Edith Cowan University

Research Online

2006

Exploring the notion of emotional attachment in Orford's model of addiction : Review, and a step towards operationalising Orford's concept of strong attachment in addiction : A qualitative study

Kate E. Baily
Edith Cowan University

Recommended Citation

Edith Cowan University

Copyright Warning

USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

Exploring the Notion of Emotional Attachment in Orford's Model of Addiction: A

Review, and A Step Towards Operationalising Orford's Concept of Strong Attachment in

Addiction: A Qualitative Study

Kate E. Baily

A report submitted in Partial Fulfilment of the Requirements for the Award of Bachelor

of Arts, Faculty of Computing, Health and Science, Edith Cowan University.

October, 2006

I declare that this written assignment is my own work and does not include:

    (i) material from published sources used without proper acknowledge

    (ii) material copied from the work of other students.

_____

Declaration

I certify that this literature review and research project does not incorporate, without acknowledgement, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature

Date July 2007

Acknowledgements

I would like to acknowledge the people, who with their help enabled me to complete me

research project. Firstly I would like to thank Dr Greg Dear for being my supervisor and

helping me out as much as he could. I would like to thank and send my gratitude to the

drug treatment agencies that acknowledged, and agreed to my research. Most of all, thank

you to the clients of the treatment agencies who agreed to participate in my research, as I

would not have been able to complete it without each of you. Lastly I would like to thank

the psychology staff at Edith Cowan University as they are always willing to help.

Table of Contents

Running Head: EXPLORING ORFORD'S MODEL OF ADDICTION

Exploring the Notion of Attachment in Orford's Model of Addiction

Kate E. Baily

Edith Cowan University

Exploring the Notion of Attachment in Orford's Model of Addiction

Abstract

Orford's (2001) notion that a strong emotional attachment to an object (drug) or activity (gambling) is a central component of addiction has received little empirical attention. The published research on attachment to inanimate objects was reviewed and led to the following conclusions. First, attachment theory has been validly applied to people's relationships with inanimate objects. Second, researchers have developed technologies (e.g., psychological measures, operational definitions) to enable empirical research in this area. Third, this research is in its early phases, but has produced reliable standardised measures of people's emotional attachment to brands. Further research is needed to operationalise Orford's (2001) concept of strong attachment to a drug or addictive activity, although the progress on brand attachment and place attachment provides researchers with a framework for undertaking such research.

Name: Kate Baily

Supervisor: Dr Greg Dear

28th August 2006

Exploring the Notion of Attachment in Orford's Model of Addiction

Most current definitions of addiction fit with that proposed by Walters (1996, p.10): "the persistent and repetitive enactment of a behavioural pattern the person recurrently fails to resist and that consequently leads to significant physical, psychological, social, legal, or other major life problems." Despite the large body of research on addiction, no one theory adequately explains all facets of addiction. Older psychological theories typically explain addiction in terms of physiological dependence (tolerance to the effects of the substance, and withdrawal symptoms on cessation of use) and the neurological effects of the drug itself (Robinson & Berridge, 2003). However, research has demonstrated that addiction can be present without physiological dependence (Orford, 2001). In addition, findings suggest that people can become addicted to activities other than drug use; such as, sex, gambling, and eating (Orford, Morison, & Somers, 1996; Orford, 2001). Therefore contemporary theories should account for the full range of addictive activities beyond just drug use.

A successful model of addiction must account for pharmacological, social, cultural, situational, motivational, and personality components when explaining how addictive behaviours manifest (Peele, 1977). Furthermore, theories should attempt to clarify why some people become addicted to objects/activities whilst others do not, or why it is easier for some people to give up their addiction than others. One influential model of addiction that satisfies the above criteria, is that proposed by Orford (2001), who argues that an important aspect of an addiction is the person's strong emotional attachment to an object (e.g., drug) or activity (e.g., gambling).

The objective of this review was to examine the published literature in order to answer the following three questions. First, how has attachment theory, or the constructs inherent in that theory, been applied to people's attachment to inanimate objects or activities? Second, to what extent have researchers developed technologies (psychological measures, operational definitions, etc.) that enable empirical examination of attachment in relation to inanimate objects/activities? Finally, to what extent does the above lines of research provide researchers with a framework for operationalising and examining Orford's (2001) application of attachment concepts to a theory of addiction?

An overview of Orford's (2001) psychological theory of addiction is briefly summarised, followed by an overview of attachment theory. Subsequent sections of this review summarise the literature in relation to the three questions that I aimed to address. The review concludes with a brief summary section in which I also provide some thoughts on priorities for future research.

Orford's Theory of Addiction.

Orford's (2001) theory of addiction comprises social, behavioural, cognitive, and moral perspectives. Orford defines addiction as "an attachment to an appetitive activity, so strong that a person finds it difficult to moderate the activity despite the fact that it is causing harm" (Orford, 2001, p.18). The notion of emotional attachment is the key construct embedded in Orford's psychological model of addiction, in which he suggests that becoming addicted to an activity/object involves forming a strong emotional attachment to that object/activity. Orford (2001) explains this progression from 'normal' behaviