participants spoke about experiencing boredom within the school setting which appeared to originate from difficulties with attention and concentration within the school environment, poor involvement in education, limited family investment or support in achieving educational goals and limited involvement in structured recreational activities outside of the educational setting.

*“Boredom at school and wagged school with some mates then we got stuck in Cottlesloe and stole someone’s scooter and so on and on” (participant 12)*

The susceptibility to experience boredom endured into adulthood, so that even for those participants who had established a pro-social lifestyle (i.e. were employed, in a romantic relationship or married and reported that they were crime and drug free) they continued the experience repetitive states of boredom, which they felt unable to manage and alleviate.

*“When I was working and wasn’t using, life was very boring. I was always trying to keep myself busy” (participant 3)*

For these men, not only was the stability of their pro-social lifestyle experienced as “boring” and too predictable (which in itself was perceived as aversive), but they reported little investment or deriving little pleasure and mastery out of the pro-social activities and relationship in which they were engaged. Therefore, the desire for excitement coupled with the urge to alleviate the experience of boredom was reported as a powerful factor that contributed to their choice to use drugs and become involved in crime.

*Susceptibility to peer influence.*

Consistent with the previous code, the code of susceptibility to peer influence emerged as highly consistent across participants and was experienced across the developmental trajectory and throughout the participant’s history of involvement in drug use and crime. Most of the participants interviewed spoke about their initiation into drug use being heavily influenced by their peers:

*“when I moved and fell into the wrong group and started using speed (amphetamines)...just the wrong crowd and easily led” (participant 14)*

*“Just before the weekend, go wracking (break and enters) or that when we were teenagers” (participant 16)*

Over time, the participants also attributed peer influence as a contributing factor to their continued involvement in drug use and criminal behaviour into adulthood:

*“I started driving and hanging around old mates and got done for driving without a license and started using small amounts of drugs” (participant 3)*

*“I think anyone if put in a different circumstance if you end up in a circle of influence and you have thing happening in your life and it starts off as a weekend thing*

*and then the next thing you know your addicted” “my biggest problem is the people I hang around. Always someone else’s fault, if I get out it is no good hanging out with the same crew” (participant 7)*

Implicit within the participants narrative about the influence of their chosen peer group were a range of associated psychological factors related to the participant’s self-esteem, identity and sense of belonging within the community. Factors such as a fear of rejection from the deviant peer group should the participant decide not to use drugs or comply with plans to engage in criminal activity; uncertainty about how to establish a sense of belonging to a pro-social peer group and fears of experiencing loneliness and boredom.

*Poor coping and decision making skills.*

All of the participants spoke reflectively about the decisions they made that contributed to their history of involvement in the drug use and crime. In discussing some of the decisions made and their decision making skills more generally, it was apparent that the participants were comparing themselves to what they perceived to be a socially acceptable decision, rather than one that may have assisted them to achieve a personally relevant goal. From this perspective, some participants perceived their decision making skills as limited or in some way defective and identified these deficits as a significant contributing factor to their involvement in drug use and crime:

*“I typically am a rebellious type and make some terrible decisions’ (participant 23)*

*“I always make the wrong choices” (participant 4)*

*“I gave up alcohol and took up amphetamines; at the time I thought that it was a smart move” (participant 10)*

Other participants justified their decision to continue to be involved in drugs-crime lifestyle as being a reasonable response to their life circumstance;



*“because I knew I was going back to jail, so there is no point going on the straight and narrow when you are going back to jail” (participant 12)*

*“The reason that I switched from speed to heroin was that I had an outstanding assault charge and there was no point in trying to straighten my life out until I had the assault charge out of the way” (participant 8)*

The difficulties that participants described when making decisions emerged as inextricably linked to the difficulties that this participant's spoke about in accepting and coping with life adversities. Some participants disclosed that when they encountered difficulties in their life, that these difficulties often resulted in an increase in drug use and involvement in criminal behaviour

*“We had a boy together and we lost him to SIDS (Sudden Infant Death Syndrome) when he was five months. That fuelled the drug problem; it gave us an excuse to continue using” “when I turn to drugs, I turn to crime to pay for it” (participant 7)*

*“Split up with my de-facto and have been in and out of prison since then” (participant 14)*

*“ when I was doing it (taking drugs) for the emotional aspect, it wasn't nice, it wasn't what I expected, I thought it would get rid of the problem, but it just got worse” (participant 16)*

From the above quotes it is evident that drug use and criminal behaviour provided the participants with an “escape” or break from the experience of an aversive emotional state, thereby forming a maladaptive coping strategy. For these participants, poor decision making and maladaptive coping strategies appear to be cyclic and mutually reinforcing. That is, when faced with adversity, these participants spoke about feeling unable to cope which leads to poor decision making (e.g. drug use and crime involvement), which again led to increased stress and again poor decision making.

*Dysfunctional evaluation of self-efficacy.*

Across interviews, the participants tended to provide inaccurate perceptions of their ability to control current and future events in their lives. Many described passive acceptance of other people's decisions about their lives and a tendency to rely upon others to guide and manage their behaviour. For example, participant seven spoke of how the death of his brother led to "*people hanging around me that wouldn't have because my brother wouldn't have allowed it*". Here the participant provides an example of how his brother was able to manage the influence of peers around him, a task that he perceives himself as unable to do since the loss of his brother. This perception of self as helpless was described in various ways, including feeling unable to control or influence the types of events that happen in their life

*"When you get out things always seem to happen and you don't like to do these things, but they do tend to happen" (participant 30)*

Further, when negative events do occur, feeling unable to respond in an alternative manner, that is, other than by taking drugs and/or committing crime

*"The feeling of is this it? Is this the way it is going to be forever? Am I always going to take drugs? Am I ever going to be able to give it up? Or will I always have a lot of self-doubt?" (Participant 11)*

And finally, the participants dysfunctional self-efficacy meant that when one negative event occurred in their lives, they maintained the belief that more negative events were inevitable. Therefore, the participants described how they would give up on attempting to maintain a pro-social lifestyle and engage in a series of anti-social behaviours with the belief that they were going to be caught anyway

*“Once you do one thing, you might get a fine or whatever and then you don’t pay that and then it just goes downhill. I got an intensive supervision order and breached that, then I would do something else knowing that I was coming inside” (participant 12)*

*“I see life like you need to build it up to get things you want and when you have a great big pot hole in the way, like when you have to go to court for something, then there is no point doing things to get your life back on track when you know you might have to go back to prison”*

#### *Inability to delay gratification*

This code relates to the participants reported inability to voluntarily postpone immediate gratification and continue in goal directed behaviour for the benefit of future positive outcomes (Mischel, Shoda, & Rodriguez, 1989). Therefore inherent in this code is poor planning and goal setting skills. As the ability to delay gratification emerges during childhood, this difficulty was described as an enduring tendency that exacerbated with increased use of Alcohol and other drugs.

*“Sometimes I can work towards things. Like the car I have now. Other times, like when I am on drugs I want things now and that’s when you take it” (participant 12)*

This quote from participant 12 highlights the dis-inhibiting effects of intoxication could either enhance goal directed behaviour (i.e. to have the desired object) or impeded such behaviour (i.e. to desist from offending behaviour) dependent upon the desired future outcome. Some participants concurred with the later, that is, that their inability to delay gratification significantly impaired their ability to attain their goal of abstinence from drug use or crime.

*“When I get out I see temptation and it’s all over” (participant 3)*

#### *Mental illness.*

Many of the participants reported that they had experienced mental illness/es that precipitated and/ or occurred as a consequence of their drug use. Some participants maintained that their initiation into drug use could be understood due to a diagnosis of a disorder of childhood such as Attention Deficit Hyperactivity Disorder (ADHD)

*“I was diagnosed with ADHD and have been on dexamphetamine and Ritalin since the age of 7. I have been on naltrexone implants, but I think a lot of speed users are ADHD” (participant 30)*

*“I had to go to Next Step and they wanted to put me on dexamphetamine for ADHD” (participant 31)*

Like those quoted above, some participants attributed their desire for a stimulant based drug (amphetamines) as a symptom or consequence of their pre-existing mental illness. Others however, justified their choice to use stimulant based drugs as a means through which they could “self-medicate” or attenuate their experience of symptoms associated with an undiagnosed disorder such as ADHD. For other participants, drug use resulted in the experience of a mental illness.

*“I have got schizophrenia....I had a psychosis due to the drugs” (participant 17)*

*“Long term effect; psychological spinning out, thinking that things are there that are not there, thinking that cops are always after you, paranoia, I have heard voices, I have had depression” (participant 3)*

*“I started using methamphetamines and that sent my brains bananas, I ended up with a speed induced psychosis” (participant 8)*

Despite the adverse effects of mental illness, none of the participants who disclosed experiencing mental illness reported ceasing their use of alcohol and other drugs. Instead, some of the participants reported attempting to manage the symptoms of mental illness by making a change to their substance use.

*“My head couldn’t handle the schizophrenia and the amphetamines, so I decided to jump onto the opiates. The mix between the schizophrenia, the paranoia and the opiates, that turns you nasty” (participant 8)*

### ***Drive for Power, Sex and Money***

As the participants developed into later adolescence and adulthood, they described their motivation for continued use of illicit substances and involvement in criminal behaviour as being derived from their own hedonistic goals and values. Hedonistic goals in the psychological sense, relate to the pursuit of pleasure and the avoidance of pain. While the pursuit of pleasure is thought to be the basis of most human behaviour, for these participants, pleasure was derived predominantly from meeting primary physiological needs, rather than pleasure that is derived from higher order needs such as social or romantic affiliation, achievement or self-actualisation. It is this type of hedonism that is referenced throughout the narratives of these participants.

#### *Physical pleasure, wild sex and great parties*

For some participants, the most reinforcing element of their involvement in both criminal behaviour and drug use was the immense physical pleasure that occurred due to a state of intoxication, adrenaline release or a combination of the two:

*“I think the offending was I got as much of an adrenaline rush off offending as I did off taking drugs” (participant 10)*

*“I loved it, I loved the feeling of being stoned and I would steal” (participant 8)*

Supplementing the physical pleasure derived from the state of intoxication or adrenaline was the pleasure derived from “great parties” and “wild sex”. A psychopharmacological side effect of some illicit drugs is an increased libido:

*"It makes your sex drive a lot, as soon as I have a shot, it makes me really horny"*  
(participant 22)

Therefore the participants described resultant expectations and implicit rules within the drug using subculture related to casual sex and parties that maintained their drug use:

*"For me I will honestly say it is the go girls, it's the wild sex and great parties"*  
(participant 23).

*"When you start getting into drugs, you start getting girls, you become, you start to dictate to a lot of people to do things for you"* (participant 22)

For these men, "pleasure" was derived from a number of sources; the psychopharmacological changes that occurred due to the state of intoxication or release of adrenaline (in the case of offending behaviour without intoxication), an increased libido, the expectation (and at times certainty) of casual sex, and as a secondary reinforcer, the absence of normal relationship expectations and responsibilities.

*Powerful self when high juxtaposed to inadequate self when sober*

Many of the participants spoke about the feelings of enhanced social status and self-efficacy that they experienced when high or intoxicated that they felt unable to achieve when in a state of sobriety.

*"You think you are bullet proof (when intoxicated) most of the time. If you take drugs, you think that you are the hulk"* (participant 3)

*"Untouchable, unstoppable (when on drugs), vulnerable (when sober)"*  
(participant 34)

These two participants independently identified that their self-image and self-efficacy changed dramatically during a state of intoxication and further that this element of intoxication was reinforcing. For other participants however, drug use assisted them to

attain a sense of identity, in the absence of a coherently formed sense of self. For example when asked to describe himself when not taking drugs, participant 19 stated *“um I don’t know, just work alright, put a bit of effort in and I don’t know, responsible enough”*

This code related to the highly reinforcing feelings of power and enhanced self-efficacy that participants experienced when intoxicated which was in contrast to their feelings of powerless and inadequacy when sober. In addition, this code encapsulated the experience of gaining a sense self and identity when intoxicated in the absence of a coherent sense of self when sober, that is in itself experienced as powerful.

*Inability to tolerate routine and normality.*

Participants in this study spoke about their inability to tolerate routine and what they perceived as “normality”. Instead, the participants described their lives (upon reflection) when involved in drug use and criminal behaviour as unusual or abnormal, but exciting. It was the unpredictable and “exciting” aspect of the drugs-crime lifestyle that was appealing.

*“I really enjoyed myself when I started working, but it became boring, I need to have excitement” (participant 31)*

*“when I got out I got a job and was earning \$1400 per week and that was the worst thing I ever did, I was trying to work and use drugs, looking after my missus kids and then the pressure got too much” (participant 30)*

These quotes illustrate the difficulty that these men experienced fulfilling the role expectations of a pro social “normal” lifestyle. For some participants, periods of sobriety and incarceration led to the realisation that what they perceived to be a normal lifestyle while involved in the drugs-crime lifestyle was anything but normal. One participant

spoke about “craving normality” while incarcerated, yet acknowledged that his lifestyle was not characterised by what others would perceive to be normal.

*“I can remember tuning people’s cars at 4am and revving it up and normal people don’t do that and people would come out and have a go at you and you can’t understand what they are on about and you can go days without sleep and kid yourself that you are normal” (participant 7)*

For this participant, over time what he considered to be “normal” and/ or reasonable behaviour became skewed by his association with others in the drug using subculture. It is this contradiction that is the essence of this theoretical category; these participants are aware of pressure (from the judicial system, family and society as a whole) to live a conventional or “normal” pro social life, yet as they become more entrenched in the drugs-crime lifestyle, their perception of what constitutes normality is considerably different to that of society as a whole. When faced with the expectation to live a “normal” or conventional lifestyle, these participants spoke about feeling overwhelmed and thus sought to seek pleasure and avoid the routine and responsibility associated with such a lifestyle.

*Material possessions define self.*

In the absence of a coherent sense of self, the participants appeared to define themselves and their place within the social hierarchy by their possessions.

*“When I was 16, I was draped in gold” (participant 10)*

*“Couldn’t wait to get back to Perth to buy things like clothes and that” (participant 12)*

Many of the participants spoke about the amount of money that they had made through offending behaviour or the sell and supply of drugs, in addition to the types of possessions they had and the ease with which they could obtain these possessions. For these participants, the more possessions they acquired equated to higher social status and in turn, increased self-efficacy. Similar to mainstream society, certain possessions,



such as cars, jewellery and certain brand label clothing, were purchased as a means through which to demonstrate success within drug use and crime subculture.

The ease with which material possessions could be attained through criminal activity and/ or the sell and supply of drugs created an additional barrier to leading a pro social lifestyle. Many of the men stated that they were unable to make as much money through legitimate means of employment when compared to what they made through offending behaviour.

*"I make really good money (selling drugs) and my son has some good stuff all brought legitimately with drug money". (Participant 23)*

This quote not only illustrates the ability of some of this participant to justify their involvement in the sell and supply of illicit drugs as legitimate business, but is also illustrative of how financial success within the sell and supply of drugs contributed to this participant being able to provide for his family, a sense of achievement and mastery he was not able to achieve through legitimate employment.

### **Drug use and Offending behaviour led to family exclusion.**

Most of the participants described their relationships with their families as predominantly protective. The majority acknowledged that their family did not approve of their lifestyle choices and would therefore attempt to intervene to inhibit their involvement in offending behaviour and drug use. This core category therefore related to how the participants navigated the conflicting desire to live their life as they choose (i.e. drugs-crime lifestyle), while at the same time appease their families' requests that they live a pro-social lifestyle. Some of the participants therefore, oscillated in their association with their family; when they felt motivated to change their lifestyle they would draw upon their family for support, however when they were satisfied with their lifestyle, they would distance themselves from their family system.

*Family support protective when accepted.*

Most of the participants acknowledged that their families did not approve of their lifestyle choices and in some instances, that they were the only family member to live a deviant or anti-social lifestyle.

*“Everyone in my family has their own business and then there’s me. I have always had the opportunity, but I always thought I could use recreationally” (participant 23)*

Perceiving themselves as an “outcast” or dissimilar to the rest of the family contributed to these men to make deliberate attempts either conceal their involvement in the drugs-crime lifestyle

*“I was always trying to hide it (drug use) you know” (participant 11)*

or to attempt to desist from involvement to live a pro-social life. When the participants described making attempts to desist from involvement in the drugs-crime lifestyle, they acknowledged that their family’s support was critical to helping them achieve their goal.

*“I did stop for a while with the help of my family” (participant 27)*

However, ultimately the participants acknowledged the support and encouragement they received from their family to live a pro-social lifestyle was not enough to make a sustained lifestyle change.

*“I have the most loving parents and sisters in the world, but I like to be me” (participant 31)*

*Family support conditional on being sober and crime free*

Over time and with continued involvement in drugs-crime lifestyle, the participants stated that the nature and level of the support from their family changed and became

conditional upon them being able to demonstrate that they were no longer using illicit drugs or involved in criminal activity. In practice, the participants stated that this meant that practical and emotional support from family was offered predominantly after periods of incarceration where the family assumed that they had been drug and crime free for a period of time and were most motivated to remain out of the prison system. It is also possible that the offers of support from family occur within the context of implicit and at times, explicit pressure from the participant themselves and various facets of the justice system, such as releasing authorities, to support the participant's reintegration back into the community. The below quote illustrates the type of practical support that one man's brother offered to assist his brother following his release from prison.

*"Now my brother has offered me a job and I have all my own tools etc to start me out, I have more now to get out with than in the past" (participant 23)*

Where participants were not able to demonstrate a commitment to remaining drug and crime free or relapsed, family support was withdrawn.

*"Family, it (drugs and crime) costs you your family, people you are closest to, it's not worth it" (participant 16)*

### **Shifting attributions of blame**

Throughout their narrative accounts, participants attributed blame for their drug use, lifestyle and current incarceration to both internal and external sources, including a range of people, circumstances, events and environments. Essentially, this core theoretical category related to how the participants came to understand their own involvement in drug use and crime. This core theoretical category included three codes; drug entitlement, personification of the drug and an attribution bias.

*Drug entitlement.*

For most of the participants interviewed, it became apparent that they came to perceive drug use as a lifestyle choice that they felt entitled to choose irrespective of the impact that their choice may have had on themselves and those around them.

*“I never used to think about anyone else or the consequences never; I didn’t seem to care about financial loss or anything like that” (participant 7)*

The sense of entitlement to choose the drugs-crime lifestyle as a legitimate lifestyle choice was often justified in terms of the lack of harm to others. For example, the participants would speak about drug use as a victimless crime and that they were only hurting themselves (through the administration of the drug). Associated with this view, some participants spoke about experiencing feelings of resentment towards family members or others who suggested that this lifestyle was amoral or wrong.

#### *Personification of the Drug.*

In attempting to understand their own pattern of drug use, participants tended to apportion some responsibility for their behaviour to the drug itself, thereby personifying the drug.

*“The problem is once you start it’s like quicksand; once you fall into it, you don’t see anything else” (participant 27)*

Personification of the drug appeared to serve two functions for the participants; first, the participants could apportion the substance some responsibility for the choices they had made and behaviours they had exhibited; and second, the participant was able to distance themselves from their behaviours, choices and perceptions that were incompatible with social/ family expectations and their own self-perception (ego dystonic). Personification of the drug itself for the participant’s incarceration in particular and involvement in criminal behaviour, more generally, appeared to have its basis in the

drugs causes crime theoretical framework adopted by the general public and public policy as a widely accepted stereotype.

*Attribution bias.*

It became apparent when coding the interviews that the participants tended to attribute responsibility to internal and external sources in accordance with a self-serving attribution bias. That is, during the participant's narratives, when discussing their ability to desist from offending or drug use (i.e. positive or socially desirable behaviours), they tended to apportion their success to internal factors (strengths or traits), however when discussing their involvement in negative activities (e.g. criminal behaviour), they tended to apportion responsibility to situation, events, or people that were external to themselves.

*"When you get out things always seem to happen and you don't like to do these things but they do tend to happen" (participant 30)*

*"I was selling it, selling amphetamines...but I had a very high maintenance girl, she cost you an arm and leg" (participant 19)*

Attribution biases are self-protective, in being able to create psychological distance between self and behaviour. Reliance on external attribution biases as evident in the above quotes, increased in frequency where feelings of ambivalence emerged. That is, when the men described experiencing competing feelings of wanting to be both involved in the drugs-crime lifestyle and also not want to be involved in the drugs-crime lifestyle, apportioning blame to external sources reduced the cognitive dissonance created by the ambivalence and resultant relapse.

Interestingly, internal attributions tended also to be made by the men with respect to perceived success within the drugs-crime lifestyle. The ability to make money, avoid police detection or gain social status within the criminal subculture, was often attributed

to what the men perceived to be strong internal traits that did not appear to be generalizability to other contexts. For example in discussing his drug sales and distribution business, Participant 23 described himself as

*“Very business orientated, very domineering, anything business related and I am dominant. I am a thinking person and I think a lot about the deal...I have people I know and trust but they are junkies and I know they will rip me off.”*

### **Volition retained**

Implicit in all of the theories and models of drug use, intoxication and development of dependency are ideas and understandings about the degree to which drugs may or may not impair volition. Consistent with the rational choice model participants interviewed were able to articulate the decision making processes that they engaged in throughout their history of involvement in drug use and criminal behaviour. From the participants perspective, even when drug dependant, they retained their volition. This core category therefore comprised of three codes; drug lifestyle chosen over an existing pro-social lifestyle; different drugs used to regulate and enhance the effects of other drugs; and chooses when and how to commit offences.

#### *Drug lifestyle chosen over an existing pro-social lifestyle.*

In the context of their early family support and encouragement to adopt a pro-social lifestyle, some participants described their explicit decision to engage in drug use and criminal behaviour instead of continuing in their current established pro social lifestyle,

*“I was married, I had a kid, a house, a car...I found out she was having an affair, but I didn't care, I just wanted to move out with my brother so I could start to use drugs”*  
(participant 22)

*“I was driving and earning heaps of money and started using to go to work 7 days a week, I had no social life and then stopped working so that I could sell drugs and still use and pay off my mortgage” (participant 31)*

These participants spoke about their decision to abandon their established pro-social lifestyle to become involved in the drug-crime lifestyle. The men perceived their decisions to be well considered, goal oriented and fulfilling both their needs of daily living (mortgage repayments, food etc) and desire to use drugs. For participant 22, the social bonds of marriage, a career and even his role as a father was not enough to curb his interest in the drugs-crime lifestyle. For this participant in particular, these social conventions were actively rejected in favour for the drugs-crime lifestyle, which he perceived to be more exciting and fulfilling when compared to the responsibilities and expectations of a conventional lifestyle.

Other participants however made attempts to co-exist between two lifestyles; a pro-social lifestyle and the drugs-crime lifestyle.

*“I would rather not spend work money on drugs, so I would steal for it and spend that on drugs, I still had to pay rent and that” (participant 12).*

In the above quote participant 12 described his attempt to abridge two lifestyle choices; that is he would spend legitimate income on the provision of basic needs (e.g. food, shelter etc) and engage in illegal or illegitimate means of generating income (in this case stealing) for illegal or illegitimate needs (i.e. drugs). This decision was effective to some extent until his involvement in the drugs-crime lifestyle resulted in his incarceration, which in turn impacted on his ability to continue his involvement in his pro-social lifestyle.

*Uses different drugs to regulate and enhance emotional states and the effects of other drugs.*

All of the participants interviewed divulged a history of poly substance use and disclosed their pattern of drug use to span the full spectrum of use, that is, recreational use, intoxication and the development of dependency for varying lengths of time. Through this pattern of use, the men described becoming aware of the different psychopharmacological effects of various drugs, and in turn, described using this knowledge in various ways; to decide upon the type of high they wanted to suit the plans they had for the night:

*“I used to only use when I went out nightclubbing, so I used to take it to drink and not get drunk because I didn’t like being drunk” (participant 19)*

To choose the drug they wished to use based upon their prevailing mood/emotional state:

*“I would take ecstasy because it is a mood drug, you have to be in the right mood and you have to feel like getting dirty and moody.....some are nice and some are hard highs, I hate that head stone, I hate being on a hard high, marijuana was a hard high” (participant 19)*

To enhance the effects of other drugs:

*“basically the way it goes is that marijuana becomes a never ending source and when you are on speed the marijuana goes with the speed” (participant 30)*

Or to moderate withdrawal effects:

*“When I had a Heroin habit and used speed, it would bring me down” (participant 29)*

Lastly, some participants spoke about choosing their drug based upon imminent criminal sanctions:



*“The reason I switched from speed to heroin was that I had an outstanding assault charge and there was no point in trying to straighten my life out until I had the assault charge out of the way. I enjoy life on heroin and I thought I should enjoy life while I was out” (participant 8).*

Irrespective of their reason for using various drugs at various points in time, these participants described being able to engage in a decision making process to meet their own needs.

*Ability to desist.*

All of the participants spoke about their ability to desist from involvement in both offending and drug use at varying points in their life for varying lengths of time. The motivation for desistance of drug use varied; for some drug tolerance (i.e. needing a greater amount of the substance to achieve a similar euphoric state) motivated their desistance, while for others, the desire to reduce the amount of money spent on substances or concern about physical harm were overriding considerations.

*“I used to have strong mixes and the purity and I would have long breaks off drugs, like a year or two at a time”; “Just have a break and then you need less once you have a break” (participant 16)*

These men described patterns of use and non-use that appeared to be cyclic in nature. For some participants, the prison system played a pivotal role. Participants described intensifying the frequency and amount of use just prior to incarceration, and once incarcerated, utilising the time to assist with withdraws from substances and recuperation for further use on the outside.

*“Prison was my withdrawal period” (interview 3)*

The prison system was also described as playing a significant role in the participants involvement in criminal behaviour. As would be expected, many participants spoke reflectively about their involvement in various criminal offences and tended to; either concede that their incarceration was justified or that they had benefitted from a rehabilitative perspective from their incarceration:

*“It’s good I have come to jail, I can see that you know” (participant 16)*

For other participants, the prison system was viewed as a place that they could establish connections and increase their skills in criminal behaviour.

*“When I got to adult prison it was nothing like I expected, I enjoyed it and I learnt a lot from prison, I used (drugs) all throughout my prison sentence....I have learnt a lot from my adult sentence I learnt a lot and never got caught” (participant 8)*

For these participants, incarceration appeared to be accepted as part of the drugs-crime lifestyle and was therefore embraced and incorporated to be a functional component of their lifestyle choice. That is, the time spent in prison was used to recuperate from health difficulties associated with drug use, to establish stronger connections within the drugs-crime lifestyle or during periods of increased motivation to desist, to access education and psychological assistance.

*Chooses when and how to commit offences.*

Similar to the participant’s description of retaining volition with respect to their choice of drug, and the amount and frequency of use, so too they discussed their ability to decide and plan their involvement in offending behaviour.

*“We went stealing for fun and sometimes I would steal cars and then return them...I have matured...I don’t get motivated by crime; I used to do it for the excitement and fun, not meaning to hurt anyone” (participant 19).*

*“I have had some times when the robberies were premeditated” (participant 30)*

Also similar to the participants use of substances, the decision of how and what type of criminal behaviour to engage in changed over time, as did the motivation for engaging in the criminal behaviour. As depicted in the first quote from participant 19, involvement in criminal behaviour during his late teens or early adulthood was motivated out a desire for sensation seeking and excitement. However with greater investment in the drugs-crime lifestyle, the types of criminal behaviour and motivation for the criminal conduct changed. Of equal importance were the participants’ narratives about the level of premeditation to engage in criminal behaviour. Existent theories within the research literature that attempt to account for the drug-use and crime relationship describe involvement in criminal conduct as largely spontaneous and opportunistic that is derived, in part out of reduced volition associated with drug dependency. This type of involvement in criminal behaviour is not supported by the narratives of these participants. Instead, the participants discussed either a group based or individual decision to engage in criminal conduct (e.g. stealing, robbery, break and enter etc), where the target or victim may have been already identified or identified along the sequence of events that formed the crime.

### **Belonging and mastery achieved through drug use and criminal behaviour**

As with any other activity, endeavour or group association, the participants spoke about gaining a sense of belonging from their involvement in the drugs-crime lifestyle. As a part of this drug-crime subculture, behavioural standards, rules and obligations are created to encourage group cohesion, develop a social hierarchy and to guide individual’s behaviour. For those who became involved in the drug distribution network, it became apparent that they gained a sense of mastery and achievement through their “work” as a “drug dealer”, similar to that derived from legitimate employment, sporting

achievement or goal attainment. This theoretical category is comprised of codes that relate to how these participants achieved a sense of belonging to a cohesive group; criminal behaviour becomes a career; the development of moral and behavioural codes of conduct; distances self from other pro-social groups.

*Drug distribution and criminal behaviour becomes a career.*

Within this sample, the participant's involvement in legitimate employment was varied. While some of the participants described their involvement in legitimate employment as limited, others spoke about being legitimately employed for various periods of time, or having the opportunity to be employed. In the absence of legitimate employment, involvement in the illegal drug distribution network and criminal behaviour became the participants employment and career.

*"Can be quite lucrative, there is a lot of money to be made in crime" (participant 10).*

*"Very business orientated, very domineering, anything business related and I am dominant. I am a thinking person and I think a lot about the deal...I have people I know and trust but they are junkies and I know they will rip me off...I will meet with other dealer, I never advertise what I am doing" (participant 23).*

Participant 23 drew parallels between how he operated his drug distribution business to that of legitimate business models. This participant created two separate environments; a work space (i.e. a house where he sold illicit drugs) and a home/ personal space (i.e. his actual residence). He gained a strong sense of mastery and achievement out of the manner in which he ran his "business" and prided himself on the positive reputation that he achieved within the drug subculture; a sense of mastery and achievement that he had never been able to achieve through legitimate employment or as a member of mainstream society.

*“My major problem is that I like my money and I like to be able to go to the bank and have money. When I had a part time job I had not enough money to buy stuff for my little boy, it’s too easy to sell some gear and get my boy anything he wants” (participant 23)*

*Development of moral and behavioural codes of conduct.*

Most of the participants exhibited a tendency to minimise the impact of their drug use in terms of both harm to themselves and harm to others by exaggerating the harm caused by others drug use. Within the participants narratives, there was strong evidence for a drug users hierarchy that appeared to be based on two critical points; perception of drug dangerousness and route of administration. Consistent with mainstream perceptions and stereotypes, heroin was perceived as the most hazardous drug and therefore users of heroin were likewise perceived to be the most dysfunctional or morally and ethically corrupt. Participants who had not used heroin tended to identify themselves as non-heroin users as a way to separate themselves from those who had, and to minimise their own drug use:

*“Never used Heroin, just amphetamines” (participant 7)*

*“I have never used Heroin .....I wouldn’t take smack (Heroin), I can’t see why you would take a drug to sit around and spew up, they operate differently” (participant 3)*

While the majority of the participants disclosed that they used illicit substances intravenously, for others this route of administration was viewed as an additional risk factor that indicated greater drug dependence and personal dysfunction.

*“I have never used it IV (intravenously).....The people who use it IV will steal it, do anything to get it, the drugs are worth more than money” (participant 19).*

Similar moral virtues were ascribed to various criminal activities and those who engage in that activity. While many of the participants spoke about engaging in acquisitive crime, some justified their behavioural choice as being less harmful or morally reprehensible dependent upon who the targeted victims were.

*"I have never hit battlers, I never steal from common people, I have never stolen from my family and that's why I still have the trust of my family". (Participant 23)*

*"I have never really robbed people's houses, but I would rob shops" (participant 30)*

This type of justification occurred repeatedly throughout the interviews, in that the participants were able to minimise their perception of harm to the victims of their crime if they perceived these victims to be wealthy, insured or their crime to be impersonal (i.e. robbery of a business vs. home).

For those participants who disclosed involvement in violent crimes (e.g. assaults, armed robberies, sexually based offences) the type of drugs used at around the time of their involvement in the offences (irrespective of whether they were intoxicated at the time of the offence) and the drug-crime subculture also became areas of their life that they drew upon to justify their involvement.

*"that's why I am in here for fighting, the people who I lived with were using and I was trying to get a house with my fiancé, but she was causing me grief ....they were trying to get me to do drugs that I didn't want to do and she just goes loopy" (participant 19).*

*Distances self from other pro social groups.*

Involvement in the drugs-crime lifestyle created a significant barrier for the participants involvement in pro-social groups. While a physical barrier existed whenever the participant was incarcerated, the participants discussed an equally isolating intrinsic barrier that stemmed from the participants own paranoia that others would detect their drug use and/ or state of intoxication. As a consequence of the detection, the participants envisaged that they would experience possible rejection and condemnation of their lifestyle choices.

*“I never wanted to go into pubs and stuff because of the drugs, thinking that people are looking at you” (participant 3)*

*“I don’t like people to know that I am on drugs, I have a guilty conscience about taking drugs, I stay home and potter around the house” (participant 19).*

The experience of this type of paranoia reinforced the participant’s sense of belonging to the drug subculture in two ways; avoidance of mainstream values meant that their behaviour could not be challenged; and second, socialising only with those involved in similar behaviours normalised their beliefs, behaviours and experiences. As with any behaviour that is repeated and normalised, over time the use of drugs and involvement in crime becomes a “normal” lifestyle.

*“I have always done it (used heroin), it is normal for me now. People have coffee in the morning its normal, for me get up and have a tickle (shot of heroin) and its normal for me” (participant 8)*

### **7.3 Discussion**

The participants’ narratives about their involvement in the drugs-crime lifestyle were best depicted as a developmental pathway model. That is, in adulthood they came to understand their involvement in drug use and crime as having evolved over time, but ultimately as a lifestyle choice; a lifestyle choice that is dynamic, multi factorial and

involves periods of desistance and re-engagement with drug use and criminal behaviour. Retrospectively these participants were able to understand their lifestyle choice from a bio-psychosocial perspective. The participants believed that they possessed innate psychological vulnerabilities related to poorly developed self-regulation skills that they perceived as having contributed to a range of challenges with the social realm in which their early growth and development occurred. The men described a childhood history of difficulties with conformity, exemplified by challenging mainstream social norms, values and behavioural expectations, which contributed to their early experience of social exclusion.

From this early foundation and notwithstanding that the majority of the men reported to have originated from a supportive and pro-social family system, the men described the influence that interactions in various social contexts (e.g. school, sport employment) and the relationships formed within those contexts had on either consolidating their interest in the drugs-crime lifestyle or to promote pro social pursuits. However for the men in this study, the interactions and influence of positive social bonds such as the family system, school, structured recreational pursuits, employment and marriage only delayed the onset of their investment in the drug-crime lifestyle, rather than preventing their involvement altogether. Further, once involved and invested in the drugs-crime lifestyle, the involvement in pro-social social roles and relationships (e.g. marriage, parenthood and employment) were described as overwhelming and were perceived to have contributed to re-engagement in the drugs-crime lifestyle, rather than promoting desistance. Where attempts at desistance occurred, family were identified as an important resource, however without an accompanying pro-social base of peer social support, and opportunities to develop mastery through conformity, desistance attempts were not sustained.

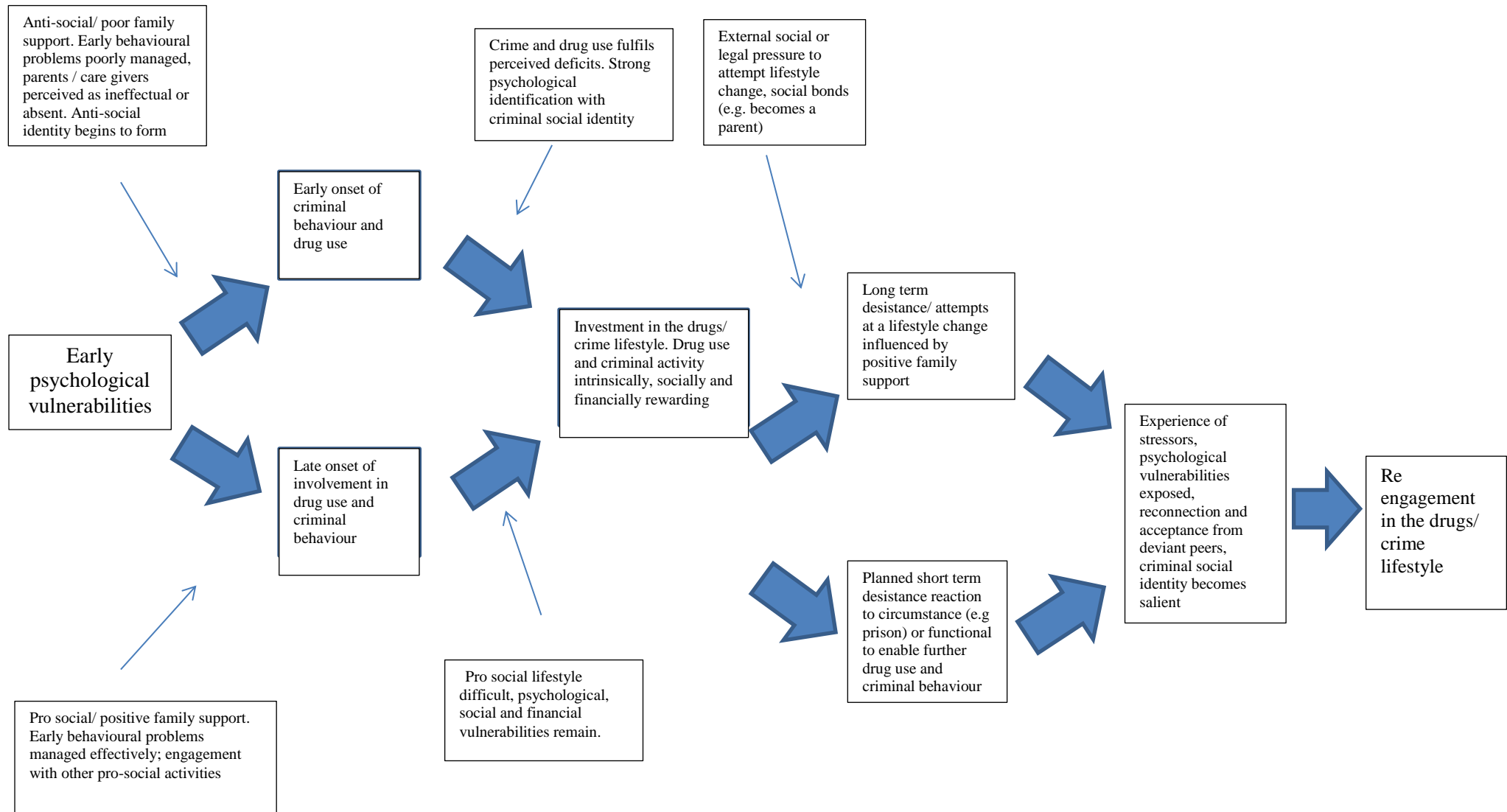
The emergent theory is therefore best depicted as a dual pathway model (see Figure 1). The two pathways originate from the same common factors evident during childhood. The pathways diverge at the participants recalled stage of initiation and



investment in the drugs- crime lifestyle and converge as those participants within both pathways describe similar factors as maintaining their involvement in the drugs-crime lifestyle. The pathways again diverge with respect to periods of desistance (short versus long term desistance) from involvement in the drugs-crime lifestyle. Those who described engaging in short planned periods of desistance diverged from those who attempted to make a sustained change in lifestyle and again at this point, the participants described family and social environmental influences as important. The pathways again converged during periods of re-engagement back into the drugs-crime lifestyle. The convergence of the pathways was reported as being in response to multi-systemic factors, including intrinsic psychological vulnerabilities, social isolation and financial difficulties.

As will be explored in more detail in the following sections, the dual pathway model is more consistent with life course criminology theory (Godfretson & Hirschi, 1990; Laub & Sampson, 2003; Moffit, 1997; Sampson and Laub, 1997; Schroeder, Giordano & Cernkovich, 2007), when compared with the dominant theoretical models within the drug-crime empirical research literature outlined in Chapter 3. The pathway model explores the propensity to engage in deviant and criminal behaviours and life events and circumstances that may be able to alter the drugs-crime trajectory across the lifespan to the time of interview.

Figure 1 Dual Pathway Model of Involvement in Drug Use and Crime Lifestyle



### **Origins of involvement**

Consistent with Gottfredson and Hirschi's (1990; 2016) self-control theory, the men in this study identified common intrinsic self-regulatory difficulties that they perceived to have made them vulnerable to a range of early behavioural difficulties, social exclusion and poor adherence to social conventions. Difficulties with attention, concentration (boredom), their inability to delay gratification and susceptibility to peer influence set the scene for difficulties being able to cope with the demands and behavioural expectations of the school environment. While these psychological vulnerabilities were universally reported across all participants, the manner in which these perceived vulnerabilities influenced initiation in the drugs-crime lifestyle was moderated by the environments within which these participants interacted and the relationships formed. Interestingly, with respect to the temporal ordering of involvement in the drugs-crime lifestyle, participants in both pathways (delayed and early onset) reported that they became involved in regular criminal behaviour prior to their involvement in the use of illicit substances.

The initial point of convergence in the dual pathway model emphasises the protective role of a pro-social family system and involvement in pro-social groups and organisations. Consistent with Sampson and Laub's (1993) age graded theory of informal social control and the emphasis this theory placed on the protective role that social bonds play in desistance from criminal activity, the participants in this study who described being able to develop strong bonds with pro-social family and peers during childhood and early adolescence were able to some extent, delay their involvement in the drugs-crime lifestyle. In contrast, for those participants who described poor attachments to parental figures, that they perceived their parents' or care providers' as ineffectual or unable to control or moderate their early behavioural difficulties, or stated that they belonged to a family system that normalised and condoned drug use and involvement in criminal behaviour, these participants described their initiation into drug use and criminal behaviour as occurring at a younger age.

The pivotal role that parental management practices, monitoring and attachment play in curbing delinquent behaviour is well established within the research literature (Fagan et al., 2011; Moffitt, 1993; Sampson and Laub, 1993, 1997; Laub and Sampson, 2003), forms part of the social control theories of crime (e.g. Gottfredson & Hirschi, 1990; Hirschi, 1969; Moffitt, 1993; Sampson & Laub, 1993; Thornberry, 1987) and is consistent with the experiences of these participants. Importantly, this research drew upon the narratives of the men's own perception of their relationship with their family. Specifically, the men's perception of their attachment to their parents' or care-provider's and of their primary care providers' ability to monitor, respond and curb (through discipline, guidance or otherwise), their involvement in anti-social or deviant behaviour. It is therefore the relational element of the men's bond to their family system, or the family social processes (Sampson & Laub, 2005) that is identified as important in this research, rather than any other structural component of family adversity (e.g. residential transience, poverty, large family size). Where a participant described being part of a pro-social family unit with a parent or parental dyad who they perceived as invested and responsive in the parent-child relationship, the men reported being encouraged to engage in pro-social structural recreational pursuits. Involvement in sports or other pro-social recreational activity not only provided the participant as a youth, with the opportunity to establish a pro-social peer group, but also provided the opportunity for positive feedback and mastery experiences outside of the attenuated bond they reported to the school environment, which in turn, is important for identity formation and strengthening the commitment to conformity (Sampson & Laub, 2005).

For the men who formed part of the early onset pathway, two different family systems emerged; one that was characterised by parental involvement in the drugs-crime lifestyle, with fewer reported opportunities for involvement in pro-social groups or alternative avenues of informal social control. And another family system that was predominantly pro-social however was perceived by the men as less involved, with parent/s that were perceived as less effective. As a whole then, with respect to family

social processes, this group of men described less present and responsive parenting due at times to family fragmentation, employment commitments and for some, the role modelling of drug use. This meant that the men perceived their parents as ineffectual in being able to curb their own involvement in deviant behaviour, or alternatively perceived that their own deviancy was consistent with the behaviour role modelled by their parents or siblings. For these men the combination of early self-regulation difficulties appeared to be compounded by negative family conditions, which set the pathway for the development of an anti-social identity and involvement in the drugs-crime lifestyle at an earlier age. The combination of psychological vulnerabilities related to self-regulation and negative family conditions has been identified by Moffitt (1993) as being the conditions most likely to develop into life-course persistent offenders.

During adolescence, men from both pathways' described becoming disenfranchised with their involvement in mainstream social institutions such as school. They likewise described a loosening bond with their parents during adolescence, as their peer group became their primary reference group for identity formation. The protective influence of parental attachment and family bonds have on desistence from deviance and criminal activity has been found to wane over time and across adolescent developmental (Patterson et al., 1989; Sampson and Laub, 1993; 2005; Thornberry, 1987). Consequently, as children develop through adolescence, develop autonomy and seek new peer dominated role models to emulate, a combination of parent/teen conflict and a relaxation of parental monitoring and control weaken the social bonds and control of the family system (Fagan et al., 2011). The weakening of the social bonds to the pro-social family system, in combination poorly developed self-regulation skills, an attenuated bond to pro-social institutions that encourage conformity such as school, and associated social exclusion, sets the foundation for an identity crisis and the emergence of a criminal or anti-social identity (Boduszek & Hyland, 2011). From interactions within the school environment and social categorisations that centre on academic performance and attitudes towards authority, it has been suggested that two higher level categories of

personal identity ensues; the successful and the failures, when comparisons are made in terms of academic and social success, and the conforming and non-conforming, when the comparisons centre on authority (Boduszek & Hyland, 2011). The stability and cohesion of these groups over time is dependent upon categorisation and labelling allowing for group boundaries and rejection between groups to take place (Ellemers, 1993). As hypothesised in social identity theory, the identification of the failures and non-conformists as a group is thought to provide its members' with an alternative social identity and in turn, increases self-esteem (Boduszek & Hyland, 2011).

The participants in this study perceived themselves as forming part of the failure and non-conformist group within the school environment. The men described identifying with and to have gained psychological group membership to the nonconformist group, which in turn is hypothesised to have contributed to the development of a criminal social identity.

The participants who were able to delay their initiation into the drugs-crime lifestyle into adulthood, described being able to establish conventional social bonds that encouraged conformity, such as marriage, parenthood and employment. However the men described their "attachment" to these roles and relationships as variable or to have waned over time so that they experienced these roles as tedious and unfulfilling. It is at this point in the delayed onset pathway that volition and human agency (i.e the purposeful execution of choice; Matza, 1964) are evident as important variables. Put simply, the men in the delayed onset pathway perceived the drugs-crime lifestyle as exciting (even prior to initiation), free from conventional responsibility and ultimately more attractive, when compared to the conventional lifestyle they had been able to establish. It was on this basis that the men made the conscious decision to commence the use of drugs and involvement in crime.

During adulthood, conventional social roles that encourage conformity to mainstream norms and values, such as marriage, becoming a parent and employment, have been described by Elder (1985), Sampson and Laub (2003; 2006; 2016) and other

life-course criminologists' (e.g. Rutter, 1996) as "turning points" that can encourage desistence from crime or alter patterns of involvement in crime and deviancy over the life course. However critical to the influence of informal social control, social bonds, and turning points, is personal investment and fulfilment out of the role. That means that it is not enough to get married or have a child, the role must become of some personal value. For these men, the conventional roles and responsibilities that they had assumed, were described as unfulfilling, onerous and therefore to be avoided. In essence then, the same social bonds that are commonly thought to promote desistence, for this sample of men, encouraged initiation into the drugs-crime lifestyle. Initiation into the drugs-crime lifestyle therefore appeared to occur out of a dual process; the desire to avoid the roles, responsibilities and monotony of conventional roles coupled with what Sampson and Laub (2005) coined transformative action, that is, investment in a new identity, but not as a desister from crime (as Sampson and Laub have used the term), rather as belonging to the drugs-crime lifestyle.

### **Maintenance within the drugs/crime lifestyle**

While the dual pathways diverged with respect to the participant's reported onset of involvement (i.e. late adolescent onset vs adult onset), the pathways converged again with respect to the participant's motivation and goals for continued involvement in the drugs-crime lifestyle. The participants identified a myriad of internal, social, financial, relational, environmental and situational factors that maintained their involvement in the drugs-crime lifestyle that they felt unable to fulfil from any other pro-social pursuit, relationship or achievement.

From a psychological perspective, the participants spoke about their involvement in offending behaviour and drug use as serving a dual role; to temporarily abate their perceived psychological vulnerabilities and the fulfilment of needs and desires of importance to them. With respect to the perceived psychological vulnerabilities, the participants reported feeling able temporarily self-medicate difficulties with self-regulation (i.e. feeling overwhelmed by life events, maladaptive coping skills, inability to tolerate

boredom, an inability to delay gratification) through the use drugs and involvement in criminal behaviour.

For some, drug use also became a way in which to manage social pressures, personal trauma and at times, diagnosed mental illnesses'. Some of the participants disclosed having personally experienced a drug overdose; however none of those who reported the experience of such an event reported ceasing their use of substances. Instead, most of the participant's described an intensification or diversification of drug use. Furthermore, those who reported having witnessed a friend or acquaintance overdose likewise reported continued use of illicit substances at similar or intensified levels. With respect to criminal behaviour, the men described not only financial rewards that could not be easily obtained from legitimate employment, but also reported gaining a sense of mastery, achievement, social status and identity from the material possessions they obtained that portrayed success to the wider community (pro-social and within the drugs-crime subculture). Consistent with the concept of criminal self-efficacy (i.e. the experience of mastery and success through criminal behaviour that contributes to the belief that one can successfully carry out crime to produce a desired outcome; Laferriere & Morselli, 2015), the men described feeling psychologically bolstered by their ability to succeed at crime (either through monetary gain, obtaining material possessions or avoidance of being caught), which in turn maintained their investment in the drugs-crime lifestyle. Crime provided an avenue for a successful identity, where such an identity was perceived to be unachievable through a conventional lifestyle.

The men identified a strong intrinsic need for hedonistic pleasure, which they reported being able to achieve through a number of avenues within the drugs-crime lifestyle; first, the psychopharmacological effects of drug intoxication (euphoria) and associated increase in libido; second, social relationships that centred on risk taking and impulsive criminal behaviour and third, promiscuous romantic relationships, that were described as short, intense and devoid of the same moral standards of behaviour, obligations, responsibilities and commitments to that expected from conventional marital



or defacto relationships. Therefore, consistent with the motivation described above for initiation in the late onset pathway group, the men described the relational aspect of the drugs-crime lifestyle (i.e. avoidance of obligation and responsibility to others) as particularly attractive and equal to the pleasure derived from the heightened state of intoxication and sexual arousal.

Socially, the participants described a strong sense of belonging to a group with similar values, interests and standards of behaviour; a sense of belonging that they had not been able to achieve within mainstream social groups. However, interestingly, within the larger group of those who identified as drug using offenders', this subculture was broken down further into sub-groups based upon a unique set of moral principles that mirrored to some extent, the values, views and stereotypes of mainstream society (i.e. their conventional upbringing). The men distinguished themselves by the type of drugs used and offences committed. Those offenders' who used or were perceived to be dependent on heroin were also perceived to be more morally corrupt and "deviant" when compared to those who were involved in the use of amphetamines, cannabis and cocaine. Similarly, heroin users were also described as engaged in more deviant offending behaviour. The perception of deviance related to heroin dependency appeared to be based upon the participants' acceptance of the medical disease model of addiction and the drug causes crime models. That is, the stereotype that heroin is highly addictive and those who are dependent upon heroin will engage in highly deviant criminal behaviour in order to obtain more of the substance. It would therefore appear that similar to the views held by mainstream society, those within the drug and crime subculture ascribed to the "druggie" stereotype.

The participants' self-perception and social identity based upon their drug use and offending behaviour was highlighted as an important maintaining factor in their continued involvement in the drugs-crime lifestyle. Where the participants felt accepted, and that their drug use and offending pattern was similar to their peers within drugs-crime subculture and consistent with the sub culture's established morals and rules, they

reported feeling comfortable and entitled with their lifestyle choice. During these times, the participants spoke about being able to manage their involvement in crime, in addition to the amount and type of drug/s used.

Consistent with social identity theory (Tajfel & Turner, 1979), all of the men described an innate need to belong (Baumeister & Leary, 1995), and described the creation of in and out groups largely through the unconscious socio-cognitive processes of categorisation and self-enhancement (Hogg, Terry & White, 1995). The role of categorisation is to strengthen the boundaries of the in-group by defining what is stereotypical of the in-group and therefore differentiates the in-group from the out-group (Hogg, Terry & White, 1995). Self-enhancement relates to the basic presumption that people have a need to view themselves in a positive light through social comparison. One's social identity is accentuated when an individual starts to identify strongly with other in-group members and perceive themselves to share a large degree of similarities with those group members'. Consequently there is a noticeable attitudinal and behavioural preference for these group members, which results in a depersonalisation away from self-perception to social identity (Boduszek, Adamson, Shevlin & Hyland, 2012; Hogg & Smith, 2007). The shift away from self-perception to social identity is accompanied by an assimilation of the attitudes, feelings and behaviours of the group, thereby resulting in noticeable changes to the way people think, feel and behave (Boduszek, Adamson, Shevlin & Hyland, 2012).

When applied to this current study, within the larger group of drug using male offenders', in-groups were identified based upon the norms and stereotypes developed in relation to the types of drugs used and criminal behaviour performed. Paradoxically, while most of the men interviewed disclosed a history of poly substance use, group membership was defined by the men perceived to be the worst or most serious drug used and criminal behaviour. In particular, the perception that heroin users possessed deviant qualities and engaged in more deviant criminal behaviours was a common theme to emerge that is illustrative of categorisation through self-enhancement; that is, the

participant who identified as part of the amphetamine user subculture who engaged in predominantly acquisitive offences perceived this in-group to be superior to the Heroin users out-group. For some of the men, the perception that there was a group of men who were engaged in “worse” drug use and criminal behaviour when compared to them was a factor that maintained their commitment to the drugs-crime lifestyle.

The level of comfort and commitment that these participants reported the drugs-crime lifestyle fluctuated over time and in response to individual life circumstances, including their ongoing involvement in various social environments and institutions, such as the criminal justice system. At times, when the participants reported experiencing stress due to any personal life difficulty or obstacle, they reported a corresponding increase in the amount of drugs they consumed and, in most cases, the amount of criminal activity they engaged in. During these periods of high intensity, high frequency drug use and involvement in criminal behaviour, the participants described feeling more out of control, more likely to be involved in the criminal justice system and more distant from family and other pro-social supports. Additionally, in describing these out of control periods, the participants were much more likely to blame sources or circumstances external to themselves for their behaviour, rather than accept responsibility for the choices made to maintain involvement in the drugs-crime lifestyle.

Accompanying this externalisation of blame was the identification of factors that would fit within Goldstein’s (1985) tripartite framework and therefore also aspects of the economic motivation and systemic models in explaining the impact of drug use on involvement in criminal behaviour. For example, some participants described a personal life stressor such as the loss of a child, which resulted in an increase in illicit drug use, involvement in the drug market and violent offending. Cross sectionally at these discrete periods of time, the tripartite model has face validity, however as described above, the factors that maintained these men’s involvement in the drugs-crime lifestyle longitudinally extended beyond the psychopharmacological effects of illicit substances, the situational contexts and economic pressures that drug use may create. Periods of high intensity use

often resulted in short periods of desistance from the drugs-crime lifestyle, either by choice or due to incarceration.

### **Desistence**

The pathway model diverges again with respect to the men's reported attempts at either short term or long term desistence from involvement in the drugs-crime lifestyle. Short term desistence was described by the men as being attempted for two main number; first, that they had engaged in criminal behaviour that was in some way personally or morally reprehensible; and second, that they were building up a tolerance for a certain drug, which meant that they required more of the same drug to achieve the desired point of intoxication and therefore their use was becoming too expensive. Long term desistence or the decision to make a sustained lifestyle change was found to be much more likely to be attempted in the context of some sort of external pressure being applied to encourage or force desistence; a significant change in personal life circumstance, accompanied with pro-social support and internal motivation to change.

For those who made the decision to engage in short term desistence due to drug tolerance, the participants described their decision to cease drug use for a period of time with the knowledge that once they recommenced their drug use, that they would require a much smaller quantity of the substance to achieve a state of intoxication. Others' described deliberately using incarceration as their period of desistance or withdrawal. This decision appeared to be more common when the participants were aware that they had outstanding arrest warrants. In this situation, the participants described their tendency to intensify their drug use with the knowledge that they were likely to be detained and that they should therefore "have fun" before being detained where they could then "detox". However, incarceration did not always results in desistence from involvement in the drugs-crime lifestyle. Some of the men disclosed ongoing use of illicit substances during periods of imprisonment, while at the same time establishing new connections within the drugs-crime relationships to enhance their involvement within the subculture and re-affirm their commitment to the lifestyle.

The most common theme to emerge when the participants discussed their decision to attempt a long period of desistance or a lifestyle change was influence of the following combination of factors; external pressure being applied due to parole, serving a community based order or restrictions placed on the men through releasing authorities from prison; a significant personally relevant life event; the presence of a supportive, available and involved pro social family system; availability of a pro-social base of social support or equally motivated spouse to support desistance and most importantly, the internal motivation to desist. Where external pressure was placed on the men to attempt a lifestyle change, the men discussed being able to access family support for financial, practical and emotional support. The level and type of support described by these men ranged from the provision of accommodation, employment options, supervision or other aspects of emotional support, however without intrinsic motivation to make a sustained lifestyle change, these efforts were rarely sustained.

The experience of personally relevant life events by the men were consistent with the social roles that Sampson and Laub (2003; 2005) described as turning points. That is, becoming a parent, employment, or assuming other roles of family responsibility. For events to become turning points, Sampson and Laub (2003) described four conditions that take place; 1) the event demarcates a definite point in time between the past and future; 2) the new event should provide supervision, monitoring and opportunities for social support; 3) a change in structure and routine; 4) the opportunity for identity transformation. These four conditions should also be accompanied by transformative action (Sampson & Laub, 2005), that is internal motivation to make a change. The narratives of the men in this study support these conditions. Where the men were able to access practical, emotional and financial support from family and other pro-social bases of support over time, and were also able to engage in multiple social contexts, a corresponding change in social identity was likely to ensue (Boduszek & Hyland, 2011).

For other men however, it was the process of aging and the discomfort of repeated terms of incarceration that prompted them to consider a long term period of desistance with varying levels of success.

### **Re-engagement with the drugs-crime lifestyle**

While their motives for an attempt at a lifestyle change varied, their reported reasons for returning to the use of drugs and involvement in criminal behaviour were more homogenous. The men reported that when they encountered lifestyle obstacles or personal stressors, which exposed their psychological vulnerabilities, they quickly reverted back to their established pattern of coping (i.e. drug use) with adversity. For those who described attempting more sustained lifestyle changes, they described experiencing significant role strain and ambivalence associated with the pro-social responsibilities and social identity assumed. The participants reported feeling overwhelmed, psychologically vulnerable and ultimately that the attempted lifestyle change was unsustainable. This state of vulnerability, coupled with the reported dysfunctional self-efficacy beliefs contributed to the loosening of any social bonds created. Consistent with the research of Giordano, Cernkovich and Holland (2003), these men therefore, described how the pro-social adult social bonds formed did not sustain desistance from the drugs-crime lifestyle over time. Within this context, the influence of reconnecting to the men's deviant peer connections and romantic partners who were also involved in the drugs-crime lifestyle were identified as significantly associated with a recommencement in the drugs-crime lifestyle.

The participants reported initial ambivalence about their re-engagement in the drugs-crime lifestyle. The men described initially experiencing feelings of guilt, shame and failure, which reinforced their reliance on the previously established maladaptive coping strategies (i.e. illicit drug use) and a desire to gain a sense of mastery and acceptance through aligning their social identity with others involved in this subculture. Once re-invested in the drugs-crime lifestyle, it became apparent that the commitment, desistance and re-engagement phases were dynamic and cyclic, with each phase

varying in length dependent upon the unique circumstances of the men and their involvement in the social context around them.

#### **7.4 Conclusion**

This sample of drug using incarcerated offenders' ultimately described their involvement in drug use and criminal behaviour as a lifestyle choice. The conceptualisation of drug use and involvement in criminal behaviour as a lifestyle choice is inconsistent with the disease model of drug dependence and many of the established theories and models that attempt to explain the drugs-crime relationship. The pathway model emphasises human agency, and volition in decision making. Volition refers ultimately to the ability to voluntarily choose whether or not to engage in behaviour, the consideration of alternative lifestyles and the management of behaviour for the individual's own benefit. It became clear that each of the participants interviewed could, at some point in their history of involvement in drug use be classified as drug dependent. It also became apparent that each of the participants retained their ability to manage their drug use and behaviour in a manner that could be considered goal directed.

The pathway model described brings together aspects of both the state dependent life-long propensity towards crime and deviancy as proposed by Gottfredson and Hirschi (1990) and aspects of the age graded social control theories of Sampson and Laub (2003). Similar to the Gottfredson and Hirschi (1990), the model identifies self-regulation deficits that are influential across times, contexts and maturation to influence the behaviour and decisions of the men towards or away from the drugs-crime lifestyle. The influence of social bonds, and turning points (Laub and Sampson, 2003; Sampson & Laub, 2005) was found to have a protective role by delaying onset and encouraging desistance, yet paradoxically, these same social bonds and turning points undermined desistance processes. Laub and Sampson (2003) acknowledge the influence of alcohol use on the quality of social bonds, such that alcohol use is likely to demise the quality of the marital relationship and further, that alcohol use is likely to sustain involvement in criminal activity. However this research goes further to draw into question how, when

and at what times during the drugs-crime lifestyle can social bonds and turning points actually assist to instil internal motivation or transformative action towards a lifestyle change? Conversely, at what stage and under what circumstances do turning points encourage involvement in a deviant lifestyle?

All of the participants described having pressure applied from various social and family institutions to live a conventional, pro-social lifestyle. At times, these influences and the connections to social bonds were turning points (Laub and Sampson, 2003) and were effective in assisting these participants to desist from involvement in the drugs-crime lifestyle, however ultimately, the participants described gaining a greater sense of belonging, achievement, mastery and acceptance from their interactions within the drugs-crime lifestyle when compared to their attempts to live a conventional lifestyle. Conventional roles and responsibilities, even when considered personally relevant, were perceived as onerous, boring and to be avoided, thus re-affirming the sense of belonging and social identity to the drugs-crime subculture. Once established in this lifestyle, the participants described a sense of entitlement to adhere to their lifestyle choice irrespective of the views or perception of others and the impact that their lifestyle had on themselves or those around them.



## Chapter Eight

### Study Two

Study Two drew upon the same methodology and procedure as Study One (see p. 207), however drew upon a sample of incarcerated aboriginal men with the aim of exploring the narratives and experiences of their involvement in drug use and crime over time. Qualitative approaches and grounded theory in particular, as an inductive methodology that allows for theory development to be derived out of narratives and stories has been cited as particularly useful for cross cultural research (Liamputtong, 2008). The emphasis on the importance of the life experiences of these aboriginal men was thought to provide a voice for a marginalised group, in addition to theory development based upon these experiences that can then be confirmed and tested (Byrant & Charmaz, 2007; Charmaz, 2006; McCoy, 2008). As outlined in the methodology section, I used individual interviews that encouraged an autobiographical narrative through the use of open ended questions and minimal prompts. The interviews were conducted in English.

#### 8.1 Participants

Eleven Aboriginal male incarcerated drug using offenders participated in a semi-structured interview regarding their personal history of drug use and participation in criminal behaviour. The participants ranged in age from 21 to 35 years of age (mean age 26.9 years). Table two outlines the demographics of the sample.

Table Two Demographics of the Aboriginal Sample

Number of participants	11
Age Range	21 – 35 years
Mean Age of sample	26.9 years
Self-reported number of drug related offences	0 – 100

Mean number of self-reported drug related offences	13.5
Number of participants for whom the index offence was drug related	8
Average age at first drug use	13 years
Age range of first drug use	10 – 19 years
Mean age of first offence	15 years
Age Range of first criminal offence	9 – 20 years

## 8.2 Results

The process of coding resulted in Core Categories which are the basis for the emergent conceptual theory. Table 2 outlines the Core Categories and the corresponding codes that emerged from the comparative analysis of the open codes across participants. The core categories are presented in the manner through which the participants presented and came to understand their experiences; that is, from a developmental perspective, from early initiation/ experimentation into a drug use-crime lifestyle as an adult.

It became apparent early on in the coding process that the first emergent theme related to the strong influence of family on the participants initiation into the drugs-crime lifestyle. Therefore, during subsequent interviews this became an area of inquiry such that participants were asked about who they engaged in drug use and offending behaviour with and the reasons why they chose these associates over others in their life.

### Table 3 Core categories and Corresponding Codes (indented)

#### ***Family as Gang***

Early initiation into drug use and criminal behaviour occurs within the family

Role modelling of drug use and criminal behaviour

Drug use and criminal activity binds family together

***Collective Disadvantage***

Ongoing experience of social and economic disadvantage

Individual identity subsumed into collective disadvantage

***Psychological Vulnerabilities***

Poorly developed coping skills

Material possessions define self

Inability to tolerate boredom

Low self-efficacy

***Shifting attributions of blame***

Lifestyle entitlement

Personification of the drug

Shifting volition

**Family as Gang**

The most prominent code that emerged from this study pertained to the influential role that immediate, extended family and kinship relationships had on the participants involvement in drug use and criminal behaviour. The participants reported that while the influence of family relationships and the inherent obligation to family ebbed and flowed in intensity, it nevertheless remained a constant pressure throughout their pathway of involvement in the use of drugs and criminal behaviour. The influence that the participants described family as exerting during periods of initiation, maintenance and re-engagement in the drugs-crime lifestyle was similar to that of belonging to an anti-social peer group or “gang”. As such the corresponding codes that comprised this core category included; early initiation into drug use and offending behaviour; normalisation of the drugs-crime lifestyle within the family system and drugs-crime lifestyle binds the family together.

*Role modelling of drug use and criminal behaviour.*

Most of the participants spoke about growing up within a family system whereby numerous immediate and extended family members were involved in drug use, criminal behaviour, or most commonly both. Within this family system, the participants described how the role modelling and implicit assumption or pressure of involvement was influential on their involvement in similar behaviour from early to middle childhood.

*“Broke into a woman’s house at 10 with my brothers and stole some money”*

*(participant 9)*

*“growing up it was my uncles, they put me onto it (amphetamines), I just copied my brothers and uncles, I just wanted to see what they see, I got addicted, so I went from 1993- til now”* (participant 9)

*“(Started using drugs) cause my brother was using”* (participant 7)

These quotes reflect the participants understanding of the strong influence that various family members’ role modelling had on both their desire to be involved in criminal behaviour and drug use, in addition to the level of acceptance of such behaviour within the family system. Other participants recalled making explicit decisions in relation to the type of criminal behaviour and drug use that they would engage in with various family members.

*“Families on my mum’s side were stealing with my brother, so I went to my dad’s side of the family, and then started stealing with them. I would mostly steal with family, I wouldn’t steal with mates. On mums side they don’t take needles and that, they just drink. On dads side they are speed (amphetamine) freaks and I went to dad’s side”* (participant 4)

For this participant, the level of normalisation of both criminal behaviour and substance use within this family system contributed to his perception that the drugs-crime lifestyle was the only acceptable option; an experience that mirrored that of participant 5:

*“Well I grew up all my older brothers have gone to jail, I have seen the police come and look for my brothers, it was a rite of passage really, I have never seen any of my family have a job or do something worthwhile with their lives” – participant 5*

This participant reported beginning to commit serious offences at the age of nine. The level of normalisation of criminal behaviour and illicit substance use within some of the participant’s families meant that when they had attempted to desist from these behaviours, they were required to remove themselves from the family system. The decision to distance themselves both geographically and relationally from the family unit resulted in isolation and a reduction of their available support system. One of the participants described such an experience as foreign and personally challenging.

*“One time I was on parole and I went without committing an offence for about nine months, it was strange because I haven’t done it before...I was by myself” – participant 5*

The challenge for this participant then became not only to desist from criminal behaviour and illicit substance use, but also to desist from involvement with his family, turn his back on family responsibility and obligation, in addition to establishing a new base of social support; a task that proved to be overwhelming.

Within the descriptions and experiences discussed by these participants, it became apparent that criminal behaviour and substance misuse became accepted as the preferred lifestyle of the majority of the family unit. As such, it became a lifestyle that

solidified the family system, encouraged cohesion and contributed to a sense of belonging.

*Early initiation into the drugs-crime lifestyle.*

Within the context of the early role modelling of the drug-crime lifestyle, most of the participants immediate and extended family members as being instrumental in commencing their involvement in offending behaviour and drug use. The types of influence described varied from explicit instruction to be involved in offending behaviour at an early age;

*“I didn’t really know what I was doing, my cousins would just get me to knock on the door because I was the little white kid, so I would knock on the door and ask for some water or something and then they would jump the back fence. They thought no one would suspect me being whiter than them” - participant 10*

To other participants description of their initiation into the use of illicit substances as being at the hands of family members and against their own volition;

*“First used with my cousins, funniest thing was that I was asleep, he gave me a shot (injected amphetamines) while I was asleep” – participant 4*

From the participants early childhood experiences and recollections, the values, beliefs and behaviours evident within the family system appeared to be disparate to that of conventional mainstream society. For example, some of the participants discussed that they had learnt early on in their childhood about the age of criminal responsibility through family encouragement to be involved in criminal behaviour before the age of 10 years. As an adult, they came to understand that their families encouragement of their early involvement in criminal behaviour stemmed predominantly from the participant at the

time being below the age of criminal responsibility and therefore not being liable to a criminal sanction.

*Drug use and criminal behaviour binds family together*

Most of the participants described criminal behaviour and drug use as an activity that contributed to a sense of cohesion and belonging between family members'.

Participants repeatedly spoke about only engaging in drug use and crime with family members;

*"I would mostly steal with family, I wouldn't steal with mates"*

*"I used to get into it with my eldest brother, then I stopped and then did some by myself, then with my cousins, then with my ex (girlfriend), then couple by myself, then quit". – Participant 9*

From the participants narratives, it would appear as though involvement in crime within the family was preferable to friends or other associates for a number of reasons; first, that family relationships are by their nature strong, cohesive and based upon a level of reciprocal trust; second, that such trust was thought to be strengthened through mutual involvement in criminal behaviour; third, relationships were thought to offer a level of protection against detection from police when questioned and/ or apprehended.

Participant's involvement in the drug-crime lifestyle was also found to contribute to the family system through the fulfilment of obligations and responsibilities.

*"I help my family out with speed and also give money to my family. Usually all the money is gone by the next day. I give a lot of money for food or whatever they need, same with my girlfriend as well, she would have a (drug) habit and I would steal for her as well" - participant 2*

Involvement in drugs-crime lifestyle therefore appeared to encourage family cohesion on a number of levels; through affiliation, visiting and spending time with various family members; fulfilment of obligations through the provision of illicit drugs to those who required it to maintain their “habit”; and to provide for the family through the provision of the family’s basic needs, that is, participants used illegitimate financial rewards from crime or illicit drug sales for legitimate purposes (i.e. food, rent, clothing etc.).

Of the eleven men interviewed, only one participant described not regularly engaging in drug use and/ or criminal behaviour within the family unit. While this participant attributed his initiation into drug use as occurring due to the influence and role modelling of his older brother, he stated that his pathway into drug use and criminal behaviour diverged from that of his brother (who ceased drug use and crime) during middle to late adolescence. He asserted that he would never commit offences with his family as he was aware that his family unit would not condone such behaviour:

*“My sister is a cop, my mum and dad are in the air force, my cousins are straight”*  
- participant 7

For those family members’ who chose not to be involved in illicit substance misuse and criminal behaviour, participants described how these family members were either deliberately excluded or avoided.

*“Family members that did not use, I distanced myself from them”- participant 4*

This pattern of cohesion and exclusion resulted in a number of “in group” and “out group’s within the extended family and kinship system based upon the type of criminal behaviour that family members engaged in and the types of drugs consumed.

Participants discussed how their association with these various groups influenced both their behaviour and the types of drugs used:



*"I drink all day with family and friends in Kalgoorlie you know relations. When I go out to the community I am right, it a dry community, when I am in the community I go bush hunting" - participant 1*

The presence of these "in groups" and "out groups" not only influenced the types of substances consumed and involvement in criminal behaviour, but was also discussed by some participants as contributing to conflict or "feuding" within the extended family and kinship system.

*"I remember a few things like when I was arrested for family arguments" - participant 2*

*"Only when I am in town with families, I get drunk have a fight and end up in jail. That has happened a lot of times" – participant 1*

The conflict that the participants described as having ensued, appeared to stem from a number of sources; disinhibited and poorly regulated behaviour caused by family members state of intoxication at the time of the conflict; various family members viewing other family members' drug use and/ or involvement in various criminal behaviours as amoral when compared to their own; or family members who did use attempting to distance themselves from those who did not. Therefore it would appear as though, while involvement in criminal behaviour and illicit drug use drew certain members of the extended family system together as a cohesive unit, such behaviour also contributed to a fragmentation of the wider family/ kinship system.

For some of the participants, the only period of abstinence that they had successfully completed was during their incarceration. Therefore, the choices of who they resided with upon release from the prison environment became highly influential upon their ability to desist; the choice of their subsequent illicit drug use and the type of criminal behaviour they were involved in.

### **Collective Disadvantage**

Many of the participants came to understand their own experiences as being shaped by the unique ways in which past colonialist process and policies have affected Aboriginal people as a whole, and in particular, their own extended family systems. While there is great heterogeneity among the aboriginal population and their experiences, these participants, like generations prior to them, described their experiences of injustice, inequality and oppression. This theoretical category was therefore comprised of the two common codes that emerged and united these participants in their experience of disadvantage; ongoing experience of social and economic disadvantage and individual identity subsumed by collective disadvantage.

#### *Ongoing experience of social and economic disadvantage*

Some of the participants described their own awareness and experiences of social and economic disadvantage from an early age. With the benefit of hindsight, these participants described how their experience of economic and social disadvantage contributed to their early involvement in criminal behaviour.

*“Other kids had better things than me, I wanted to show them what I had” –*

#### *Participant 4*

This participant described how he quickly came to understand that his family did not have the same economic resources when compared to other children in his school. With this realisation, he described one of his first offences as occurring during early childhood, where he broke into a toy shop and stole sporting cards. From this early age, the reinforcing nature of him being able to gain social notoriety from his peers due to his new acquisitions, the ease with which he attained these cards, and his family's acceptance of this behaviour contributed to an increase in frequency of offending behaviour.

*Individual identity subsumed by collective disadvantage.*

Some of the participants came to understand their involvement in the drug-crime lifestyle and resultant incarceration as being underpinned by belonging to a socially and economically underprivileged group in society.

*“I fell into a routine and kept on doing it (crime) like every other aboriginal boy in here”*

*“Not much good in here [prison], most of us [aboriginal people] end up in here”- participant 11*

Within the context of their family experiences and their own observations of the experiences of their people, many of the participants conveyed a sense of inevitability about their involvement in criminal behaviour and subsequent incarceration. Once this occurred, and more poignantly, once they were incarcerated, it appeared as though these participants lost their individual identity to that of being “*like every other aboriginal boy in here*” (participant 2). This sense of inevitability gave way to a sense of hopelessness to change their situation as described below.

However, one participant described how he had chosen not to be defined by the experiences of previous generations of Aboriginal people, he described himself as:

*“I am not your typical Aboriginal man; I have more self-respect than most. Most aboriginal guys walk around with a huge chip on their shoulders about things that happened 200 years ago, I say get over it”- participant 7*

In describing these beliefs and attitudes, this participant also described being adopted by a Caucasian family during his early childhood and being reunited with his aboriginal

family during adulthood. He was clear in his narrative that these experiences had shaped his views and personal identity.

### ***Psychological vulnerabilities***

This theoretical code described the participants perception of their own inherent characteristics that in some way contributed to their initiation and ongoing use of illicit substances and involvement in criminal behaviour. While many of the participants identified inherent characteristics that they believed created a vulnerability to involvement in the drugs-crime lifestyle, others were aware that their involvement in this lifestyle had contributed to psychological vulnerabilities. The most common themes to emerge from the participants were related to poorly developed self- regulation and were captured in the following codes; poorly developed coping and emotional regulation; an inability to tolerate boredom; material possessions define self; low self-efficacy.

#### *Inability to tolerate boredom.*

Many of the participants attributed their early initiation into drug use as being partially attributed to their inability to tolerate boredom. During middle to late childhood, participants discussed feeling disenfranchised with schooling or community expectations which, in turn, increased their experience of boredom. This state of boredom was experienced as aversive and contributed to the participants seeking out illicit drugs or involvement in criminal behaviour.

Over time and into adulthood, as a repeated pattern of criminal behaviour and illicit drug use was established, participants attempts to desist from such behaviour appeared to be undermined partially by their experience of boredom. Boredom was described by the participants as aversive and required the enactment of previously relied upon coping strategies, that is, drug use and criminal behaviour.

*“Bored. Best thing I would say would be to get a job. Finding something else to do other than stealing” – participant 4*

*Poorly developed coping and emotional regulation*

Many of the participants discussed life events, situations and pressures that they experienced throughout their lives as an antecedent to an increase in the frequency of their illicit substance misuse, or as a trigger to re-engagement with illicit substance misuse.

*“I don’t know, when I was with my girlfriend I didn’t use, when she and I broke up and I started to using again” – participant 2*

Some of the participants were able to clearly articulate that they drew upon illicit substances as a means through which to cope with adversity;

*“Escape for a couple of hours, all my problems would disappear” – participant 5*

The use of these maladaptive coping strategies commenced from an early age and continued to draw upon as a means of coping throughout their adult life. For other participants, it was an inability to cope with a lifestyle free from illicit substance misuse and criminal behaviour that contributed to re-engagement in this lifestyle:

*” (life without drugs), depressing and it’s like, I couldn’t handle it when I was straight” – participant 4*

*“When I was out I turned to amphetamines to escape the realities of being normal” – participant 9*

This inability to tolerate sobriety appeared to stem from a combination of the participants own psychological vulnerabilities, the normalisation of the drug use-crime lifestyle within

their own family system and a lack of experience of a pro-social lifestyle. That is, few participants described having ever been employed or ever witnessed anyone within their family system who lived what mainstream society would consider a “normal life”.

Highlighting how the aforementioned code of normalisation of drug use and criminal behaviour and this code are inextricably linked.

*Material possessions define self.*

During the interviews, most of the participants experienced difficulty being able to define themselves in the absence of the drugs-crime lifestyle. One participant described a chronic history of involvement in criminal behaviour and drug use that commenced in early childhood. Within the prison environment and in a state of sobriety, he reported that he was undergoing a process of introspection. When asked to describe himself when not using drugs, he responded:

*“I’m still finding that out” – participant 10*

In the absence of a coherent sense of self, the participants described gaining a sense of self-worth and achievement through material possessions. The origins of this code appear to lie within the participants experience of economic disadvantage and social marginalisation. One participant described how his involvement in criminal behaviour became his career in the absence of legitimate qualifications or training. He described becoming proficient at gaining extensive economic resources through illegitimate means, much more than he would through legitimate employment. Further, the financial acquisitions and possessions were important to his sense of self-worth.

*“Everyday [engaging in criminal behaviour] cause I would hate lining up in Centrelink, because I hate Centrelink, because when I first came to Perth, I looked at all*

*the aboriginals at Centrelink and it looked poor, you know I felt out of place. So I made my own money and made more than Centrelink gave me with no forms to fill out” -*

participant 4

Here this participant described a desire to distance himself from those who were welfare dependent due his perception of how society views these individuals. Other participants spoke more specifically about the types of material possessions that they sought through illegitimate means that they felt defined who they were;

*“I wasn’t worrying about drugs, just wanted money this time. Ended up coming across \$30000 then went to Victoria Park to buy myself a VP commodore 50”*

#### *Low self-efficacy*

This code related to the participants perception of themselves as a purposeful agent, who can attain a goal and affect change in their circumstance. While some of the participants described a sense of powerlessness at being able to effect change in their life circumstances (low self-efficacy), others described a pattern of behaviour whereby they would undermine their own ability to adhere to community standards and parole orders due to their perception that they are likely to fail (dysfunctional self-efficacy).

*“I was reporting [on parole] for about 2-3 weeks, then I breeched, but I wasn’t using drugs, then I thought I would just run amuck” – participant 4*

This thinking style; that is, the tendency to attribute one set back to more global failure, contributed to what many of the participants referred to as their repeating pattern of involvement in drug use and criminal behaviour.

*“I want to do a relapse course, I keep relapsing”- participant 2*

The impact of the participants low self-efficacy was also evident in accessing therapeutic treatment programs within the prison facility. The men tended to describe themselves as passive recipients' of treatment programs rather than active agents of change. That is, treatment was perceived as something that was done to them, rather than viewing themselves as an active participant in this process. In this way, many participants viewed their ability to desist from offending behaviour as being outside their control as they did not view themselves as purposeful agents.

### **Shifting attributions of blame**

During the interviews completed, all of the participants attempted to explain, rationalise and justify their lifestyle choices. As the interviews took place within the prison environment, I was conscious of the demand characteristics of the interview such that, a power differential was likely to exist between the participants as prisoners and me as an interviewer within the prison system. The corresponding codes that emerged within the core category of shifting attributions of blame were lifestyle entitlement, personification of the drug, and shifting sense of volition.

#### *Lifestyle entitlement.*

The participants discussed the legitimacy of their lifestyle choice with reference to the fact that the drugs-crime lifestyle fulfilled their economic, social and family obligations, in addition to fulfilling their intrinsic hedonistic desires. For these participants, the drugs-crime lifestyle had been role modelled throughout their early childhood. Within this context, participants described a sense of entitlement to this lifestyle choice that appeared to commence at an early age.

*“Everyday (criminal activity), you name it, I don’t know, we call them sneaks, they call them aggravated burglary. We would mainly go around looking for a gardener*



*and jump the fence and go inside while they are outside. Cat burglary, you know mainly in summer” – participant 9*

*“I didn’t care (about offending) cause my missus had a baby for me and I couldn’t see the baby until I gave up the drugs and that made me worse, cause I didn’t want to give up the drugs” – participant 4*

The men in this study were well aware that their involvement in the drugs-crime lifestyle was against mainstream social conventions, despite this lifestyle being one that was condoned and normalised within their own extended family system. However, the sanctions, feedback and interventions that these participants received from mainstream society and the justice system did not appear to be effective in promoting lifestyle change, but rather confirmed their entitlement to their current lifestyle choice.

#### *Personification of the drug.*

In their explanations of how they ended up using illicit substances, involvement in criminal behaviour and later incarcerated, the participants tended to apportion blame to their drug of choice, thereby attributing human qualities to that drug and personifying this substance.

*“It (amphetamines) got me into doing burglaries” (participant 6)*

The personification of the substance allowed for the participants to distance themselves from their behaviour, especially involvement in behaviour that the participant themselves experienced as morally repugnant. The tendency to personify the drug and create psychological distance between the influence of the drug, impaired reasoning and how the individual would ordinarily behave is consistent with the medical model of drug dependence and can form the basis for some therapeutic interventions.

#### *Shifting volition.*

The participants discussed their perception of the volition they retained throughout their pathway of involvement in the drugs-crime lifestyle. Some overtly stated that they felt they had made rational choices to engage in both drug use and criminal behaviour and therefore did so of their own volition. For others, however their choices were not so clearly defined. Participant 7 described first how he would manage the fiscal demands of his drug use when using amphetamines through involvement in criminal behaviour;

*“It’s your own self-control really. If you let yourself get addicted, you need money for it, you can’t afford speed on minimum wage”.*

And later, when changing his drug use to cannabis only:

*“When I was smoking every day, \$50 per day, sometimes you could survive on food vouchers and use your money on pot (cannabis)”*

Other participants were more direct in describing the dramatic changes they were willing to make to their lifestyle in order to continue their involvement in illicit substance use. For example participant 3 described his decision to geographically relocate to gain access to illicit substances:

*“I get depressed about it, about not having it; I think where am I going to get more from. I used to live in the country and so I moved to the city to get more”*

Other participants sense of volition became apparent when describing how they use various drugs to achieve the euphoric state they desire. For example, participant 9 described how he would deliberately choose which drugs to use:

*“Alcohol daily. Speed whenever I didn’t feel like drinking. I would go out and get speed (amphetamines) and pot (cannabis) and smoke on top (of the speed) and stay like*

*that there for the rest of the day and smoke again and then drink and next inject about 20-40 units after that mull up a smoke and smoke half a foil just after I had a blast"*

While it is clear in this description that this participant was able to exert control over the choice of drugs he would administer and in what quantities, like the participant above, he shifted during the interview in describing how much volition he maintained over his behaviour:

*"But I suppose when you're stuck with it (drug use), you're stuck with it"*

Other participant's sense of volition became apparent in how they used their illicit substance use to enhance the enjoyment that they derived from their involvement in criminal behaviour

*"On amphetamines I would like to do high speed chases, it was just the rush hey"- participant 4*

For those participants who described being involved in criminal behaviour and illicit drug use during early childhood, their sense of volition appeared to be minimal. That is, with the men's growth and development occurring within a family network who role modelled, normalised and encouraged involvement in the drugs-crime lifestyle through explicit instruction and implicit encouragement, the men as children has little exposure to an alternative lifestyle and therefore little ability to "choose" to be involved or not. However over time and with increased exposure to conventional social and cultural roles, the men were able to exert greater agency and choice with respect to shaping the characteristics and activities of their drugs-crime lifestyle.

For others', who were involved in intimate relationship where both parties used illicit substances and were involved in criminal behaviour, a self-serving attribution bias was

present in discussions about their level of volition within their lifestyle choice. For example, some participants apportioned blame to significant others in their life for their involvement in drug use;

*“I had a girl out there, she was doing it and I was doing it, I was doing it for about 6 months, we were doing speed and I ended up getting sick of it. I went off my head at her for making me take it.”- Participant 9*

Overall, most of the men described an increasing level of volition over their behaviour and choices in relation to both their drug use and criminal behaviour, in accordance with their growth and maturation. However, their retrospective perception of how much volition they maintained over their lifestyle choices appeared to shift in response to at least two demand characteristics of the interview, One, the men’s own perceptions and implicit assumption about my values and beliefs, and two, the environmental characteristics inherent in the interview location. That is being interviewed in a prison about illegal behaviour. Furthermore, within many of the men’s narratives, a self-serving attribution bias was present. This meant that the men tended to ascribe any successes (e.g. drug/ criminal behaviour desistance) to internal factors or aspects of their personality and their failures to external factors that may be beyond their control. This attribution bias impacted on the men’s sense of volition, agency and sense of responsibility for their behaviour and lifestyle choices.

### **8.3 Discussion**

The aboriginal men’s narratives about their involvement in the drugs-crime lifestyle was best conceptualised as a developmental pathway model. That is, in adulthood and with the benefit of hindsight, the men came to understand their involvement in the drugs-crime lifestyle as having evolved over time, but that was ultimately a lifestyle choice that was chosen by the family system within which their early

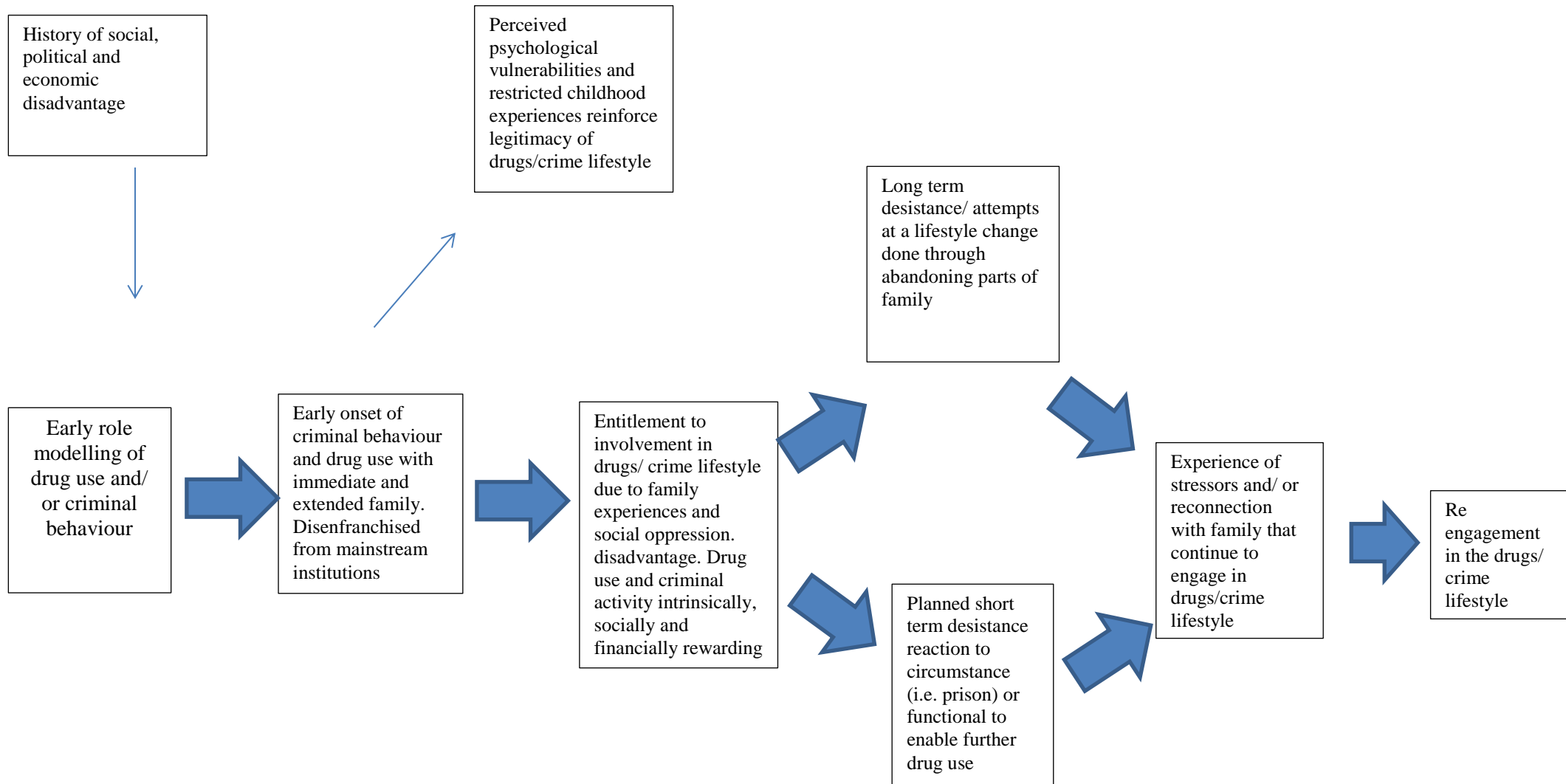
growth and development had occurred. Fundamental to understanding the family unit's involvement in the drugs-crime lifestyle, are the historical and more proximal factors of socio-political oppression, racism and disadvantage that permeate all facets of the aboriginal people's life in conventional Western Australian society. From this social context and the early foundation of exposure and role modelling of the drugs-crime lifestyle, the men were able to understand their involvement in the drugs-crime lifestyle from a bio-psychosocial perspective. They described an evolving sense of agency (from childhood to adulthood) and volition with respect to their own involvement in the drugs-crime lifestyle as adults, and identified psychological, social and cultural factors as influencing fluctuating periods of persistence and desistence.

The men identified a range of psychological vulnerabilities related to poorly developed self-regulation skills, that they perceived to have had contributed to early childhood difficulties with conformity during involvement with social institutions such as school. These innate self-regulatory difficulties, in combination with the men's early experience of discrimination, prejudice and an understanding that their family was different to conventional society contributed to the early experience of social exclusion. The men described few attachment or involvement with conventional social institutions, which therefore limited the extent to which conventional social bonds could be established. Instead, the men described both a family and personal history of contact with the criminal justice system, so much so that this involvement was perceived as a normal part of their growth and development. Where desistence from the drugs-crime lifestyle was attempted, the men described having to distance themselves from family, which was unachievable and resulted in re-engagement.

Based upon these eleven participants narratives and experiences the emergent theory is best depicted as a single pathway model (see Figure 2) that diverges at the periods of desistence and converges again at the participants recalled points of re-engagement in the drugs-crime lifestyle.

Consistent with Study One, the pathway model is more consistent with the life course criminology theoretical framework (Godfretson & Hirschi, 1990; Laub & Sampson, 2003; Moffit, 1997; Sampson and Laub, 1997; Schroeder, Giordano & Cernkovich, 2007), when compared to the dominant theoretical models outlined in Chapter 3. The pathway model described, explores the cultural and social context in which these men develop the propensity to engage in the drugs-crime lifestyle over time. The model also explores that psychological, family, social and life events that may alter involvement in the drugs-crime lifestyle up to the time of interview.

Figure 2 Pathway Model of Involvement in Drug Use and Crime Lifestyle



### **Origins of involvement**

The identified point of origin of the participants commencement in offending behaviour and drug use was the most consistent theme to emerge from the study; that is, many of the participants were born into the drugs-crime lifestyle or early engagement in the drugs-crime lifestyle occurred in the context of this lifestyle being role modelled, condoned and encouraged within the immediate and extended family system.

For the developing child within the Aboriginal kinship system, the family is thought to be the heart of the child's social existence (Heathcoate & Bell, 1999). As such, the child is encouraged to learn through observation of the family and the kinship system; the totality of both systems therefore offers a strong and cohesive force that provides psychological, practical, emotional and social support across the lifecourse (Heathcoate & Bell, 1999). The participants therefore came to understand the drugs-crime lifestyle as a family lifestyle that was a functional means through which the family unit could meet their basic needs, attain goals and social status through the possession of material goods and maintain a cohesive sense of belonging; all factors the men perceived, with the benefit of hindsight as unachievable through conventional or pro-social means.

The role of family in influencing an individual's involvement in deviant behaviour is well established. Research has consistently found that family of origin characteristics (Perkins et al., 2010); current family circumstances and family structure (Argys et al., 2006; Barrett & Turner, 2006; Perkins et al., 2010) all contribute to the risk of engaging in illicit substance use as proximal and situational risk factors. However these experiences must be understood within the cultural context in which they occur. The systemic factors that underpinned the men family's involvement in the drug-crime lifestyle had their origins in the Aboriginal people's colonialist history of social, political and economic oppression. The men discussed their own and their family systems ongoing experience of marginalisation, racism, and economic disadvantage, such that the family system was described as being comprised of intergenerational welfare recipients. Many of the



participants were not able to identify any family member who had been able to achieve economic independence via legitimate employment and also described the repeated patterns of incarceration of multiple family members.

As noted by Clear and Rose (2003) the incarceration of already vulnerable communities creates a ripple effect of disadvantage and can exacerbate already existing social problems. The removal of male figures within these families and communities means that important social roles, such as the role of father, husband/ partner, uncle and brother are not fulfilled, which in turn has a devastating effect on the passing down of cultural knowledge and opportunities for legitimate success (Clear & Rose, 2003). The majority of men in this study described the complete absence of role models, cultural or conventional, who were able to demonstrate what legitimate success meant for them as an aboriginal man. This family fragmentation highlights the psychological, cultural, financial and social impact of the social policies and practices that contribute to the gross over-representation of Aboriginal men in Western Australian prisons. The repeated removal of family members' therefore had a number of consequences; first, increased financial burden and poverty, through the removal of an income generating (through welfare payment or illegitimate means) member; second, removal of an adult male shifts the family and cultural roles within the immediate and wider family system; third, the stigma of incarceration reinforced the stereotype of aboriginal males being involved in criminal behaviour, and served to further damage the relationships between the men, their family and the wider community; and fourth, increased social schism between the family unit and mainstream society, which in turn reinforced the family's investment in the drugs-crime lifestyle choice.

Against the historical and social background, these men described an extended family and kinship system that had formed a criminal social identity, based primarily on their mutual rejection of mainstream social norms; that is, a rejection of white Anglo-Saxon mainstream society. The process of forming a criminal social identity may originate from an individual feeling disenfranchised from mainstream society early in

childhood; however in this study, the rejection of mainstream norms appeared to occur at a family systems level and emanated from a long history of socio-political oppression, racism and prejudice. In this way, as McGarty et al (1993) and Kaplan (1987) have suggested, the mutual rejection of social norms for the families described in this study not only reduced the uncertainty of group norms of behaviour, but is also likely to be a source of self-enhancement. This means that as a family system, involvement in the drugs-crime lifestyle may become a public rejection of the lifestyle that the mainstream society expects them to have (Campbell, 1987).

From an individual perspective, the men discussed their perception of their own psychological vulnerabilities that they believed contributed to their initiation and reliance upon illicit substances and criminal behaviours. All of the men perceived themselves as experiencing difficulties with self-regulation (inability to delay gratification, inability to tolerate boredom); a poorly developed sense of self; being susceptible to peer influence and low self-efficacy.

There is an abundance of psychological research literature that highlights the role that poor self-regulation, low self-control and sensation seeking play in a range of adverse outcomes from early childhood behavioural problems, eventual income earning potential, socioeconomic status, criminal behaviour and illicit substance misuse more generally (Duckworth, 2011; Gottfredson, 1990; Gottfredson & Hirschi, 2016; Hirschi, 1994; Moffitt et al., 2011; Moffitt, Poulton & Caspi, 2013). Psychologically, emotional and behavioural regulation are closely related and refer to one's ability to redirect or manage spontaneous flow of emotions and the reciprocal effect that behaviour and emotion have on each other (Vohs & Baumeister, 2011). Associated with self-regulation is self-efficacy. Self-efficacy beliefs are thought to be crucial to how people motivate and direct behaviour (Bandura, 1994; Beech, 2013) as self-efficacy beliefs contribute to how people think, feel, and behave (Bandura, 1994). As motivation is a cognitive process, self-efficacy beliefs pertain to the individual's appraisal of what they are capable of, how likely that are to be able to achieve goals and to anticipate the outcomes of their behaviour

(Bandura, 1994). The development of self-efficacy is thought to occur through four main sources; mastery experiences (being successful at a task builds confidence in individual's abilities and promotes the idea that a task is a challenge to overcome rather than an obstacle to avoid); vicarious experiences by social role models (witnessing others similar to oneself achieve acts as a positive influence for an individual's own resolve to succeed); social persuasion (verbal and/ or social information received by the individual that they have the requisite abilities to succeed can provide a temporary boost to self-efficacy); reducing stress and aversive emotional states (the tendency for people rely on emotional and physical cues to judge capabilities). It is thought that repeated aversive emotional experiences result in reduced perception of one own ability (Bandura, 1994; Beech, 2013).

When this research is applied to the data from the men's narratives, it is apparent that their self-efficacy beliefs centred around involvement in the drugs- crime lifestyle, consistent with what has been termed in the research literature as criminal self-efficacy (Laferriere & Morselli, 2015). From an early age (late childhood) these men reported achieving mastery experiences through engagement in criminal behaviour (e.g. break and enters prior to the age of criminal responsibility); they described social role models, with whom they could strongly identify (i.e. family members) who succeeded at criminal behaviour and illicit drug use, in that they were able to acquire possessions not otherwise obtainable and experienced pleasure; the men reported experiencing social pressure from various family members to be involved in the drugs-crime lifestyle, either in an implicit or explicit manner; and finally, the men described quickly learning that illicit substance misuse had the powerful effect of alleviating aversive emotional states.

### **Maintenance within the drugs-crime lifestyle**

The influence of the family system remained a strong theme throughout the maintenance or persistence of involvement in the drugs-crime lifestyle. From the early beginning of being explicitly encouraged or implicitly expected to be involved in the

drugs-crime lifestyle, the men recalled that as they entered adolescence and early adulthood, they described an active choice, or implicit encouragement to be more heavily involved with various factions of the family system that engaged in certain types of drug use and/ or a certain type of criminal activity. Once the men described gaining a sense of belonging and acceptance within their respective family subsystem, ongoing involvement in the drugs-crime lifestyle reinforced the men's sense of belonging and cohesion within the family system. The creation of various "in" and "out" groups within the same extended family or kinship system ensued based predominantly on their identity that centred on certain types of criminal behaviour and drugs used.

The preference and at times, exclusive engagement in the drugs-crime lifestyle with immediate and extended family groups is consistent with research conducted by White (2009), who explored young Aboriginal groups or gangs. Similar to the current findings, White found that "*the theme that the local gangs were criminal groups based upon family emerged strongly*". In his study, White outlined the strong influence that colonisation and past social policy that excluded and marginalised Aboriginal peoples, in addition to the ongoing experience of racism on a daily basis as unifying Aboriginal people and assisting to create an outsider identity. Similar to the themes presented in White's study, the men in the current study spoke consistently about their involvement in criminal behaviour and illicit drug use as an activity that united family members and strengthened within group ties and affiliation. From this perspective, the men reported feeling entitled to engage in the drugs-crime lifestyle. The greater the disapproval of their behaviour from the general public and criminal justice system served at times to amplify their behaviour and again reinforce the family/ group identity.

As Boduszek and Hyland assert, once a group has formed a group criminal identity, individuals can define themselves by traits, characteristics and behaviours they reject rather than do not possess. Additionally, creation of an oppositional culture, where criminally successful peers and family members are respected and viewed as role models is crucial to the development of a successful identity and creating a sense of

purpose, where purpose cannot be found in mainstream culture (Laferriere & Morselli, 2015). Collectively then, for the family system and the men individually, criminal self-efficacy (the experience of mastery through crime) is an important variable in maintaining involvement and investment in the drugs-crime lifestyle (Laferriere & Morselli, 2015).

Importantly, criminal efficacy through the men's involvement in drugs-crime lifestyle, while psychologically reinforcing, also assisted the men to fulfil more traditional roles and responsibilities within the wider aboriginal kinship system. As Bell and Heathcote (1999) highlight, the Aboriginal kinship system determines the rights and obligations of an individual within the family system and provides a guide for an individual's behaviour in any number of situations. The kinship system can therefore be considered " *a social grid that defines people's identity in relation to one another and to outsiders, and can be interpreted as a web of community group*" (Bell & Heathcote, 1999, P. 3). The values that are central to the kinship system have their origins in ancestry, marriage, generations, personal relationships and the other factors that serve to define each individual within society (Bell & Heathcote, 1999). In the absence of legitimate employment, proceeds from criminal activity was used on legitimate basic needs (e.g. rent, food, clothing etc.), or for the provision of illicit substances to family members' who may have been drug dependant. Other relational obligations were fulfilled in various other ways. For example, involvement in criminal behaviour together with various family members, demonstrated and reinforced the trust and bond that existed between family members, or perhaps where the men were involved in the sale and distribution of drugs, visiting family members to supply drugs assisted them to fulfil their obligation to remain in contact with their extended family members. As such, many of the men discussed that a powerful factor contributing to their motivation to maintain their involvement in the drugs-crime lifestyle was to fulfil their kinship obligations and provide for their family.

Aside from the criminal mastery experiences, fulfilling family and kinship obligations and maintaining a connection to culture, the men also described deriving

pleasure and enjoyment from the drugs-crime lifestyle, which in and of itself was a powerful motivator to continue involvement.

### **Desistance and re-engagement with the drugs-crime lifestyle**

The men described periods of self-imposed and mandated desistance; both in prison and while on community based legal dispositions. For some of the men, periods of short term desistance were planned or imposed through incarceration and were viewed as a necessary break, during which, they could recuperate physically from the psychopharmacological effects of substance withdrawal, with the explicit aim of returning to the drugs-crime lifestyle. These participants were able to view the physical break from drug use in a positive manner, in that they would be able to achieve a similar state of intoxication from a reduced amount of illicit substance upon release. Other participants openly acknowledged that the period of mandated desistance was futile, as they continued to use illicit substances within the prison environment. While others still, stated that short term desistance efforts occurred within the context of the family system. During these attempts, the men stated that a combination of their own psychological vulnerabilities and mounting pressure from family contributed to their decision to re-engage in the drugs-crime lifestyle.

For those participants who described attempting to engage in a longer term period of desistance while in the community, either initiated due to external constraints being placed them from community based criminal dispositions or from their own internal motivation to change, the theme remained that same; in order to succeed in their goal of desistance, they were required to physically relocate away from their family system. The attempt to geographically relocate, reduce communication and contact with family could be understood as a “turning point” as described by the informal social control theory (Laub & Sampson, 2003). Certainly from these men’s perspective such desistance attempts required many of the hallmarks of a turning point as described by Laub and Sampson, such as a “knifing off” from the past; new situations that changed routines and structure, a new opportunity for personal growth and development. However, ultimately

these desistance attempts were undermined by a fundamental lack of social and cultural support, in addition to limited psychological resources to manage their difficulties with self-regulation. Many of the men described their entire social network as being comprised of immediate and extended family. By “knifing off” family, a crisis of identity ensued with respect to the men’s connection to culture and place, and sense of belonging within the aboriginal community. In this context, the men reported only being able to withstand a short period of desistance before reconnecting with family and re-engaging with the drugs-crime lifestyle.

Some of the men reported attempting to adopt conventional lifestyles in the context of developing social bonds through parenthood, employment or romantic relationships. However commonly, the men reported to have commenced a romantic relationship with a partner who was also involved in the drugs-crime lifestyle or when other conventional social roles were attempted, the conventional role was experienced as overwhelming and unsustainable. Therefore, even when these social roles were considered personally relevant, the routines and responsibilities were perceived as onerous, boring and to be avoided. In turn, re-affirming the sense of belonging and social identity to the drugs-crime subculture.

The research literature on desistance highlights the importance of connection with pro-social institutions and conventional relationships. Factors such as anti-social networks, few attachments to pro-social institutions, and few avenues of informal social control are all factors that are hypothesised to complicate desistance from crime efforts across the lifespan (Laub & Sampson, 2003; Giordano, Cernkovich & Holland, 2003; Schroeder, Giordano & Cernkovich, 2007), while age graded social bonds, such as attachment to parents, marriage, and employment encourage or support desistance efforts (Laub & Sampson, 2003). However the results are less clear for those involved in the drugs-crime relationship. For example, during adulthood Schroeder, Giordano & Cernkovich, (2007), found that adult social bonds do not act as powerful mediators in the relationship between drug use and crime, when compared to adolescence. Further,

Schroeder et al found that it was not necessarily the satisfaction derived out of being in a romantic relationship or marriage that was important, but rather the “respectability” of that partner that assisted to promote desistance (p. 214). Respectability of course is a relative term. In the context of desistance research, respectability is taken to mean pro-social or with a strong connection to conventional social roles. Similar results may be applicable to social bonds formed within the family, that is, the importance of the “respectability” of the family system.

From the narratives of the aboriginal men in this study, it was clear that they enjoyed strong bonds to their own family and kinship system, which objectively could be assumed to encourage desistance, if the family ascribed to a conventional lifestyle, but they did not. Indeed, apart from observing others within mainstream society, many of the men in this study reported having had no lived experience or direct role modelling of what it meant to live a conventional lifestyle. For example, with respect to employment, many of the men could not identify any family member who had maintained legitimate employment (outside of welfare dependency). This finding should be placed into social context; the gross overrepresentation of aboriginal people within the criminal justice and prison system of Western Australia has an aggregate and individual level effect on economic wellbeing (Western, Pettit & Guetzkow, 2002). From a macro level it is acknowledged that the earning and employment potential of aboriginal people is disproportionately affected by the higher incarceration levels as an incarceration record reduces employment prospects across the lifespan (Garland et al., 2008). This means that within Western Australia, it is clear that the impact of social justice policy is not evenly distributed across the population. As Sampson and Laub (2016) assert, macro-level changes to sentencing legislation and incarceration can have the impact of shaping the life course of a whole cohort of people (Sampson & Laub, 2016). Aboriginal people therefore are likely to be confined to a lower earning class due to a large extent by the disproportionate imprisonment.



The stigma of this high level of incarceration can and does have a ripple effect, as evidenced in this study by the intergenerational reliance on welfare and discrimination experienced when attempting to secure legitimate employment. At an individual level, a history of incarceration and involvement in the drugs-crime lifestyle, has been found to restrict access to conventional institutions and activities such as limited legitimate employment opportunities (Schroeder, Giordano & Cernkovich, 2007). Therefore, for those who do attempt to gain employment with the aim of living a “conventional lifestyle”, they are faced with fewer opportunities, low earning potential and limited role models of how to manage the requirements of employment. Psychologically then, such attempts are likely to result in decreased mastery experiences gained by legitimate employment, decrease self-worth and in turn, increase the viability and reliance the drugs-crime lifestyle.

Of additional cultural relevance is the identification of risk factors for involvement in anti-social behaviour that appears to be culturally laden. For example, residential transience is commonly reported as a risk for involvement in anti-social or deviant behaviour, based upon the assumption that multiple relocations imply poor connection to community and family do not hold weight in aboriginal families. Indeed residential transience may indicate the exact opposite- a connection to culture and adherence to family and kinship obligations.

From this perspective and with reference to the consistently strong influence of family and culture throughout the narratives of the men interviewed, this research raises a number of questions with respect to the social bonds and desistance literature. For example, can conventional social bonds assist when there is no early connection to a conventional lifestyle? Or further, where there is an active rejection of conventional lifestyle? It would appear as though implicit in the literature on informal social control theory is a value laden assumption about what constitutes a conventional lifestyle, irrespective of culture. From the narratives of the men of this study, where conventional social bonds are inconsistent or at odds with family expectation or cultural obligations, it

would appear as though the utility and transformative influence of social bonds such as employment, military service or marriage (Laub & Sampson, 2003; Sampson & Laub, 2016) are undermined. Therefore perhaps at least for this sample of aboriginal men (and other cross cultural samples), the type and nature of social bonds that are likely to encourage desistance from the drugs-crime lifestyle are different to that described by Laub and Sampson (2003). Culturally relevant social bonds such as connection to traditional culture may therefore be a more potent social bond when compared to connection to conventional bonds.

#### **8.4 Conclusion**

This sample of incarcerated aboriginal men described their involvement in the drugs-crime lifestyle as having originated out of a family investment in the drugs-crime lifestyle that arose out of a history of socio-political marginalisation, oppression and prejudice. The pivotal role of culture, family, and the socio-political context within which the drugs-crime lifestyle operates permeated every facet of the men's narratives of their experience in the drugs-crime lifestyle. As adults, the men were able to identify their own innate psychological vulnerabilities and lack of connection to conventional society that contributed to their own choice to maintain their involvement in the drugs-crime lifestyle over time. Where periods of desistance were attempted or enforced through the criminal justice system, these men identified that these attempts would require isolation from the family system and for them to engage in a process of acculturation to mainstream conventional lifestyle. However, such practices and policies may only serve to reinstate the devastating social policies of the stolen generation. Instead, encouraging the process of enculturation that is, connection with traditional elements of the aboriginal culture to assimilate into modern lifestyle may provide more lasting social bonds that could encourage desistance from the drugs-crime lifestyle.

## Chapter Nine

### Discussion of the emergent theoretical pathway models

Study One (Chapter 6) and Study Two (Chapter 7) resulted in the development of two distinct pathways models for involvement in the drugs-crime lifestyle across the lifespan to the point of interview. Drawing upon the narratives of incarcerated men from different cultural backgrounds, a number of commonalities and distinct differences emerged with respect to their initiation, maintenance, desistance and re-engagement in the drugs-crime lifestyle. The aim of this chapter is to explore the emergent commonalities and differences between the two pathway models.

#### 9.1 Common themes between Study One and Study Two

One of the critical questions within the criminological research literature relates to the aetiology of criminal propensity (DeLisi & Piquero, 2011; Piquero et al., 2003). Different perspectives centre on the degree to which criminal propensity arises from person centred constructs, social/ contextual- specific constructs or a combination of the two (DeLisi & Piquero, 2011; Gottfredson & Hirschi, 1990; Laub & Sampson, 2003). Both pathway models support the latter. In the two samples of men, propensity for engagement in the drugs-crime lifestyle arose out of a combination of deficits or poorly developed self-regulation skills and interacting in contexts which promote factors associated with the drugs-crime lifestyle. Specifically, the men across both studies, irrespective of culture, described common difficulties with self-regulation, such as poorly developed coping skills, inability to delay gratification, inability to tolerate boredom, a poorly developed sense of self and low self-efficacy. Consistent with Gottfredson and Hirschi's (1986, 1990) General Theory of Crime, the associated self-control theory (Gottfredson & Hirschi, 1990) and the Common Cause Model (see Chapter 3.4); the men reported a cluster of early childhood behavioural difficulties, including early experimentation with criminal behaviour and substance use. The perceived self-regulation deficits were reported to be stable over time and to have contributed to their

ongoing involvement in the drugs-crime relationships through the men's interactions in various contexts, life events and situations. During adulthood, difficulties with self-regulation were reported as most obviously related to the drugs-crime lifestyle during periods of attempted change, adaptation or during periods of heightened stress and emotional arousal. With reference to the pathway model, periods of attempted desistence (short or long term) and re-engagement were most often cited as periods where the men felt psychologically vulnerable and became acutely aware of how their own self-regulation difficulties contributed to their involvement in the drugs-crime lifestyle. Implicitly however, it is proposed that these self-regulation difficulties underpinned the men's involvement in the drugs-crime lifestyle across all facets of the pathway over time, albeit outside of the men's conscious awareness. While the psychological vulnerabilities were similar, the manner in which they manifested and shaped the involvement in the drugs-crime lifestyle differed across the studies with respect to contextual factors related to culture, family and informal social control. As such, the drugs-crime lifestyle was found to vary over the life course (Menard et al., 2001).

Associated with self-regulation deficits, was the common theme of low and dysfunctional self-efficacy beliefs. Self-efficacy relates to the belief that one can execute behaviour to produce a desired outcome and is crucial to motivation and directing behaviour (Bandura, 1977). There are two common themes across the studies related to self-efficacy, the first, is that criminal behaviour provides mastery experiences that are likely to bolster self-efficacy within the drugs-crime lifestyle and in turn, increase commitment to that lifestyle (criminal self-efficacy; Laferriere & Morselli, 2015). Criminal self-efficacy or the experience of mastery out of criminal activity was found to be a potent reinforcer for men across both studies. However mastery experiences were also achieved through the psychopharmacological effects of drug use and associated expectancy beliefs of illicit drug intoxication on social skills and acceptable social behaviour. For example, the men across both studies spoke about illicit drug intoxication

leading to more proficient social skills, increased sexual arousal, greater courage to engage in criminal behaviour and for some, associated expectancy beliefs of casual sexual relationships and heightened sexual pleasure. Second, when faced with the challenge of a lifestyle change through desistance, dysfunctional self-efficacy beliefs contributed to a re-engagement in the drugs-crime lifestyle. In the later example, the men across both studies tended to portray themselves as passive agents in their life, relying upon others to guide and manage their behaviour. Men across both studies therefore provided inaccurate perceptions of their ability to control current and future events in their life. Commonly, dysfunctional self-efficacy beliefs were coupled with a sense of hopelessness. The men spoke about the inevitability of being incarcerated, socially stigmatised and provided their perception that a conventional lifestyle was beyond their capabilities.

Another common person centred construct across both studies was the men's reported sense of (varying) volition, agency and control. In adulthood, involvement in drug use and criminal behaviour was depicted as a lifestyle choice that was developmental in nature. The importance of human agency and volition were important variables across both studies. Human agency has been identified by Sampson and Laub (2005) and others' (Butterfield, 1995; Katz, 1988; Sherman, 1993) as vitally important for understanding both persistence and desistance from drug use and criminal behaviour. As Sampson and Laub state "some men simply insist on a criminal lifestyle, not out of impulsivity or lack of knowledge of future consequences, but rather because of the rewards of crime itself or a wilful resistance to perceived dominance" (p. 37). Across both studies, the men discussed the attractive elements (e.g. hedonistic pleasure, mastery, and belonging) of their involvement in the drugs-crime lifestyle that maintained their investment in this lifestyle. Once invested in the drugs-crime relationship, men across both studies reported feeling entitled to maintain their involvement in the drugs-crime lifestyle as a legitimate lifestyle choice. Feelings of entitlement and the development of a criminal social identity appeared mutually reinforcing. The men

described the drugs-crime lifestyle as a legitimate and functional lifestyle option that met their psychological, social, economic and relational needs. Drug use and criminal behaviour separately and in combination became a functional component of how the men across both studies met their individual and family based needs. As such, the men in both studies described a varying pattern of drug use across time that fluctuated in both intensity and diversity. Irrespective of the pattern of use (infrequent use, high frequency use to dependency) all men across both studies described as adults, being able to retain control over the type and frequency of use depending upon the contexts and aims of the intoxication. For example, the men described choosing particular drugs, such as cannabis to assist with the experience of withdrawal symptoms of amphetamines or heroin, while others' chose to use amphetamines to enhance the excitement and pleasure out of criminal behaviour. Intertwined with the choice of substances and criminal behaviours to engage in together or in isolation are the expectancy beliefs (Zinberg, 1984) that the men had with respect to the psychopharmacological effects of the drug used or pleasure derived out of the criminal behaviour.

Men in both studies' described being aware (either through legal sanctions or socialisation within wider mainstream society), that their lifestyle was not condoned by mainstream society; that the lifestyle potentially caused health and/ or mental health difficulties and carried the possibility of legal sanctions and restrictions. Indeed, consistent with the social psychological research on the criminal social identity (Boduszek & Hyland, 2011) at times, men in both studies' reported that their experience of social judgement, marginalisation, and criminal sanction, served to amplify their outsider group status, enhance cohesion amongst members of the drugs-crime subculture and strengthen their resolve to remain active in their lifestyle choice and reject mainstream social expectations. Therefore, there was a common experience of belonging to "in" and "out" groups, based upon characteristics of the drugs-crime lifestyle such as the types of drugs use and criminal behaviour performed. Disparities existed,

however with respect to the relationship structures of who belonged to these groups (i.e. family vs peer social networks).

The origins of the entitlement across both studies differed somewhat in response to contextual factors and events encountered throughout the course of the men's growth and development. For those men in Study One, the sense of entitlement appear to arise out of a desire to reduce the cognitive dissonance between the moral condemnation that they knew their family held with respect to their involvement in the drugs-crime lifestyle and their own internal conflict related to adopting a "deviant" lifestyle. For the men in Study Two, the sense of entitlement stemmed predominantly from their early childhood experiences of growing up in and around the drugs-crime lifestyle and the collective rejection of conventional or mainstream Anglo-Saxon lifestyle.

As with any lifestyle choice, the men in both studies described periods of reduced and increased commitment to the drugs-crime lifestyle, such that they both described periods of desistance (from offending and drug use), re-engagement and maintenance that were cyclic in nature across the life course. This meant that there was not one clear factor that contributed to the decision to desist from the drugs-crime lifestyle, but rather that general desistance and persistence processes were evident across the lifespan (Sampson & Laub, 2005; 2016). However, disparities were present in the participant's recollections of the systemic, relational and social factors that contributed to desistance and re-engagement in the drugs-crime lifestyle over time. This suggests that in order to understand desistance processes across the lifespan, that an understanding of the interplay between child, adolescence and adult experiences and culture is required (Sampson & Laub, 2016).

Contextually, the influence of peers in terms of both negative peer association and peer pressure emerged as a common theme across the two studies. Research on peer influence consistently demonstrates that associations with drug using friends is a significant predictor of substance use, and criminal behaviour especially in adolescents and young adults (Curran, White & Hansell, 2000; Perkins et al., 2010; Schroeder,

Giordano, & Cernkovich, 2011). Less however, is known about the influence of adult peers on the adult criminal behaviour (Schroeder, Giordano, & Cernkovich, 2011). As an environmental/ situational influence, peer associations are thought to act upon the individual as a process of social learning. While the concept of peer pressure was similar, the source of the peer pressure varied. For the men in Study One, the source of peer pressure were similar aged peers and acquaintances, for those in Study Two, peer pressure came from members of family and kinship groups. A related consistency across studies was the identified points across the lifespan where peer pressure was most influential. Within the narratives of the men in both studies and consistent with the research evidence, peer pressure was identified as a significant influence on initiation and re-engagement in the drugs-crime lifestyle. The commonly identified influence of peers should be considered with respect to the attribution bias and demand characteristics also evident across the narratives of the men in both studies. The periods along the pathway model that the men have identified peer influence as critical to their own involvement in the drugs-crime lifestyle is consistent with a self-serving attribution bias. That is, apportioning blame to sources external to themselves reduces the cognitive dissonance associated with the decision and therefore, their personal and moral culpability.

The portrayal of a social hierarchy within the drugs-crime subculture that was dependent upon drug and criminal activity of choice was also evident in both studies. The hierarchy described was consistent with the paradoxical belief of mainstream society that drug addiction is both a medical disease and personal defect (Pereria & Carrington, 2016). Therefore reinforcing the belief that those "addicted" to illicit drugs are thought to be simultaneously pathological and weak willed, motivated by both an involuntary compulsion for their desired drug and free will (O'Malley, 2004; Pereria & Carrington, 2016). For the men in both studies such beliefs were particularly pertinent with respect to those who used heroin based upon the stereotype of the heroin "junkie". Many of the men perceived themselves to be morally superior to those who use heroin and sought to



distance themselves from being viewed as a “junkie”. For example, some men described a history of heavy poly substance use and high frequency offending behaviour over an extended period of time, however remained adamant that they were fundamentally different to those who use heroin. Other men described more implicit views, by making clear statements that they “*never used heroin*” (*non-Aboriginal participant 7*). By making such statements, the participants were able to minimise their own drug use in light of their assertions that they had never used the drug that they perceive society viewed as the worst or most morally corrupt. Statements such as “never used heroin” were typically followed by a minimising statement such as “*just mainly amphetamines*” (*non-Aboriginal participant 7*).

Intertwined with this moral code of conduct, is the moral condemnation for participating in some crimes over others. The men based their moral views upon the perceived harm that certain offending causes to their victims, society’s view of such behaviour and how frequently some crimes are committed (i.e. normalisation within the drugs-crime subculture). From this perspective, the men tended to minimise their involvement in acquisitive offending when compared to more violent offences. Statements such as “*I just do burglaries and armed robberies*” (*non-aboriginal participant 7*) or “*do snatches, breaks mostly, do sneaks, but wouldn’t go as far as armed robbery, some people do, but I wouldn’t go that far*” (*Aboriginal participant 4*) denote the acceptability of acquisitive offences amongst both studies sample and demonstrates the hierarchical level of moral/ ethical code of conduct within the drugs-crime subculture.

Finally, The presence of demand characteristics (i.e. the participant’s assumptions pertaining to the views, beliefs of the interviewer and subsequent unconscious change in behaviour) and attribution bias’ within the interview process was also evident within both studies. It was noted in both studies, that when the men were asked open ended, non-directive questions about their involvement in drug use and criminal behaviour, that they would provide a different perspective to that provided when questioned directly about illegal behaviour. For example, when asked directly about the

positive aspects of drug use (closed question), participants tended to state that there were no positives (consistent with social expectations), however when asked to tell me about their experiences of drug use (open question), the men across both studies were much more likely to provide a more balanced and introspective perspective.

Acknowledgement of the demand characteristics of the interview process and the attribution biases evident within the narratives of the men is important due to the ambiguity that can exist in self-reports about people motives and reasons for engaging in behaviours and actions (Sampson & Laub, 2016). Indeed Kahnemann (2011) asserts that people are notoriously biased in understanding and explain their own actions, due partly to the fact that so much of human cognition operate automatically, outside of conscious awareness.

The contextual/ environmental demand characteristics of the interview, that is, that the interviews occurred within the prison environment, were also deemed to be influential. The men in both studies tended to justify and rationalise their decision to engage in a lifestyle that is not condoned by mainstream society through a process of attributing blame to various source external to them (external locus of control). For example, in discussing their lifestyle choice, participants in both studies tended to apportion blame to their drug of choice (personification of the drug) for their involvement in criminal behaviour and other behaviour that was morally repugnant or inconsistent with their own values. The tendency to personify the drug, that is, apportioned blame to the drug for “making” the men commit crime, or at least heavily influential in their behaviour may stem from the disease model of addiction. Implicit in the disease model of addiction, is the assumption that those who are drug dependent are perceived to have a medical illness (addiction) that reduces volition and becomes the overriding force behind subsequent behaviour. When questioned directly, this socially acceptable explanation is offered predominantly as it reduces moral culpability and responsibility (attribution bias). However, for many of the men, indirect questioning would elicit some very different understandings and motivations for becoming involved in drug use and offending

behaviour. Interestingly, in the sample of drug using offenders' in Study One, most of their narratives centred on their evolving patterns of drug use and criminal involvement that involved a conscious decision to become involved in the drugs-crime lifestyle despite having established a conventional pro-social lifestyle. The men in both studies therefore reported a shifting sense of volition with respect to various aspects of the drugs-crime lifestyle, partially in response to the demand characteristics of the interview. In particular, with respect to the choice of drug/s used and the amount to which they accepted responsibility for involvement in criminal behaviour.

## **9.2 Disparities between Study One and Study Two**

The most obvious disparity across the two studies pertains to the homogenous narratives and experiences of the men in Study Two, which led to the emergence of a single rather than dual pathway model. The single pathway model highlights the disparity between the two studies with respect to the role of family, culture, informal social control and evolving volition on the men's involvement in the drugs-crime lifestyle over time. For the Aboriginal men in Study Two, the socio-political history of aboriginal people in Australia and Western Australia continues to have an impact on how these men view themselves, their families and their relationship with mainstream/ conventional society. The aboriginal people's history of dispossession, exclusion, discrimination and marginalisation, coupled with an over-representation in all facets of the criminal justice system has had a profound effect on Aboriginal people (Shepherd, Li, Mitrou & Zubrick, 2012). Policies of forced removal of aboriginal children were evident across Australia until the 1970s, which significantly undermined the psychosocial functioning of the "stolen generation" and their ability as adults, to parent according to cultural practices (Shepherd, Li, Mitrou & Zubrick, 2012). Consequently, aboriginal people have been found to have poorer health outcomes across all measures when compared to non-aboriginal Australians, including measures of poverty, substance use, educational attainment and life expectancy (Payne & Payne, 2005; Shepherd, Li, Mitrou & Zubrick, 2012). In the men's narratives from Study Two, the themes of collective disadvantage

exemplified the impact that the aboriginal people's experience of disadvantage continues to have on aboriginal men's identity, self-efficacy and standing relative to mainstream society. The men expressed feelings of hopelessness and helplessness (low self-efficacy) at being able to effect change in their circumstance or live a "pro-social lifestyle" in the absence of having a cognitive template or any vicarious or actual lived experience of what a pro-social lifestyle may entail. In this way, the collective criminal social identity became the defining feature of the family unit and the men as individuals.

At the point of origin into the drugs-crime lifestyle the common self-regulation difficulties reported across studies were moderated in Study One through informal social control within the family and exposure to other activities that encouraged conformity, so as to delay onset into adulthood. In the delayed onset pathway of Study One, crucial informal measure of control of the family system were considered to be; a predominantly pro-social family system that ascribed to conventional morals, values, behavioural expectations that were consistent with mainstream society, that the men reported a strong attachment to their parents', who were perceived as involved, responsive and able to exert effective parenting management strategies. Over time, and across the men's reported involvement in the drugs-crime lifestyle, pro-social family support (rather than social bonds), was identified as critical (when accepted) to encouraging desistance. Even for those men in Study One who formed part of the early onset pathway and perceived their family units to be less pro-social, less involved and therefore less effective at promoting a conventional lifestyle, they reported some access to pro-social role models through either extended family or other means.

In contrast, participants in Study Two described being born into or raised within the drugs-crime lifestyle. This lifestyle was role modelled and encouraged (explicitly or implicitly) within the immediate and wider family and kinship system. The men described being aware from a young age that the family system that did not ascribe to (or actively rejected) mainstream social values and norms of behaviour. In this context, the family system was identified as being instrumental in encouraging initiation, maintenance and

re-engagement in the drugs-crime lifestyle. For these men, involvement in the drugs-crime lifestyle unified the family system as a whole and created smaller cohesive groups based upon unique characteristics of the drugs-crime lifestyle such as the types of drugs consumed and criminal behaviour performed. Themes of trust, connection and reciprocal obligation were discussed by the men as reasons for engaging in the drugs-crime lifestyle exclusively with family.

Growing up in families characterised by structural disadvantage (e.g. poverty, residential transience, large family size; Sampson and Laub 2005) and adverse family social processes (e.g. harsh discipline, poor supervision, weak parental attachment) is thought to compound childhood trait/ state vulnerabilities, which in turn may result in life course persistent offending (Moffitt, 1993). This assertion fails to account for unique cultural factors related to different parenting styles, family connections and cultural obligations. Within this sample, the men described family as central to their lives and lifestyle, with a strong connection reported to parents and numerous other family members. At the heart of aboriginal society is reciprocity as a moral obligation (Bourke & Bourke, 1995) and this obligation to family was evident in the men's narratives. The men described being motivated to fulfil kinship and family obligations to care and provide for both their immediate and extended family system, often using illegitimate means to provide both primary and secondary human needs. For example, the men spoke about engaging in criminal behaviour with and for their family to provide basic needs such as food, clothing, accommodation, transportation etc, and secondary needs, such as illicit drugs for a drug dependant relative.

Other family structural disadvantages related to residential transience and family size as outlined by Sampson and Laub (2005) also become less meaningful when related to Aboriginal families. Aboriginal conceptualisations of family involve more than the direct nuclear family, to include extended family members and kinship ties, all of who play a vital role in the shaping and maintaining cultural and family connection (Bourke & Bourke, 1995). Practically, kinship connections and obligations may mean that several

extended family members could reside in the same home, or commonly, family members regularly travel to or reside in various family members' home to maintain kinships connections (Bourke & Bourke, 1995). Therefore the idea of residential transience is somewhat culturally specific; what is considered transient in one culture may not be considered so in another. Further, with respect to parenting, aboriginal children may be raised by a number of parental figures, all of who are referred to as mother, father, grandparents, aunts etc. (Bourke & Bourke, 1995). This is due to the rules and values of the kinship system, whereby the child's biological aunts and uncles are identified as holding the same status as that of their biological parents (Bourke & Bourke, 1995). Therefore, it is possible that aboriginal children could enjoy attachment relationship with a larger variety of family members when compared to non-aboriginal children.

Returning then to the role family as a form of informal social control, the men in Study Two reported to enjoy many of the positive family features identified in the research literature as assisting to prevent involvement in criminal behaviour. Factors such as parental monitoring and support (Gottfredson & Hirschi, 1990; Hirschi, 1969); strong attachment relationships (Hirschi, 1969), affection, opportunities for involvement in with the family activities, positive recognition for behaviour, setting boundaries and concern about parental disapproval (Catalano & Hawkins, 1996) were all factors discussed within the narratives of the Aboriginal men, yet the morals, values and behaviours condoned were not consistent with a mainstream conventional lifestyle. Instead, for some men, mainstream values and morals were actively rejected, while for others, the history of socio-political disadvantage and recurrent experiences of discrimination and racism meant that the family and kinship system was so fractured that the only lifestyle known for at least more than one generation, was welfare dependency and the drugs-crime lifestyle. Under these conditions, the drugs-crime lifestyle became known as the only available lifestyle.

Where a child's growth and development occurs within the drugs-crime lifestyle, the question of volition with respect to at least initiation becomes relevant. Some men in

Study Two described being explicitly directed or actively encouraged to engage in criminal behaviour prior to the age of criminal responsibility (i.e. 10 years of age). With the benefit of hindsight, these men understood this to be due to them as children not being able to be held criminally responsible for their actions. In such a situation, just as the child cannot be considered to have formed criminal intent, the child also cannot be considered to have deliberately chosen to have engaged in the criminal behaviour. Therefore, unlike the men in Study One, who were able to describe engaging in deliberate decision making to initiate involvement in the drugs-crime lifestyle, volition for the men in Study Two appeared to be more of an evolutionary construct. Volition was displayed more obviously in the men's reported decisions about which type of drugs-crime lifestyle they wished to engage with, dependent upon what family or kinship relationships that felt a greater sense of belonging and mastery. For example, one side of the family may be involved in violent offending and the use of amphetamines, while another was involved in the use of heroin and acquisitive offending or vice versa.

Volition was also evident during periods of attempted desistance from involvement in the drugs-crime lifestyle. However, desistance from involvement in the drugs-crime lifestyle had vastly different outcomes and implications from the men across both studies. While the men in Study One described desistance as a means through which re-connection to family support could occur, the men in Study Two described desistance as involving them to isolate themselves geographically and emotionally from their family and kinship system. This dislocation from culture and family was described as distressing and extraordinarily difficult, ultimately resulting in a return to the family system and the drugs-crime lifestyle. For these men, coerced or forced desistance through the criminal justice system, either by way of restrictions placed on movements and contact with family by releasing authorities or community based orders was perceived in a similar vein to historical policies of forced removal.

### **9.3 Ability of existing theories to account for the experiences of the participants in Study One and Study Two**

The emergent pathway models that emerged based upon the narratives and experiences of the participants in both studies were considered against the dominant theories outlined in the research literature. The men's involvement in the drugs-crime lifestyle was considered longitudinally for both studies. Similar to criminal careers based explanations (Blumstein, 1988; Blumstein, Cohen & Farrington, 1988; Chaiken & Chaiken, 1990; Sullivan & Hamiltons, 2007), the pathway models acknowledge social and contextual factors associated with initiation and vacillations in both persistence and desistence in the drugs-crime lifestyle. From consideration of the men's narratives across both studies, it became apparent that the dominant causal theoretical frameworks (see Chapter 3) could only account for the participants experiences with drugs and crime at discrete periods of time across their involvement in the drugs-crime lifestyle. This finding is not novel and is consistent with previous research (e.g. Bennett & Halloway, 2006; 2009; MacCoun et al, 2003) which suggests that no one single theory can account entirely for individual's experiences within the drugs-crime relationships longitudinally. From this perspective, the following paragraphs discuss points across both pathway models where the existing theoretical models appear to offer explanatory power.

From the point of initiation into the drugs-crime lifestyle across both studies, the Common Cause model, Gottfredson and Hirschi's (1990) theory of self-control and their general theory of crime (Gottfredson and Hirschi, 1989; 1990) appeared to account for the commonly reported deficits in self-regulation. However, these traits or states were found to be moderated to a large extent by culture, contexts, life events and situations encountered over the life course. Therefore, the models and frameworks within the life course developmental criminology field appeared to also be applicable, such that the combination of person centred (i.e. self-regulation deficits) and context-specific (i.e. social bonds, informal social control) factors were found to contribute to both the early initiation pathways in Study One and Study Two, in addition to providing an understanding of the circumstances under which adult onset occurred in Study One's delayed onset pathway.



During periods of persistence or maintenance within the drugs-crime lifestyle, fluctuations in the use of drugs, alcohol and criminal behaviour in isolation and in combination, meant that the rate of involvement in offending behaviour was not stable over time. Rather the rate of drug use and offending behaviour was considered to be dynamic and responsive to context, life-experience and external constraints on behaviour. During periods of high intensity drug use and high frequency involvement in criminal behaviour, the economic motivation model offered some explanatory power. The economic motivation model draws upon the casual chain that illicit drug use engenders urgent economic need, which in turn underpins the drive for illegal earning (Bennett, Halloway & Farrington, 2008; Inciardi & Pottieger, 1994; Thompson & Uggen, 2012; Uggen & Thompson, 2003). The men in both studies described involvement in acquisitive offending behaviour, which appeared to increase in frequency during periods of heavy drug use, suggesting that economic motivation model was able to explain the men's intensification in acquisitive offending. However, the economic motivation model may have only been applicable to the use of certain classes of drugs, rather than globally applicable to all drug use. For example, one participant described how a change in their drug of choice changed their pattern of criminal behaviour (*"when I was on marijuana I didn't offend, I just sold it to friends, when I got on to amphetamines I started doing burglaries to support my habit"* (Aboriginal participant 11)).

Despite most of the men reporting to have been involved in at least low level or minor sales, distribution or sharing of substances over time and across their involvement in the drugs-crime lifestyle, very few reported being the victim or perpetrator of personal violence (e.g. assaults, robbery with violence, grievous bodily harm etc). Instead, some of the men described being the victim of acquisitive offences (people breaking into their home to attain drugs and/ or money), while others, reported specifically targeting those that they believed to be drug dealers' as a perpetrator of acquisitive offending to obtain drugs and money. With the systemic model's focus on the inherent violence within the drug distribution network, within the Perth context, and based upon the narratives of the

men across both studies, the systemic model demonstrated little validity at any point of the pathway models. While it was beyond the scope of this research to explore in depth the structure of the Perth drug market, from the narratives of the men across both studies, the drug distribution system in which these men interacted with was described as predominantly peaceful and comprised of known acquaintances, family or kinship relationships. Therefore consistent with the work of Coomber (2015; 2010; Coomber & Turnbull, 2007), the men made reference to involvement in the social supply of drugs (Coomber & Moyle, 2014; Coomber & Turnbull, 2007; Potter, 2009), and small scale drug markets that operated on the periphery of the drug market proper. Less common, although still present in the narrative of at least one participant, was the description of an organised closed market structure. This participant described operating a separate drug distribution house, whereby his client base was established through his own social network, with drug sales only occurring when a third party would vouch for any unknown buyer. This closed market structure has been repeatedly described within the research literature as one that offers the greatest protection for both the buyer and seller (Coomber & Moyle, 2012; May & Hough, 2004; Nicholas, 2008).

The pattern of drug use described by the men across both studies varied across the spectrum of use along their pathway of involvement in the drugs-crime lifestyle. As such, the men expressed being acutely aware of the psychopharmacological effects that different drugs have on their body and behaviour. However, for the majority of men across both studies, rather than being driven to engage in various criminal acts when intoxicated (as suggested by the psychopharmacological model), participants described drawing on this knowledge to help achieve their desired state of arousal, manage their experience of withdrawal symptoms or enhance the experience of their offending behaviour. For example, one participant provided a detailed description of his daily routine of poly substance use and how he used different drug types to manage the withdrawal effects of other drugs

*“(I used) alcohol daily, speed whenever I didn’t feel like drinking. I would go out and get speed and pot and smoke on top (of the speed) and stay like that there for the rest of the day and smoke again then drink and next I injected about 20 – 40 units (of amphetamines) after that mull up a smoke and smoke half a foil just after I had a blast” (Aboriginal participant, 9).*

However, as described in the literature review above (see Chapter 3), the acute psychopharmacological effects of certain drugs have been found to be more likely associated with violence when compared to others. The psychopharmacological effect of acute alcohol intoxication on violence has amassed a large amount of research support (e.g. Abbey, Wegner, Woerner, Pegram & Pierce, 2014; Boles & Miotto, 2003; Fagan, 1990; Foran & O’Leary, 2008; Forrest & Gordon, 1990; Jennings & Kormo, 2010; Maldonado-Molina, Pihl & Peterson, 1995; Pridemore 2004; Sharma & Marimuthu, 2014; Thomlinson et al., 2016; White & Gorman, 2000; Zinzow & Thompson, 2015) and has also gained some support in the narratives of at least one participant in Study Two. This man discussed the direct link between coming into town (from a remote regional area) to consume alcohol with family. The resultant state of intoxication was in his view, directly related to his involvement in physical violence directed towards other family members and members of the general public. When removed from the urban area and residing in a “dry” community (i.e. one that prohibits the sale and consumption of alcohol) this same individual reported to be non-violent and adhere to the behavioural standards of the community. While it is possible that a causal link exists between alcohol intoxication and his violent behaviour factors associated with individual and group based alcohol expectancy beliefs, the setting of the town and drinking establishment cannot be ruled out as intervening variables for this participant.

The psychopharmacological model also focusses on the effects of chronic use of illicit substances through the associated avoidance of withdrawals symptoms. Again during periods of high frequency drug use, there was some evidence to suggest that acquisitive offending behaviour was engaged into avoid withdrawal symptoms, however

this was minimal and most commonly the men spoke about drawing upon the use of other substances to moderate withdrawal effects.

When considering both pathway models as a whole, there was little evidence in the narratives of the men in either study to support the drugs causes crime hypothesis, crime causes drug use hypothesis or Goldstein's tripartite framework. Additionally, there was also little evidence to support the notion of crime and drug use specialisation.

Rather, consistent with the views of Gottfredson and Hirschi (1990; 2016) and others (DeLisi, et al., 2011) , men across both studies described involvement in poly substance use and generalist offending patterns.

## Chapter Ten

### Study Three- Case studies

The completion of Study One and Study Two resulted in the emergence of two distinct theoretical pathway models. As has been outlined in Chapter Three and discussed in Chapter Nine, the current empirical research literature propose a number of dominant theoretical models that attempt to account for the experiences of those involved in illicit drug use and criminal behaviour. From the analysis completed during these two studies, it became apparent that some of the dominant theories, models and frameworks were able to provide transient explanations for the participants involvement in the drugs-crime lifestyle during discrete periods of time, however were unable to account for their experiences longitudinally. In order to explore the various factors that are likely to impact on the applicability of these models across time, in addition to provide support for the emergent pathway models, more in depth qualitative analysis was undertaken. The aim of this study was to conduct a more intensive analysis of the parameters that define the men's involvement in the drugs-crime lifestyle over time and to therefore apply the proposed pathway models through the presentation of two case studies.

#### 10.1 Participants and Method

Case study methodology provides the opportunity to study complex phenomena such as the drugs-crime lifestyle, within the context in which it is found (Baxter & Jack, 2008). As a research methodology, the case study approach adopts a constructivist paradigm with the philosophical understanding that reality is socially constructed (Searle, 1995). This approach therefore allows for collaboration between the interviewer and the participant to tell their story as the participant's view of reality, therefore enabling the researcher to understand the behaviours, decisions and actions described (Baxter & Jack, 2008; Lather, 1992).

An exploratory case study was undertaken with one non-Aboriginal participant from Study One and one Aboriginal participant from Study Two. The men from each

study were chosen based upon the depth and quality of the narrative provided during interview, with data collection and analysis occurred concurrently, drawing upon a process of linking the data to the developed pathway models and pre-existing theoretical models. Each participant's experiences will be outlined and examined in depth using a case study format, following a life course or trajectory pattern. Each case study will be discussed with reference to the various theoretical models that attempt to explain the drugs-crime relationship, with a particular focus on highlighting the various points in time that each model could adequately account for the participants experiences (if at all). Finally, the applicability of the emergent pathway model will be outlined with reference to the specific experiences of each case study.

## 10.2 Results and Discussion

**Case Study One- Participant 23- non Aboriginal.** When invited to speak about his experience of drug use, participant 23 claimed to have "*tried it all (drugs), I have used everything that has a fancy name from amphetamines to speed, ecstasy, pot everything*". He described initiating drug use at the age of 13 years with the use of cannabis and alcohol, which he described as "*the usual sort of thing*". This comment appeared to indicate a level of acceptance that engaging in drug use at this age can be considered normal or socially acceptable. He attributed his initiation into drug use as originating out of a desire to "*experiment*" with various altered states of consciousness. He classified his use of a variety of drugs including cannabis, alcohol, car sick tablets, and trips as "*soft*" or benign drugs and maintained the belief that his use of these substances was experimental and derived out of a desire to experience a pleasurable/ euphoric state. Again this drive to experience pleasure and to experiment with altered states of consciousness was viewed by this participant as "normal" and expected behaviour for his age and stage of psycho-social development.

Participant 23 disclosed that at the age of 12 years he was involved in "*experimental*" anti-social behaviour in the form of vandalism. He admitted that he was not under the influence of alcohol or other drugs at the time, and that he had not begun

to experiment with illicit substances. From this narrative, he provided information regarding the temporal ordering of his involvement in drug use and offending behaviour and it is clear that he was engaged in early anti-social and offending behaviour (vandalism) prior to his use of any substances. In an attempt to understand his initiation into drug using behaviour, the Crime Causes Drug Use model could be applied. This model proposed that deviant individuals are more likely to choose or be coerced into subcultures and situations where alcohol and other drug use is condoned, normalised or encouraged (White & Gorman, 2000). From this participants recollections this would appear to be applicable. He recalls that his initial consumption of drugs occurred within the context of his association with older youths who introduced him to Cannabis. He conveyed his belief that his association with these older youths contributed to him having formed the belief that the use of cannabis and alcohol constituted normal or “usual” behaviour during this stage of adolescent development. This peer group also normalised and prioritised the psychological drive to experience pleasure (euphoria) over other competing interests and obligations (sport, other structured recreational pursuits, school, family etc). Therefore, this group of older peers provided a reference group for this participant to gain a sense of belonging to a group and to establish a set of beliefs surrounding acceptable and unacceptable behaviour consistent with an anti-social identity. While the Crime Causes Drugs model is able to explain this participant’s involvement in substance use subsequent to his involvement in anti-social and offending behaviour, it offers little insight into this participant’s initiation into anti-social and offending behaviour.

Participant 23 attributed his own interest and involvement in anti-social behaviour as originating from similar factors to that of his desire to engage in drug use; experimentation and sensation seeking (*“I’m typically a rebellious type”*). His experience of engaging in both drug use and criminal behaviour are derived out of a shared psychological drive to achieve a pleasurable state, to experiment with various behaviours and altered states of consciousness. Additionally, through his admission of being

“rebellious”, it would appear as though this participant’s motivation for use was also derived out of an early rejection of socially accepted norms of behaviour and testing behavioural limits. From this perspective, the Common Cause model appears to be a more parsimonious explanation of his initiation into both forms of deviant behaviour. The Common Cause Model proposes that a number of common causes contribute to an individual’s involvement in both drug use and criminal behaviour, such as; individual, intrapersonal, environmental and situational factors/ influences. Participant 23 attributes personal or psychological factors as the most influential and maintained that environmental factors (e.g. socioeconomic disadvantage, poor community organisation) and interpersonal factors (e.g. poor family relationships) were not influential in his initiation into either drug use or criminal behaviour (“*everyone in my family has their own business and then there is me. I have always had the opportunity*”). Therefore, Gottredson and Hirschi’s (1990) self-control theory may offer a better fit for this man’s experiences. Consistent with the experiences of this participant, poorly developed self-control as a part of the self-regulatory system are thought to contribute to a range of early behavioural problem and involvement in anti-social behaviour.

From the narrative so far, the common cause model, crime causes drug use model and the self-control theory hold explanatory power in understanding this participant’s initiation into early offending behaviour and drug use. However his involvement in these deviant behaviours does not cease during adolescence, but evolves and diversifies into early adulthood. It therefore becomes important to explore what factors maintain his involvement in both forms of deviant behaviour. Participant 23’s involvement in “*minor*” offending behaviour in the form of “*vandalism*” progressed to what he termed “*major offences*” to include “*a break and enter and burglary*” at approximately the age of 17. Such acquisitive offences are commonly associated with the Economic Motivation Model, and recreational illicit drugs such as amphetamines, heroin and crack cocaine have been found to be more likely to be associated with this model. However from this participant’s experience, he did not begin to use these types of



drugs *“until after my first sentence at 27”*. While the frequency of his use may have increased, it appears as though this participant had not diversified his drugs of choice (i.e. cannabis). By the age of 19, participant 23 reported that he received a lengthy term of incarceration (*“seven years”*) for *“an attempted rape (sexual assault)”*. The diversification from minor juvenile offending (i.e. vandalism) to acquisitive crimes (i.e. burglary) to a sexual offence cannot be explained by any of the existing theoretical models. Instead, this pattern of offending over time illustrates the diversity of offending over time, rather than an evolving specialisation with respect to one type or class of offences. He denied that he was heavily involved in drug use at the time of the sexual offence and remained adamant that he was not involved in *“serious”* offending behaviour.

The resultant incarceration forced a change in this participant’s pattern of drug use and offending behaviour due to the obvious environmental changes of decreased availability of drugs and restriction on his freedom of movement and choice. This participant alleged that he was able to remain drug free while incarcerated, despite being offered drugs in custody. From a psychopharmacological point of view, this participant could not be classified as being *“addicted”* or dependent upon at this point in time, as he was able to exhibit conscious decision making and refuse drugs. This suggests that when the situational and environmental contingencies are altered (that is, he is provided with another reference group or set of behavioural standards), he is provided with limited choice, greater supervision and work expectations, that he was able to either suppress his strong drive to experience pleasure or was driven primarily to seek group acceptance and avoid punishment. However when these restrictions were removed and this participant was released from prison, placing him in another environment with different behavioural expectations, he stated that *“when I got out (of prison) my brother took me around to a mates house and my brother shot me up (with amphetamines) and I went out and had a fantastic night and woke up with my eyes hanging out of my head. I went back around to the mate’s house and brought an ounce and started selling”*.

The above quote illustrates that his lengthy term of incarceration and desistence from drug use had not generalised to the community setting. The positive experience of using amphetamines contributed to a change in the frequency, intensity and type of drug use and criminal behaviour (drug distribution) that he engaged in upon his release. For the first time in his drug use and offending pathway, he began to use amphetamines and other “party drugs”. Again he attributed his change in his drug of choice as being derived from a desire to experience pleasure/ euphoria and to experiment with different drugs and different states of consciousness. After that initial use, he made a decision to engage in regular amphetamine use, a decision that he stated is motivated out of a desire to avoid experiencing the withdrawal effects of the amphetamines (consistent with the negative reinforcement model of drug dependence); however, he also reported that he was motivated to reinstate the state of euphoria (positive reinforcement model of drug dependence). When discussing his personal use of illicit substances, this participant described experiencing adverse psychological and psychiatric symptoms while intoxicated. However, these experiences in and of themselves were not enough to result in a change in his investment in the drugs-crime lifestyle, nor did they change his illicit substance misuse. In providing an example of one such episode, this participant stated *“yeah I have had a few schiz outs, you get paranoid, last year I thought the police were after me, I headed to North Beach and went in the water and rang my mate to check out the area and no one was there. I had seen a cop car and looped out, it was a lot of profit I lost.”* As illustrated in this quote, this participant became more focussed on the financial loss of his illicit substances rather than his own mental health. Just as he exhibits volition in his decision to initiate and maintain the use of amphetamines, he also decided to become involved in the sell and supply of the substance

Once he became involved in selling and supplying illicit substances, he also became involved in systemic violence. At this period of his life, the Systemic Model could explain his involvement in violent crime as resulting from negative interactions within the illegal drug market. This was exemplified where participant 23 described his lifestyle

selling amphetamines as “*chaotic, just ragged, living on the edge, violent, always someone trying to screw you over and you dealing with it any way you have to*”. Here the participant speaks about drug market interactions being inherently suspicious and at times violent. He admitted that “*because of all the (prison) time that I have done I know all the big heads in the drug circle. I know how to get good and pure stuff and I make really good money out of it*”. Over time and with additional periods of incarceration, it would appear that his motivation to sell and supply drugs had changed from the social supply of drugs and a means to obtain drugs for personal consumption, to become about financial rewards and forging a career in drug distribution. As his experience and reputation within the illegal drug trade evolved, he adopted a moral code of conduct and values. Additionally, he developed his own safety plan to safeguard his livelihood and assets. For example, he described himself as “*very business oriented..anything business oriented I am very dominant. I am a thinking person and I will think a lot about the deal*”, he goes on to state that he will “*never put yourself into a vulnerable situation*” and then outlines the measures of safety that he takes to prevent systemic violence “*I never advertise what I am doing....I have values where my house is my haven, I never let people know where I live. I have certain rules and values that I stick to*”. The participant discusses setting up residence for the sale and distribution of drugs, which exemplified a closed market structure.

The adaptation of a moral code of conduct, the establishment of a “work” and “home” space and making a distinction between business (i.e. selling) and pleasure (i.e. consuming drugs) mirrors legitimate/ legal business operation and makes this lifestyle more acceptable (reduces cognitive dissonance) and demonstrates his commitment to his established criminal identity. For example, this participant outlined the amount of work that he invested into becoming proficient in his chosen career path, “*I know all of the big heads in the drug circle, I know how to get good and pure stuff and I make really good money and my son has some good stuff all brought legitimately with drug money*”. For this participant the money he earns from the sale of drugs becomes “legitimate”

when it is used to provide for his family. This participant's narrative provides an example of how the same behaviour (i.e. involvement in the sell and supply of illegal drugs) can endure over time, but be motivated by vastly different reasons. At the early stages of involvement in the illegal drug market, this participant was motivated to ensure the certainty of his own drug supply. This motivation evolved into a financial motivation to acquire material possessions for himself, to later assuming the role of financial provider for a family. Marriage, parenthood, employment and other social pro-social bonds are thought to provide the catalyst for desistance attempts and divert the trajectory of involvement in crime, and in this case the drugs-crime lifestyle (Sampson Laub, 2005), however for this participant, parenthood solidified his engagement in acquisitive offending in the context of his desire to financially provide for his children. Participant 23 spoke about the decision to choose an illegitimate or anti-social career over legitimate/pro social career. He stated that he had tried to obtain legitimate employment however it was not as financially lucrative *"when I had a part time job I had not enough money to buy stuff for my boy, it's too easy to go sell some gear and get my boy anything he wants"*. At this juncture in his pathway of involvement in the drugs-crime lifestyle, his decision to return to the illegal drug trade was financially motivated and not necessarily deviant; he expressed a desire to provide for his son.

The return to the illegal drug trade was accompanied by a continued involvement in offending behaviour and illicit substance use. Just as he legitimised his involvement in the illegal drug trade as a career, he was able to justify his participation in offending behaviour by assuming of "robin hood" moral code: *"I'm an opportunist, if I am travelling down the road and see a work vehicle with stuff hanging out of the vehicle, and then I will take it knowing that they have insurance. I have never hit battlers; I never steal from common people"*. He was able to diffuse the responsibility for his offences, make his behaviour somewhat less deviant and more socially acceptable by subscribing to a moral code that in some way reflects social values; that wealthy (and insured) people can afford to lose possessions for the benefit of the poor or underprivileged. To reiterate his

values, participant 23 proudly stated that *“I have never stolen from my family and that is why I still have the trust of my family”*.

From the narrative offered, it became apparent that the sense of achievement, mastery, social status and acceptance that this participant gained from his career in the illegal drug trade was similar to that experienced by other individuals involved in legitimate career paths. This participant developed ways to minimise risk, maximise profits, he developed a code of transactional conduct and ethics that he perceived to render him somewhat more morally virtuous and socially acceptable when compared to other drug dealers. The development of these morals, values and codes of conduct are important as they reduce the cognitive dissonance between being perceived by the general public or mainstream society as a stereotypical “junkie” or “drug dealer” to his own self perception of being a successful businessman with morals, values and ethical codes of conduct that just happens to buy and sell illegal substances (criminal identity). His perception of himself as a businessman with a higher social standing than others in the drug trade is exemplified by the following quote *“I have people that I know I can trust, but they are junkies and I know they will rip me off. I will never get myself into the situation that I will let that happen”*.

While involved in the illegal drug market, this participant began to diversify his use of drugs; he changed his drug preference from amphetamines to heroin. This shift in drug preference also resulted in a number of environmental (accessing different areas to source the drug, change in acceptable places to inject the drug) and social changes (different set of drug use rituals and peers, increased social marginalisation due to the stigma attached to heroin use) and increased economic pressure attached to the higher price of the drug. However, the most prominent behavioural change that this participant could recall was an increase in his involvement in criminal behaviour. He stated that he would *“steal anything that was standing still”* while intoxicated on heroin. The reported change in his behaviour while in a state of acute intoxication can be explained by the Psychopharmacological model, which emphasizes that the effects of intoxication cause

criminal behaviour. This model goes further to state that chronic intoxication can also cause criminal behaviour due to factors such as withdrawal symptoms; sleep deprivation, nutritional deficits, and changes in neuropsychological functioning.

This participant's recollections that he became involved in acquisitive criminal behaviour (stealing) to fund his use when withdrawing from heroin could be caused by the effects of chronic intoxication. However, engaging in acquisitive crime to generate an income to support further drug use is also explained by the Economic Motivation Model. The Economic Motivation Model purports that drug users need to generate a lucrative income to support their drug use and therefore become involved in criminal behaviour as a means through which an income can be generated. As already reported, this participant was involved in the illicit drug trade as his primary means of supporting his drug use, however it appeared that consistent with the Economic Motivation Model, when this participant was engaged in high frequency, high intensity heroin use (a pattern on consumption consistent with being classified as heroin dependent), that this use was accompanied by an increase in acquisitive crime. Therefore for this participant, his involvement in the sell and supply of illicit substances appeared to be impeded by his own pattern of drug use which, in turn, resulted in him increasing his involvement in acquisitive crime to not only fund his own drug use but to also purchase enough drugs to on sell. It is clear from this participant's narrative that the theoretical models overlap to explain a part, but not the whole experience. The economic motivation model for example, only partially explains this participant's motivation to engage in acquisitive offending behaviour. Indeed acquisitive offending was not his reported primary base of generating income. These cross-sectionally relevant models therefore fail to account for the multiple (and at time competing) internal motivations, external pressures, expectations and transitions that drive human behaviour over time.

While most of the theoretical models outlined within the research literature draw upon the environmental or practical realities of engaging in drug use (e.g. expense of the drug, time spent locating the drug) and offending behaviour, few explore psychological

factors that contribute to both involvement in drugs-crime lifestyle. The case study format allowed for the exploration of how various psychological factors influenced this participant's decision to become involved in the drugs-crime lifestyle.

When asked to reflect upon how his patterns of drug use and offending had changed over time from late childhood/ early adolescence to adulthood, as he transitioned into adulthood, participant 23 was able to identify discrete periods where he has been able to desist from the drugs-crime lifestyle. He described a repeating pattern of behaviour whereby he would be released from prison "*each time I come to prison and each time I don't use and then I get back out go to work, save some money and then the shit will hit the fan and I'm back into it (drug use)*". With the benefit of hindsight, this participant observed that "*I seem to be able to give it away in goal, but when I get out is the big challenge*". While he is able to identify that the contrasting environments (prison vs. community) contribute to his drug use, he appears unable to identify what social and environmental factors contribute to his substance use.

Psychologically, participant 23 appeared to be describing a combination of adopting an avoidant style of coping ("*It's a lot of not wanting to deal with life in general*") and poor decision making ("*I am typically a rebellious type and make some terrible decisions*") that contributed to his use of drugs. He appeared to underestimate the influence of drug use on his life "*I always thought that I could use recreationally, but you can't, all my thought processes go out the window*". When discussing his recurrent periods of drug use, this participant appeared to oscillate from portraying himself as experiencing reduced volition, (consistent with medical models of addiction) to describing himself as making a conscious decision about the types of drugs he wished to use dependent upon the desired psychopharmacological effects, to fulfilling his social role expectation (criminal identity) as a seller and supplier of drugs and/ or a "junkie". For example, he provided the following example of some medical difficulties that he experienced that resulted in him beginning to use substances again "*I got a rare disease that attacked my nervous system and I....had to spend a lot of time rehabilitating and my*

*girlfriend thought I was using again because I lost so much weight and so I did start using again”.*

During early adulthood participant 23 disclosed a number of aversive and positive life events (turning points) that could have influenced his decision to either decrease or increase his use of drugs. First, he described experiencing a drug induced psychosis, second, witnessing other friends and associates “*loop out*”, third, the aforementioned medical difficulties and fourth, the birth of his son. While the first three incidents resulted in a temporary decline in his reported frequency of use, or a change in drug of choice, the birth of his son appeared to have had a conflicting impact on his decision to remain involved in drug use and the drug trade. The internal conflict experienced by this participant is indicative of him making attempts to adopt another social role and identity as a father. On the one hand, he attributed the birth of his son and the subsequent separation from this child as a motivator to get out of prison and desist from further involvement in drug use and offending behaviour (“*not seeing my son, not spending as much time as I could taking him camping and I built up a good relationship with my son and then I got put in jail...and that has been the kicker not seeing him*” “*my boy is that last thing I think about at night*”). Yet on the other hand, he also attributed the financial pressure associated with being a parent as a motivator to remain involved in the illegal drug trade (“*when I had a part time job, I had not enough money to buy stuff for my boy, it’s too easy to sell some gear and get my boy anything he wants*”). At this stage of the participant’s life, the motivator to remain involved in the drugs-crime lifestyle (involvement in the illegal drug trade) was perceived as financial, however underlying the financial practicality of being a father are psychological processes related to role strain, mastery, self-esteem, self-efficacy and the drive for pleasure. Ultimately his desire to “*have money*”, his experience within the illicit drug trade as being “*it’s too easy to sell some gear*” and his internal rules and standards that “*when I am not using I won’t sell*” all contribute to him maintaining both his use of drugs, and to justify his involvement in the



drugs-crime lifestyle as a functional means through which he is able to achieve his goals and meet his responsibilities.

When examining how this participant has come to understand his own experience, it is interesting to highlight the shifting attributions of blame that have occurred in response to not only interviewer demand characteristics (types of questions and perceived values of the interviewer) but also to social and environmental demand characteristics. Initially, this participant portrayed his experiences with drug use as extensive (*"I have tried it all"*), he sought to normalise his early drug use and then to portray his experience as overwhelmingly negative (*"it's been a roller coaster ride to hell and back ever since"*). When questioned about the frequency of his drug use, he tended to highlight the positive/ rewarding aspects of his use (*"for me I will honestly say that it is the go girls, it's the wild sex and great parties"*), only to then again portray his life while using drugs as negative (*"I had my life together but as soon as I start using it goes to shithouse"*). Here this participant appeared to be making a fundamental attribution error, that is, he accepts responsibility (an internal locus of control) for the decision to engage in the positive and rewarding aspects of his drug use. However, then adopted an external locus on control, apportioning blame to the drug for the negative aspects of his use.

The presence of a shifting attribution of blame was evident throughout the interview and appeared to be responsive to the types of questions posed by me as the interviewer. For example when asked open ended questions, this participant tended to begin by adopting an internal locus of control and highlighting the positive aspects of his drug use and offending behaviour. However when questioned directly about his drug use and offending behaviour, he tended to attribute blame for his behaviour to the drugs. This response style led to contradictions in his responses, for example when questioned directly about whether he had ever committed any offences while not using drugs he responded *"no, all my offences I have been stoned on heroin or speed"*. However when questioned about his involvement in offending behaviour in an open ended, non-directive

manner (e.g. “tell me about your experience of offending”), it became apparent that he had been involved in a variety of offending and anti-social behaviour prior to initiating drug use and while not intoxicated. This participant also sought to apportion blame and justify his decision to become involved in drug use “*I have been told that I have ADHD (Attention Deficit Hyperactivity Disorder), when I am not on it I am hyperactive, when I am on it, I mellow out and take things slower*”. Therefore, he attempted to rationalise his use of amphetamines as means through which he self-medicated or manage a chronic mental health condition.

Upon examination of this case study against the existing theoretical models that attempt to account for the drugs-crime relationship, it became evident that there is a large amount of theoretical overlap at various stages, while at other points of the narrative, no one theory appeared to account for this participant’s experience. As a whole, no single theory appeared to explain the participant’s entire experience. While it could be argued that this participant’s initiation into drug use and criminal behaviour can be explained by a common intrapersonal drive (sensation seeking), the same common causes do not appear to maintain his use of drugs or involvement in crime over time. For example, as he goes through the process of maturation, enters relationships and gains additional social roles and responsibilities (social bonds and turning points), the factors that maintain his use of substances change to reflect more of a deficit in the self-regulatory system such as emotional regulation, poor coping skills, dysfunctional self-efficacy in addition to practical issues such as financial incentives. His involvement in criminal behaviour within the illicit drug trade becomes a functional primary means through which to generate an income to support his daily living expenses and meet his parental obligations, with the secondary gain of also being able to access cheaper drugs for his own consumption.

For this participant, the illicit drug trade appeared to have been the only career where he perceives himself to have been successful. This is important, as not only does his drug use fulfil his drive for pleasure, but his success within the drug trade provides

him with mastery experiences that increase his self-efficacy and self-esteem, which in turn, contribute to a sense of psychological well-being and solidified his criminal social identity. Within the anti-social peer group that this participant associated, his “occupation” was important; he felt accepted and respected. It is not until placed in the custodial environment that cognitive dissonance (consistent with strain theory) intensifies between his self-perception and social standing in the drug subculture, in addition to the social stigma and moral judgement attached to his occupation from the justice system and the general public. Upon release from custody, the participant experiences within group social expectations and pressure from his previously established peer group that he will return to his drug distribution career; this is contrasted by a legal and wider social expectation that he will change his behaviour and desist from involvement in the drugs-crime lifestyle. This expectation is likely to result in a great deal of psychic stress, as essentially he is required to form a new identity as a law abiding citizen, with the attached stigma of being both a “junkie” and “criminal”. These labels significantly impair his ability to fit in and fulfil the requirements expected of him as a law abiding citizen (*“I am very motivated; the hardest thing is getting someone to hire me because of my past. I get depressed because of my past and think I am only going to ever be junkie”*). This, in turn, resulted in his experience of negative affect such as feelings of failure both within himself, by society, and as a father who is now unable to provide for his son. When these feelings are combined with poor coping skills and limited pro social supports, interaction with a peer group that reinforced involvement in the drugs-crime lifestyle, it is understandable that drug use and offending behaviour (the only adult lifestyle he is familiar with) becomes a more personally, socially and economically fulfilling alternative.

### **10.3 Application of the emergent Dual Pathway Model**

The emergent Dual Pathway theoretical model as proposed in Study One (see Chapter 6) is an exploratory pathway model that has been derived from a grounded theory approach. As such, this model seeks to understand the interactions between drug use and offending behaviour across the lifespan. The model adopts an interactional

bio-psychosocial perspective, in that the model acknowledges that human beings are multi-faceted, are socialised in and interact with numerous environments, including culture, social, family, legal, religious and community environments.

When applied to this case study, the dual pathway model is able to explain this participant's experiences as originating from early psychological vulnerabilities that have reportedly contributed to feeling disenfranchised from important early forms of informal social control (Sampson & Laub, 2005). Institutions such as school and structured recreational pursuits are thought to reinforce conventional values and norms of behaviour (Sampson & Laub, 1993). This participant, exhibited early self-regulation difficulties, such as an inability to tolerate boredom, difficulties with attention and concentration, an inability to delay gratification and an inclination to challenge rules and boundaries (*"as a kid, boredom, being one of the boys"; "I'm a rebellious type and make terrible decisions"*). These early self-regulatory vulnerabilities, which this participant identified as internal or part of his psychological makeup, influenced the manner in which he interacted with the various social environments, resulted in an attenuated bond to these institutions from childhood.

This participant reported that he enjoyed a supportive pro-social family environment, with strong attachment relationships to several family members. However he perceived his parents' as exhibiting an ineffectual parenting style, such that he perceived them to be unable to manage or intervene to direct his behaviour in a more pro-social manner. Over time, and with ongoing development through late childhood and early adolescence, the influence of his parents and family system faded. He described how his interactions within the social environment as more rewarding and influential. He gained a sense of belonging to an anti-social peer group, which in turn reinforced his emerging desire for sensation seeking and anti-social behaviour. As depicted in figure 1 (p.242), participant 23's narratives and experiences were consistent with the early onset pathway. He described engaged in early onset criminal behaviour (self-reported first offence age 12) and illicit drug use (initial drug use 13 years). He reported gaining a

sense of belonging (to a deviant peer group) and psychological fulfilment out of both his drug use (sensation seeking, pleasure, euphoria) and criminal behaviour (mastery and financial gain). By late adolescence/ early adulthood, this participant reported feeling connected to and invested in the drugs-crime lifestyle, in that he experienced this lifestyle as socially, financially and psychologically rewarding.

By 19 he reported being incarcerated for a significant period of time for a serious offence (sexual assault). The length of time that he was incarcerated meant that he was forced into a period of desistence. This participant identified this period of incarceration as intensifying his desire to ascribe to the drugs-crime lifestyle, despite having completed prison based treatment programs related to both substance use and sexual offending. Upon release, this participant described human agency in action, he made the decision to intensify and diversify his drug use and criminal behaviour; he reported commencing the use of amphetamines on the first night after his release from prison and reconnected with the drugs-crime lifestyle that he viewed as intrinsically rewarding. Overtime, and into adulthood, this participant reported gaining a sense of mastery, achievement, social and financial rewards from his ability to sell and supply illicit substances, therefore solidifying his criminal social identity. He reported being incarcerated repeatedly for numerous other offences (*"I've had other incidents that I have gone to prison for rape; It has gone from burgs to stealing to receiving to possession, but now I get done for possession and I go to jail. I've had 15 years jail out of 22"*), which has contributed to him spending a significant amount of his adult life incarcerated. This participant reported a large amount of versatility in his criminal behavior and reported drug use, with no evidence of any intent to specialize in a certain type of drugs-crime lifestyle.

Each cycle of release from prison to re-arrest and subsequent incarceration has provided the opportunity for contemplation of a lifestyle change. This participant reported being part of drug treatment groups while incarcerated, however he has remain involved in the drugs-crime lifestyle. Upon reflection, he has come to understand his lifestyle choice as attributable to factors intrinsic to himself (psychological vulnerabilities)

that separated him from other's involved in a similar lifestyle. For example, this participant drew a comparison between himself and his co-offenders who were able to make a lifestyle change that he was not able to achieve; *"coming to jail for the rape, it was really out of character for me and the others. They have got out and got on with their lives. I branched out and got into drugs, so did they, but I headed down that road and couldn't find the exit"*.

As outlined in the dual pathway model, the assumption of additional social and relationship roles and responsibilities (turning points; Sampson and Laub, 1993; 2005) contributes to pressure for and the enactment of, periods of desistance from the drugs-crime lifestyle. Participant 23 recalled that the assumption of the parental role and responsibilities, in addition to the process of maturation, placed social pressure on him to change his lifestyle and desist from the drugs-crime lifestyle. He reflected that *"I guess you get a bit older and wiser and realize that there is more to life then partying and for me I have a six year old son and I wanted to spend more time with him. I wound down from selling thousands of dollars to using only recreationally and not selling"*. Here, consistent with the work Sampson and Laub, (2005), the assumption of other pro-social roles resulted in a change of behavior, rather than complete abstinence. Contributing to the influence of informal social control were the repeated periods of incarceration and involvement in prison based therapeutic programs, which actively prompted contemplation of his lifestyle choices. Therefore, as captured in the dual pathway model, overtime this participant's investment and involvement in this lifestyle fluctuated. At times he made attempts at short term desistance with the assistance of this family, and in response to external pressures placed on him through involvement in the criminal justice system. However these periods of desistance were ultimately undermined by the role strain that he experienced in attempting to adhere to pro-social roles and responsibilities, the experience of an unexpected life stressor and the pressures placed on him from different environments (pro-social and deviant) in which he interacts. (*"on and off every time I come to jail and each time I don't use and then I get back out go to work, save*

*some money and then the shit will hit the fan and then I am back into it (drugs and crime)*". However the most influential factor for this participant was his own internal motivation to re-engage with the drugs-crime lifestyle due to the combination of psychological, social and financial rewards he derived out of this lifestyle choice.

At the time of interviewing, this participant remained contemplative about his involvement in the drugs-crime relationship upon release. He acknowledged that he required strong social and environmental contingencies to be put in place if he was to succeed at long term desistence. Additionally, this participant acknowledged the need for psychological strength and change; that is to maintain his motivation to adopt a pro-social lifestyle, he required assistance to develop adaptive self-regulation skills and ultimately gain acceptance, fulfillment and pleasure out of a pro-social lifestyle to challenge his well-established criminal social identity.

## **Case study 2**

**Aboriginal participant 4.** When invited to describe his experience of using illicit substances, this participant commenced by describing the psychopharmacological effects of some of the illicit substances that he had used and the intrinsic benefits that he enjoyed when intoxicated (*"just makes you braver I reckon, amphetamines makes you run fast, gives you a lot of energy and strength. Alcohol makes you do dumb things, you can do anything that is stupid"*). Consistent with the positive reward model of drug dependency, this participant highlighted the drive to experience a euphoric state as motivating his ongoing use (*"amphetamines is a good rush, it felt good"*).

When reflecting upon his early initiation into substance misuse, he recalled that he commenced the use of cannabis in the context of feeling disenfranchised with school and truanting from this environment (*"started wagging school, I used to smoke, yeah just smoke marijuana"*). However, he attributed his initiation into the use of intravenous illicit substances (i.e. amphetamines) as being due to the early role modelling of his cousins and extended family (*"saw my cousin using and that"*). This participant described his first use of amphetamines as an involuntary intravenous administration of the drug by his

cousin (*"first I used with my cousins, funniest thing was that I was asleep and he gave me a shot while I was asleep and I just woke up and he never told me till later that I was asleep. I just went along with it for a while"*). The blasé manner, in which he described this event, appeared to demonstrate the level of acceptance and normalization of illicit substance misuse within the wider family system; a factor that he described more blatantly with the following quote *"on mum's side they don't take needles and that, they just drink. On dad's side they are speed freaks and I went to dad's side"*. The highly influential nature of family system's acceptance and normalization of illicit substance misuse and criminal behaviour longitudinally is not adequately accounted for within the existing theoretical models that attempt to explain the drugs-crime relationships. This participant described being born into the drugs-crime lifestyle.

Similar to the reported level of acceptance of illicit substance misuse, this participant described criminal behaviour to be equally accepted and encouraged within his family and kinship system. He recalled that he was engaged in early anti-social and offending behaviour (stealing) prior to his use of any substance. He commenced involvement in acquisitive offences at 13 years of age when in company with his extended family members (*"just stealing was there all the time; I just wanted to steal all the time"*). From the narrative provided, this participant attributed his early involvement in criminal behaviour during his late childhood/ early adolescence to both a desire to gain acceptance within the wider family system (i.e. cousins approval) and peer acceptance through the acquisition of goods that he and his family were unable to acquire due to socioeconomic disadvantage *"other kids had better things than me; I wanted to show them what I had"*. He provided an example of how he was able to achieve a sense of belonging to a peer group through stealing basketball cards *"When I was 14 I used to stay in a country town and I like I wanted basketball cards, so I went and ripped the tin off the roof of the toy store and stole basketball cards and that filled up all my files"*. His ability to meet his needs and acquire material possessions that he considered otherwise unobtainable, contributed to an escalation of offending behaviour *"and then went to*



*stealing bikes from school and then to motor bikes out of John Deers. This was in a small country town and then from there to smash and grabs on clothing, just rip the clothes off dummies and in surfy stores and that".* At this stage of adolescent development when social acceptance is considered an integral part of ego identity formation and indeed the formation of a criminal social identity (Boduszek & Hyland, 2011), this participant described being able to not only gain acceptance from like minded anti-social peers but also acceptance from family, thereby reinforcing his evolving anti-social identity.

This participant spoke candidly about the early role modeling of offending behaviour within his family system and how this contributed to his acceptance of and desire to engage in offending behaviour. In particular, this participant identified the offending behaviour of his older brother as being instrumental to his own motivation to engage in similar behaviour (*"My brother was doing home invasions at the age of 15 and I thought I would join him, but he wouldn't let me go with him as I was too young, I was only 1 year younger. All the boys would make me stay at home and chuck me out of the car"*). Here, despite the explicit role modelling of criminal behaviour by the older brother, a moral code of criminal conduct was evident within the older brother's actions, in attempting to limit the type of criminal conduct he became involved in. Despite his brother's attempts to dissuade him from engaging in offending behaviour at his early age, he reported that he sought out other family members to engage in criminal behaviour (*"Families on Mum's side were stealing with my brother, so I went to my Dad's side of the family, then started stealing with them"*). From this early beginning, this participant described offending behaviour as rewarding on an intrinsic (i.e. enjoyment, sensation seeking, mastery); financial (i.e. acquiring goods not otherwise available); social (i.e. acceptance from peers through new material possession acquired from criminal behaviour) and family relationship (i.e. he gained a sense of belonging and acceptance from family) level. As described above, this participant's criminal social

identity was evolving early and could be viewed as being intertwined with his family and social relationships, both of which were mutually reinforcing.

Application of the existing theoretical models to this participant's early initiation into the drugs-crime lifestyle can provide a superficial explanation at best. For example, the Crime Causes Drug use model could be applied at this point to explain this participant's early diversification from criminal behaviour into drug use. That is, as his involvement in criminal behaviour preceded his use of illicit substances, this model suggested that involvement in offending behaviour and association with others' who likewise engage in offending behaviour provides the reference group, context and financial capabilities for involvement in illicit substance misuse (White & Gorman, 2000). While the Crime Cause Drug Use Model draws upon the influence of an individual's sense of belonging to an offending peer group on subsequent illicit substance misuse, it fails to account for the reciprocity of the relationship, nor does this model encapsulate the heavy influence that the described systemic family pressure have on this participant's involvement in offending and illicit substance misuse over time. Therefore, the Common Cause model may also be of value when exploring this participant's initiation into both drug use and offending behaviour.

The Common Cause Model draws upon the reciprocity of the drugs-crime relationship and proposes that a number of common causes contribute to an individual's involvement in both drug use and criminal behaviour, such as; individual, intrapersonal, environmental and situational factors/ influences. From this participant's perspective, his early involvement in offending behaviour and later, substance misuse was derived from a combination of environmental factors (e.g. socioeconomic disadvantage), interpersonal factors (i.e. family systemic issues) and individual factors (i.e. inability to delay gratification, inability to tolerate boredom). The Common Cause model may also account for the historical social and political factors that underlie the systemic issues that this participant discussed as being an enduring pressure on him both as an individual, and the family system as a whole. However, this model fails to account for vacillations in

the drugs-crime lifestyle over time, the human agency evident in the participants decision's with respect to periods of voluntary desistence, nor the dynamic changes in the participant's drug preference or criminal behaviour.

Over time, the influence of his family system on his drug use (type and frequency of use) and his involvement in offending behaviour (type and frequency) intensified. Therefore within the same extended family unit, this participant described the creation of "in" and "out" groups based predominantly on the type of drugs used and offending behaviour engaged in. The importance of his family relationships in encouraging and maintaining his involvement in the drugs-crime lifestyle became apparent when he stated that "*I would mostly steal with family; I wouldn't steal with mates*". Family relationships are characterized by an inherent bond that for this participant is based upon reciprocal trust, kinship obligation and shared experiences of systematic discrimination and social exclusion from mainstream society. These characteristics of the family relationship not only provides the basis for a collective criminal or anti-social identity, but also is perceived as protective against disclosure or police interrogation should the offender be apprehended. From this perspective, the family system that the participants engages in criminal conduct with, becomes akin to a "gang" with group norms, codes of conduct, provision of material support, emotional and social acceptance and the provision of physical protection should this be warranted (White, 2009).

Coupled with the influence of his family and their collective criminal identity, was this participant's own sense of pride, his drive for financial independence and a desire to distance himself from what he described as mainstream society's stereotypical portrayal of welfare dependent Aboriginals ("*every day [involvement in criminal behaviour]. Cause I would hate lining up in Centrelink because I hate Centrelink, because when I first came to Perth, I looked at all the aboriginals at Centrelink and it looked poor, you know I felt out of place, so I made my own money and made more than Centrelink gave me with no forms to fill out*"). At this juncture, the complexities of the relationship between family,

state intervention into aboriginal families, social identity and self-perception are evident. From a social control perspective, Aboriginal communities have been subjected to social control policies throughout history, the impacts of which have contributed to overrepresentation within and reliance upon welfare agencies (White, 2009). For this participant, the stereotype of the “welfare dependent aboriginal” served to reinforce and motivate him to remain out of the welfare system and establish himself as a proud aboriginal man. These intrinsic goals reinforced his commitment and sense of entitlement to remain involved in the drugs-crime lifestyle. The internal motive to increase his self-esteem and self-worth through financial independence, while rejecting mainstream social convention contributed to the drive for possession of material goods (e.g. cars, jewelry, brand label clothing), which paradoxically denoted an outward display of mainstream success, and social status. For this participant, it is this paradox that epitomizes the identity crisis that he reported to experience as an aboriginal man residing in suburban Perth; seeking approval and acceptance in both aboriginal and mainstream Anglo-Saxon culture.

As he matured into early adulthood, he was involved in a romantic relationship and became a father. These events acted as potential turning points (Sampson & Laub, 1993; 2005), such that he described experiencing competing pressure (informal social control) from his partner to embrace his parental role in a pro-social manner and desist from illicit substance use. For this participant, at this stage of his life, he described his partner’s goals of ascribing to a conventional lifestyle as inconsistent with the drugs-crime lifestyle (and criminal identity) that he valued. As a form of informal social control, pro-social romantic partners have been described as heavily influential at encouraging conformity (Schroeder, Giordano & Cernkovich, 2007). However of importance is the personal investment in that relationship. For this participant, the pressure to adopt a conventional lifestyle, in addition to the overwhelming responsibility of being a parent, contributed to a crisis of identity and social role, that resulted in an intensification of his involvement in both illicit drug use and criminal behaviour (*“I didn’t care cause my missus*

*had a baby for me and I couldn't see the baby until I gave up the drugs and that made me worse because I didn't want to give up*"). Later, and in response to his unwillingness to desist from illicit substance use and criminal behaviour, this participant described how his romantic relationship dissolved. The dissolution of this relationship again increased his experience of stress, which in turn contributed to an escalation of offending behaviour (*"my missus leaving me, when she left it just got worse, stealing"*). The social role and identity crisis described by this participant, not only strengthened his resolve to remain involved in the drugs-crime lifestyle, but also exposed his psychological vulnerabilities and maladaptive coping strategies.

Once involved and invested in the drugs-crime lifestyle, this participant described the functional means through which he was able to use the psychopharmacological effects of the various illicit substances to engage in or enhance the experience of his offending behaviour (*"on amphetamines I would like high speed chases, it was just the rush hey. When on amphetamines and drink and smoke marijuana"*). He also described how he was able to assist with the withdrawal effects of one substance through the use of another illicit substance *"cocaine now and again, heroin only when I was coming down off speed, have a shot of heroin, amphetamines whenever I could get it"*. The criminal versatility and poly substance use described by this participant is consistent with the claims by Gottredson and Hirschi (1990; 2016) and others (DeLisi, et al., 2011) that those involved in the crime rarely specialize in one type of criminal offence.

This participant described experiencing perceptual disturbances and other mental health difficulties associated with his poly-substance use that he perceived as aversive. However, he apportioned blame for these experiences on the psychopharmacological mixture of incompatible drugs, which he perceived to be under his control. As such, aversive psychopharmacological experiences did not dissuade him from use (*"when on amphetamines and drink and smoke marijuana and one time, I was looking at the bin and I was thinking is that my girlfriend and then look at a pole and thought was that my brother, that's how much I was off my head you know. I was driving my car and I was*

*talking to my brother, but he wasn't there and it was just the drugs you know, that's when you mix drugs and you don't go for a sleep".* The deliberate selection of what illicit substances to use, when to use it and under what circumstances is in direct contrast to the commonly accepted disease model of addiction and the inherent loss of volition that is thought to accompany drug dependence as depicted in the psychological and psychiatric nosology.

Despite the adverse experiences while intoxicated, the participant contends that *"The reason I gave it up was that I couldn't afford it, it makes me want to break and steal to get money for it"*, which is consistent with the Economic Motivation Model. The Economic Motivation Model hypothesizes that the individual becomes addicted or dependent upon illicit substances (most commonly heroin); this habit requires substantial economic resources which the individual is unable to source from legitimate means and therefore engages in acquisitive crimes to support their drug dependence. Inherent within this model, is an assumption that volition is compromised. While it was evident that at some stages during this participant's experience within the drug use-crime lifestyle that the economic motivation model may offer some explanatory power (*"one of my mates had ounces and I would go out and steal for him and give him gold and that for it"*), this model cannot account for this participant's initiation into criminal behaviour prior to drug use and his enduring involvement in offending behaviour in the absence of illicit drug use; *"but I wasn't using, I was being smart then. Me and my cousin went for a walk and did as many breaks as I can to get the money; I wasn't worrying about drugs, just wanted money this time"*.

Despite the criminal sanctions associated with his involvement in the drugs-crime lifestyle, upon release from prison, this participant described very little motivation to desist from offending behaviour and/ or change his involvement in the drugs-crime lifestyle. He described a period of reflection in prison, whereby he came to realize that with the cost of his substance misuse, he was unable to obtain and maintain material possessions. He therefore stated that he made the decision to change his focus to

become involved in criminal behaviour for financial gain rather than to fund his drug use (*“when I was on drugs I had nothing, then when I came to jail, I thought about all the money I could get and have something to show for it. But now I’ve got my cars and that”*). This conscious decision to shift from using the acquisitions gained from his involvement in criminal behaviour away from drug use, to “legitimate purchases” is inconsistent with the economic motivation model (*“ended up coming across \$30 000 then went to Victoria Park to buy myself a VP commodore and as soon as I got my car, I had no license, so I put fake number plates and I know since I have been on drugs that I have got control of the car and the police can’t catch me.”*). He described an increased focus on acquiring material possessions as a means through which he was able to gain social status, increase his self-efficacy and self-esteem, however ongoing involvement in acquisitive offending behaviour and his discovery of a large amount of money led to him *“becoming greedy”*. This, in turn contributed to him overestimating his ability to gauge which houses were likely to have money and therefore which one’s he would target (*“stole \$80 000, I just found it in a cupboard, I thought I would just jump the fence, I knew if they had money or if they didn’t”*).

Similar to the previous case study, this participant described the development of a moral and ethical code of behaviour when engaged in offending behaviour. The moral values to which this participant described ascribing to were at times contradictory. For example, he described a desire to minimize his involvement in personal violence directed towards others by articulating the limits to what he thought of as acceptable offending behaviour *“do snatches, breaks mostly, do sneaks, but wouldn’t go as far as armed robbery. Some people do, but I wouldn’t go as far as that”*. However, when the offending behaviour was at a victim that he perceived to be morally reprehensible, he was able to justify his involvement in more serious levels of violence. He discussed developing a “robin hood” mentality to justify and rationalize his involvement in offending behaviour towards who he knew to be involved in drug distribution *“sometimes I would get aggressive, and then I would start like to run through druggie’s houses and start to*

*rip off druggies*". Involvement in criminal behaviour and violence directed towards others within the drug distribution network is encapsulated in the Systemic model. The systemic model articulated that involvement in the drug distribution network is inherently violent due to nature of the interactions and deal between the dealer and consumers. However, the violence described by this participant at this juncture was not during the process of drug acquisition, as he had described desisting from substance use. Rather, this participant was focused on the drug dealers house due to the perceived economic benefits of obtains drugs to on sell and potential for large sums of money that could be used to acquire possessions that denoted financial success. In this context, the existing theoretical models have little explanatory relevance.

One theme that remained constant was the psychological vulnerabilities that this participant described that he experienced that he thought contributed to his repeated decisions to maintain his involvement in the drugs-crime lifestyle. Throughout the narrative the participant described an inability to tolerate normality or mainstream conventional lifestyle, tolerate boredom and delay gratification. He therefore described a pattern of heavy reliance on illicit substance use as an avoidant method of coping (*"depressing, it was like I couldn't handle it when I was straight"*) when he was required to attempt a period of desistance or when facing psycho-social stressors. He identified the contrast in his experiences when high or intoxicated versus when sober, in that he viewed himself as invincible when intoxicated (*"the good thing about speed was just makes you feel like superman"*), which was in contrast to his self-perception when sober. When asked to discuss any experiences he may have had of desistance from offending behaviour, this participant described this time as aversive due to him being *"bored"*. He contrasted this with his overall summation of his drugs-crime lifestyle as being *"just fun, having fun"*. He described a dysfunctional sense of self-efficacy when faced with adversity such that when he perceived himself to fail in his role expectation; he would embark upon a period of high intensity drug use and involvement in criminal behaviour thereby undermining any attempt to fulfil his goal. For example he stated *"I got out, I*



*started buying clothing and got my own house and I was reporting for about 2-3 weeks, then I breached (his community based order), then I thought I would just run amuck”.*

The focus on hedonistic values was not shared amongst all elements of this participant's extended family members and indeed, he stated that he was provided with the opportunities to gain legitimate employment with extended family members. However just as family obligation, roles and responsibilities provided the basis for maintenance within the drug-crime lifestyle, so to family obligations were identified by this participant as a barrier to accepting assistance from family to live a conventional lifestyle *“I have got family that owns workshops and small businesses, there are jobs for me, but I did not like working for family because if they helped me out, I would have to help them out in the long run”.* Instead this participant described oscillating between a sense of entitlement to engage in the drugs-crime lifestyle to describing vague plans about becoming involved in a pro-social lifestyle (*“best thing I would say would be to get a job, finding something else to do other than stealing but don't make plans just take it as it comes”*).

#### **10.4 Application of the Pathway Model**

The pathway model as outlined in Study Two (see figure two) identified a single pathway that emerged from the Aboriginal participants narratives. This single pathway model emerged predominantly due to the homogeneity of reported experiences of the participant's which in turn contributed to early thematic saturation. This model highlights the enduring influence of family on the participant's involvement in the drugs-crime lifestyle across the lifespan.

As was consistent with all of the participants interviewed, this participant described being part of a family system that experienced socio-economic disadvantage within the context of a history of political, social and cultural oppression and state intervention. This participant described immediate and extended family acceptance and role modeling of both illicit drug use and criminal behaviour. During early childhood, he formed an idealized view of his older brother and his involvement in the drugs-crime

lifestyle. While he reported that his older brother made some attempts to delay his involvement in criminal behaviour (by telling him he was “too young”), this participant outlined the explicit decision that he made to join with various other family members who he knew would accept, condone and encourage his involvement in both drug use and criminal behaviour.

Accompanying this early role modeling and normalization of the drugs-crime lifestyle are his feeling of being disenfranchised from mainstream education and an increased awareness of the social, economic and cultural differences that exist between his lived experiences and that of mainstream Caucasian society. This disparity and his reported ongoing experience of social oppression (e.g. racism, poverty, prejudice) acted to legitimize his own and his extended family’s lifestyle choice, that is, the drug-crime lifestyle. This participant described early initiation into offending behaviour and substance misuse through which he gained a sense of belonging and cohesion to his father’s side of the family once he made the decision to adhere to their lifestyle of amphetamine use and acquisitive crime involvement. His membership to this faction of the extended family assisted him to define who he was (criminal social identity), served to reject conventional and pro-social standards of behaviour and contributed to the development of his own internal standards, morals and values that govern his involvement in offending behaviour (*“do snatches, breaks mostly, do sneaks, but wouldn’t go as far as armed robbery. Some people do, but I wouldn’t go as far as that”*). Within this context, the use of illicit substances became functional across a number of areas of his life; to fulfill his desire for pleasure (including enhancing the pleasure already derived from offending behaviour), assist in managing aversive life experiences and perceived negative emotions (avoidant coping), enhances family cohesion through shared experiences and served to mask psychological deficits when sober.

Consistent with the pathway model, overtime, and with the imposition of repeated periods of incarceration, this participant described attempting periods of both short and longer term desistance from drug use, but not involvement in criminal behaviour. These

periods of reduced drug use fluctuated in intensity and in response to his experience of lifestyle, relationship or personal stressors (*"my missus leaving me, when she left it just got worse, stealing"*). When faced with psycho-social stressors, conflicting role expectations and other intrinsic psychological stressors', this participant described a reconnection to, strengthening and entitlement to be involved in the drugs-crime lifestyle. While, this participant described fluctuations in drug use, it would appear as though his involvement in offending behaviour persisted, although with variable frequency.

This participant's persistent involvement in criminal behaviour can be understood from two levels; first, he experienced criminal behaviour to be highly rewarding in being able to secure financial independence and distance himself from the stereotype of the welfare dependent aboriginal (*"I hate Centrelink, because when I first came to Perth, I looked at all the aboriginals at Centrelink and it looked poor, you know I felt out of place, so I made my own money and made more than Centrelink gave me with no forms to fill out"*). His definition of success was demarcated by his acquisitions, most notably, the vehicles that he legitimately purchased through the proceeds of his acquisitive offences. The acquisition of these material possessions provided this participant with a sense of stability, purpose and an expressed desire to make a lifestyle change (*"now I've got my cars and that and like a month to go, I just want to get out and settle down"*). And second, he described family obligation to be a barrier to seeking support for legitimate employment through family, due to the reciprocal nature of support obligations that he perceived himself to be unable and unwilling to provide.

### **10.5 Conclusion**

From the application of the various existing theoretical models to the two case studies, it is clear that each of the existing models are able to explain parts of each of the participants experiences at discrete periods during their ongoing involvement in the drugs-crime lifestyle. However, no one of the existing models can provide a parsimonious explanation of their ongoing involvement across time.

The pathways models derived from the grounded theory approach as outlined in Study One and Study Two describe the participants ongoing involvement in both drug use and criminal behaviour as a lifestyle choice and as such, offers explanatory power across the lifespan. By adopting a pathway model, the ongoing interaction between the bio-psycho-social and cultural influences across time can be described, explored and compared and contrasted as they pertain to both populations studied. From the application of the pathway models to these two case studies, it became evident that similar psychological vulnerabilities were described by both participants as influential across time. The psychological vulnerabilities described by the participants related to self-regulation, including the ability to regulate adverse emotional experiences, cope with negative and stressful life events, the ability to tolerate boredom and routines, in addition to the ability to delay gratification. Both participants in each case study perceived these psychological deficits as innate, enduring over time and exposed during time of stress or during periods of attempted desistence. While it became clear that these participants attributed these psychological vulnerabilities to their inclination towards sensation seeking, it was the social, cultural and family environments in which they interacted on a daily basis and the degree to which the participants identified as belonging to these environments that ultimately influenced their choice to commit to the drugs-crime lifestyle.

It became clear from both the previous 2 studies and again demonstrated in the case described above, that the historical influence of socio-political disadvantage on the family dynamics and lifestyle choices of the Aboriginal participants families had an intergenerational influence on the early role modeling and encouragement of both unconventional lifestyle choice and ultimately, early involvement in the drugs-crime lifestyle. The influence of family as a form of informal social control to encourage change within the trajectory of involvement in the drugs-crime lifestyle is considered culturally relevant and requires further exploration.

## Chapter Eleven

### 11.1 Conclusion and directions for future research

The research literature exploring the relationship between drug use and criminal behaviour is expansive, complex and incomplete. Numerous theoretical models have attempted to establish causation between drug use and criminal behaviour with little empirical support. Those theories that have made attempts to explain the association between these two behaviours have been plagued by a lack of conceptual clarity, and limitations to the generalizability of findings across culture and age. The focus on the longitudinal research through the criminal careers paradigm (Laub & Sampson, 1993; Sampson & laub, 2003; 2005) has allowed for greater focus on the nuances of crime involvement overtime, however has failed to adequately explore the influence of substance use, culture and gender on crime initiation, persistence and desistence over time (DeLisi & Piquero, 2011). Therefore, there is no one single theoretical model that has been able to account for an individual's initiation, maintenance, desistence and re-engagement in drug use and criminal behaviour over time and across culture. The lack of research attention to the influence of race and ethnicity within the careers paradigm contributed to DeLisi & Piquero (2011), emphasizing the need for an increased focus on describing, comparing and contrasting the patterns of involvement in crime between different racial groups. This exploratory research is an initial step towards expanding the knowledge base about racial disparities and similarities in the pathway of involvement in the drugs-crime lifestyle for aboriginal and non-aboriginal male offenders in Western Australia.

The exploratory examination undertaken in these studies sought to understand drug use and criminal behaviour choices and experiences of two culturally diverse populations of adult male offenders. Drawing upon a grounded theory methodology, two different pathway models were derived from the participant's experiences. Study One, explored the experiences of a sample of non-Aboriginal drug using male offenders, while Study Two, explored the experiences of an Aboriginal sample of drug using male

offenders, all imprisoned in Western Australia. Ultimately, both pathway models were conceptualised as a lifestyle choice; both differed significantly in their origin based upon the participants reported cultural, ancestral, family, environmental and early childhood experiences.

By conceptualising the drugs-crime association as a lifestyle choice, both models drew upon a bio-psycho-social understanding of the participant's initiation, maintenance, desistence and re-engagement in drug use and criminal behaviour across the lifespan into adulthood. As a pathway model, the two proposed pathways allow for the experiences of the participants to be understood at discrete periods of time by the existing theoretical models within the empirical research literature. For example, during periods of intensification of drug use, the economic motivation model may explain an accompanying increased in acquisitive offending behaviour, while at other times, the common cause model may offer explanatory power into the initiation into early drug use and criminal behaviour during adolescence. However, both pathway models assume that the complexities of the individual participant, their psychological make-up, the family, social, environmental, cultural and religious systems in which the participant interacts, are such that over time their commitment to the drugs-crime lifestyle will fluctuate.

The depiction of the drugs-crime lifestyle as a "lifestyle choice" emphasises human agency. The pathways assumes that those who choose to ascribe to this lifestyle, as an adult, engage in both criminal behaviour and drug use out of their own volition. It is hypothesised however, that volition is a developmental construct. This means that for those who described being actively encouraged to engage in the drugs-crime lifestyle during early childhood (and particularly prior to the age of criminal responsibility) within the family system that normalised this behaviour, that volition is compromised. Over time however and with increased maturation and participation in other social contexts, volition is assumed to develop, such that these offenders were able to choose to engage in the drugs-crime lifestyle or not.

One of the most poignant findings derived from the two pathways models across the sample populations pertained to the influence of family across the life course of involvement in the drugs-crime lifestyle. When the experiences of the two samples of participants were compared and contrasted, the Aboriginal participants interviewed in Study Two more frequently described being part of a family system whereby drug use and criminal behaviour were normalised and role modelled during early childhood. As would be expected, these participants consistently described their initiation into the drugs-crime lifestyle to have occurred at a younger age when compared to those participants in Study One. Being born into the drugs-crime lifestyle and being exposed to early role modelling of such, at times was described by the participants to have been accompanied by explicit encouragement to be involved criminal behaviour, drug use or both activities. For example, some participants described being informed by various family members about the age of criminal responsibility, and therefore being encouraged to engage in criminal behaviour on their behalf during early childhood with the knowledge that they were not legally capable of being held accountable for their behaviour. Other participants described less explicit encouragement, but rather an implicit choice to be involved in various criminal behaviour and drug use dependent upon the drug and criminal activity of choice already evident within the extended family system. Once involved in the drugs-crime lifestyle, the Aboriginal participants described that their strong connection and sense of responsibility to family (and kinship) meant that, when members of the family system maintained their involvement in the drugs-crime lifestyle, the participant was likewise motivated to remain engaged in this lifestyle choice. Where participants described making attempts to desist from involvement in the drugs-crime lifestyle, these attempts were reportedly undermined when these goals were inconsistent with that of the family, or required the participant to sever ties with the family system, which the participant perceived to be an unachievable request.

When exploring the role that family played in the non-Aboriginal sample, the data revealed more heterogeneous experiences. This meant that while some participants

described early initiation into the drugs-crime lifestyle, the majority of participants described being part of a family system that subscribed to a conventional or “pro-social” lifestyle. These participants therefore described the family system as protective against involvement in drug use and criminal behaviour, which in turn contributed to a later age of onset in the drugs-crime lifestyle. Once involved in the drugs-crime lifestyle, many of the participants in Study One described feeling ostracised or heavily criticised by their family system for their lifestyle choice. As such, while the participants described knowing that family support was available to them, this support was conditional on the participants making attempts to desist from drug use and offending behaviour or expressing the motivation to do so. Therefore, few participants in this sample of adult males reported using illicit drugs or being involved in offending behaviour with any family member.

On an individual level however, there was consistency between the studies in the participants own identification of the innate psychological vulnerabilities that contributed to their initiation, maintenance and re-engagement in the drugs-crime lifestyle. Factors such as poor emotional regulation skills, limited and maladaptive coping strategies, low self-esteem, low distress and frustration tolerance, inability to tolerate boredom, inability to delay gratification and dysfunctional self-efficacy were common factors between the studies that the participants perceived as innate vulnerabilities that contributed to involvement in the drugs-crime lifestyle. These psychological vulnerabilities were perceived by participants in both studies to have been evident during early childhood and to have persisted throughout adulthood, so as to remain a vulnerability that required conscious management to reduce the risk of re-engagement in the drugs-crime lifestyle. These identified innate psychological vulnerabilities were perceived by the participants in both studies to increase their susceptibility to negative social influences such as peer pressure both within the community and prison settings. The psychological vulnerabilities identified within the two pathway models are consistent with those identified by the common cause model and other theories that attempt to explain involvement in deviant behaviour such as Gottfredson and Hirschi’s (1990) General Theory of Crime.



Godfredson and Hirschi highlighted the critical role that self-control plays in an individual's involvement in criminal behaviour. The proposed pathways models likewise highlight the central role of self-control, as part of an individual's psychological self-regulatory system, plays across the lifespan in the choice to not only engage in criminal behaviour, but also substance misuse. The identification of the self-regulation deficits were through introspective self-report by the men in each study. One of the limitations of this method of data collection is that the origin of the self-regulation difficulties is unknown. Genetic, biological or developmental insults, as exposure to illicit substances or alcohol during foetal development may contribute to deficits in cognitive development, in particular, executive functioning and self-regulation skills (DeLisi & Piquero, 2011). Morphological changes or structural brain damage are responsivity factors that should be considered in the development of intervention or treatment methods. Future research could enhance the current findings through the identification of any possible biological or genetic origin for the self-regulation difficulties described by these men.

As discussed above the family, social and cultural context within which the participants' growth and development occurred impacted upon the age at which onset into the drug-crime lifestyle occurred. For those participants who reported being part of a family system whereby drug use and criminal behaviour was normalised, condoned and encouraged, the development of self-control and the self-regulatory systems are likely inconsistent with the dominant cultural and social norms. Psychologically, the family, cultural and social contexts in which an individual's growth and development occurs provides the platform upon which personality development occurs. Traits, the expression of emotion and ways of social interaction are learnt and develop within the family and cultural context. For example, where parents are substance dependant and demonstrate a lack of responsiveness and tenderness in their parenting style, such factors can restrict and delay the development of empathy and guilt (Baumeister et al., 1994). In this context, the self-concept and personality structures of those whose growth and development occurs with a diverse cultural background who ascribe to the drugs-crime

lifestyle are likely to be different to those whose growth and development had occurred within a conventional pro-social family environment who later choose to be involved in the drugs-crime lifestyle. This is an area that was not explored in the current research and requires further exploration.

The proposed pathways models contribute to these theories through the identification of how cultural and family systemic factors interact differently within the Aboriginal and non-Aboriginal participants with respect to not only the development of individual's psychological self-regulatory systems, but those factors that could be considered protective against involvement in deviant behaviours. In particular, with respect to the influence of social bonds, turning points and desistance process as outlined in the age graded theory of informal social control (Laub & Sampson, 2003) and the criminal careers paradigm more generally. In Study One the dual pathway models illustrate the paradoxical function of social bonds. For example while on the one hand, the presence of social bonds such as attachment to a pro-social family, responsive, caring parents who were perceived as efficacious at re-directing early anti-social behaviour, marriage and employment, were described as being able to delay the onset of involvement in the drugs-crime lifestyle, these very same social bonds were described as aversive and contributing to the decision to become involved in the drugs-crime lifestyle. Further, during periods of desistance, social bonds were described as intolerable and overwhelming, therefore promoting re-engagement with the drugs-crime lifestyle. While preliminary, these findings suggest that perhaps the interaction of the cluster of poor self-regulation skills reported by the men in Study One attenuated the strength of the social bond over time. Therefore for this sample of men, the notion as suggested by Sampson and Luab (2016) that desistance can be encouraged by "engineering turning points" (p. 330) through a behavioural focussed intervention encouraging the assumption of conventional social roles, is likely to encourage persistence rather than desistance from the drugs-crime lifestyle.

When the criminal careers paradigm was applied to Study Two, it became apparent that ideas of social bonds and turning points as Laub and Sampson (2003) and Sampson and Laub (2005; 2016) describe them are culturally laden. Within a family and cultural context that is marginalised within or actively rejects a conventional lifestyle, the pressure (implicit or otherwise) to adopt a conventional role and acculturate was described by these men as increasing their experience of social isolation and disconnection from culture, rather than promoting those factors. While an exploratory and small study, the narratives of these men highlight the need for social bonds, connection to community and turning points to be culturally relevant and defined. From this basis, I concur with the view of DeLisi & Piquero (2011) that further research is required in the area of cross racial and cross cultural factors that influence involvement in drugs and crime longitudinally.

This research also contributes to the body of criminological and psychological research literature by describing some of the intrinsic and contextual factors that contribute to adult onset involvement in the drugs-crime lifestyle. Through the identification of the late-onset pathway, Study One outlined a subset of men who described the conditions under which they made a conscious decision to engage in the drugs-crime lifestyle, despite having already established a pro-social lifestyle with connection to conventional social bonds (i.e. marriage, employment etc). Again, whilst preliminary, these men described difficulties with self-regulation, lack of personal meaning or value derived out the relationships and a strong hedonistic desire for pleasure as some of the factors that contributed to the lifestyle change. While most of these men described early involvement in anti-social behaviour, their first arrest and imprisonment did not commence until well into their adulthood. Further research is required to understand the interplay of psychological and contextual factors that contribute to the delay and eventual adult initiation into the drugs-crime lifestyle cross culturally.

The pathway models described have implications for substance misuse treatment programs within the custodial and community based setting. At the outset, the models proposed assume that these offenders, as adults, retain their volition in making a choice to be involved in the drugs-crime lifestyle. From this basis, treatment programs should likewise adopt a perspective of empowering drug using offenders to take responsibility for this choice and the choice to continue to engage in this lifestyle. Both pathway models proposed outlined the heterogeneous experiences described by the participants and the variety of factors that were described as contributing to relapse or re-engagement in the drugs-crime lifestyle. The heterogeneity of experiences and influencing factors necessitate, at best, an individualised approach to assessment and treatment planning that draws upon the principles of treatment readiness. All of the participants described the development of a sense of entitlement to their lifestyle choice when their commitment to the drugs-crime lifestyle was heightened. Ignoring or failing to assess for treatment readiness and motivation to contemplate a lifestyle change, may serve to further the individual's resolve and commitment to their criminal identity and lifestyle choice, rather than challenge their offence supportive beliefs and attitudes.

From a baseline of individualised assessment and treatment planning, a holistic, multifaceted and sustained approach to intervention is required if long term desistance is to be achieved. In order to address the individual psychological vulnerabilities, group based and individualised treatment programs should focus on factors that target the self-regulatory system. For example, emotional regulation skills, coping strategies, distress tolerance skills, self-esteem, etc. This approach needs to be coupled with programs that address relationship and interpersonal skills that are inclusive of the family or social support systems, in addition to systemic community based family interventions. Given the disparate function that family, kinship and culture may play in the choice to persist with the drugs-crime lifestyle, treatment programs should be culturally sensitive. This appears particularly relevant when completing release planning back into the community; a time identified by all participants as a pivotal time in their decision to commence a

period of desistence or re-engagement in the drugs-crime lifestyle. Finally, vocational skills training and assisting with psycho-social needs upon re-entry into the community are also critical to reintegration into society in terms of both assisting the offenders to meet basic needs, but also in terms of their sense of mastery, achievement and provision of resources to family.

### **11.2 Limitations of the research**

As a small exploratory study that drew upon qualitative methodology, the results obtained from this research are not assumed to be generalizable to other cultural groups or countries. In particular, the experiences, family functioning and kinship systems described by the small number of aboriginal men interviewed are not assumed to represent the voices and experiences of the entire population of Aboriginal people living in Western Australia. In particular, the pathway model described was based upon offenders who were detained in the maximum and medium security facilities of the state and who self-reported a long history of involvement in offending behaviour and substance use. This sample therefore may represent the most extreme level of personal and family involvement in the drugs-crime lifestyle. It is assumed other aboriginal men, women and children from different regions and language groups across the state will have alternative narratives and experiences to share. Further exploration into the experiences of those residing in rural and remote communities would be of benefit.

The population sample comprised of incarcerated adult offenders who were known to have used illicit substances in close proximity in time to being interviewed. This sample did not therefore, comprise of any offenders who were considered to be in a current long-term period of desistence from the drugs-crime lifestyle. The pathway models derived therefore require replication and validation on a more diverse sample of offenders, including women, youth and those from culturally and linguistically diverse back grounds.

The studies completed relied upon autobiographical narratives that were retrospective. The reliance on self-report data from incarcerated individual's has been

criticised for inherent bias, in that offenders are more motivated to portray themselves in a positive light for the secondary gain of positive reports to prison officials (Jacques & Wright, 2010; Presser, 2004). Despite all participants being assured of confidentiality, and informed that participation in the study would have no positive or negative bearing on their time in the prison system, there is still the possibility that participants may have made deliberate distortions of information/ events that may have been important to the study. Further, it is acknowledged that self-report data can be problematic with those who could be considered career criminals or with lengthy involvement in offending and drug use, due to the inherent difficulties with memory and recall over time (De Lisi et al., 2011). In particular, the internal consistency and validity of the data may be compromised due to the repeated involvement in similar activities and repeated states of intoxication that are likely to impair memory recall (De Lisi et al., 2011), as such it is possible that incomplete or inaccurate recollection of information may have occurred. . However, ultimately there is no way to avoid subjective self-report in research that seeks to investigate the natural history of drug use and crime. For example, Indermaur (1989) found that incarcerated populations are commonly found to have an unconcerned attitude about their alcohol and other drug use and further, it is acknowledged that self-report data can also provide great insight into offences, events and situations not captured by official documentation such as corrective services files, arrest and conviction records. Ultimately, it was the aim of this research to encapsulate, articulate and contrast the voices of one of the largest minority groups in the Western Australian justice system, the aboriginal people with non-aboriginal people. In this way the limitations of the cited about of the narrative approach, were considered void in the context of a search for meaning rather than fact.

Overall, this research has highlighted the pivotal differences in the experiences of Aboriginal and non-Aboriginal males involved in the drugs-crime lifestyle in Western Australia. The emergent pathway models depict the pivotal role of family and social bonds in the early initiation, maintenance and desistence of the drugs-crime lifestyle

across time. The culturally based differences that emerged within the experiences of the participants in each study requires replication and highlight the need for further investigation into the experiences of culturally and linguistically diverse people within Australian society. It is possible that differing pathway models may emerge from those who have immigrated to Australia and become involved in the drugs-crime lifestyle and as such, therapeutic program delivery may need to be developed to address their specific needs if desistance from this lifestyle is going to be successful.

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## Appendix 1

### Participant Information

Dear Participant,

My name is Kathryn Riordan and I am currently completing my Doctorate in Forensic Psychology at Edith Cowan University (Joondalup campus). As part of my degree, I am required to undertake a research project, for which I am asking your assistance. The title of the research project is The Connection Between Drug Use and Crime in Western Australia, and the aim of this research is to explore the differences and complexities of individual's drug use and offending lifestyle. In order to explore these issues, I want to interview a sample of indigenous and non-indigenous male prisoners who have used alcohol and other drugs before being incarcerated. The interview should take about 20 minutes, but if you want to talk for longer than you can. In the interview, you will simply be asked to describe your experiences of drug use and criminal behaviour. This research has been approved by Edith Cowan University's Human Research Ethics Committee and is supported by the Department of Corrective Services, however anything that you say remains confidential to the university researchers. You will not be required to disclose any incriminating information during the interview, however any

information revealed that relates to a serious crime such as murder or sexual assault will require the researcher to disclose this information to the appropriate authorities.

**Confidentiality:**

The researcher at the university will write a report on their findings from the study and this report will be made available to the Department of Corrective services. No one who is interviewed will be identified in that report or in any other report that is published. You will not be required to tell the interviewer your name. If in the interview, you happen to mention your name or that of any family member, then the interviewer will wipe this name from the records and it will not be written down anywhere. The transcript of the interview will not contain any names or identifying information.

**Voluntary participation:**

Participation in this study is entirely voluntary. If you agree to participate, you can change your mind at any time, even during the interview (simply indicate to the interviewer that you do not wish to answer any further questions). Your participation or lack of participation will not in any way promote or influence your access to programs or early release. Should you choose to withdraw from the interview; any information obtained will be destroyed and will not be used for the project.

**Feedback:**

A copy of the report can be made available to any participant who requests one. You can do this by contacting the research supervisor at the address below, or by indicating to the researcher that you would like a copy of the completed study during the interview.

**Contact for further information:**

Kathryn Riordan, Edith Cowan University, Joondalup campus, 0439905519

Greg Dear, School of Psychology, Edith Cowan University, 100 Joondalup Drive, Joondalup, 6027. Phone: (08) 9400 5052

If you have any concerns about the project, you may contact Dr Craig Speelman (Head of School of Psychology) on 94005552.



If you feel distressed by any issue that was raised during the interview and wish to speak to an independent counsellor, you can contact or ask the researcher to contact the Prison Counselling Service on 92296589

**Appendix 2****Consent Form****The Connection between Drug Use and Crime in Western Australia**

(signed consent to be obtained by the interviewer prior to the commencement of the interview)

I (the participant) have read (or had read to me) the **participant information sheet** and any questions that I have asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I may withdraw at any time.

I understand that the interview will be recorded contemporaneously by hand or tape reordered, but that the tape (if used) will be erased as soon as the recorded interview has been transcribed (typed out).

I agree that the research data gathered from this study may be published, provide that I am not identified.

---

**Participant** (initial only if your signature might identify you)

**Date:**

### Appendix 3

#### Interview schedule-

The questions in bold were questions asked of all participants. Those questions under these open ended questions are examples of questions asked to expand upon the areas of interest in the study. Not all questions were asked of all participants and not all questions were asked in the below order.

#### **1. Tell me about your experience of drug use**

- a. Can you tell me about times in your life when you have stopped using drugs?
- b. Describe yourself when taking drugs
- c. Describe yourself when not taking drugs
- d. Did you experience any periods of withdrawal?
- e. Did you take the drugs for longer than you expected?
- f. How many periods of addiction have you endured?

#### **2. Tell me about your experience of offending/ crime?**

- a. Tell me about times in your life when you stopped offending?
- b. Did you ever commit any offences when you were not using drugs?
- c. How did your pattern of offending change/ evolve over time?
- d. Were you ever the victim of a drug related crime?
- e. Were you ever involved in the sell and supply of drugs?

#### **Minimal Prompts:**

1. Tell me more about that
2. Tell me more about the part where...
3. And then what happened

## Appendix 4

### Demographic data collection:

Age:

Gender:

Ethnicity:

Number of drug related offences:

Is your index offence a drug related offence: Yes/ No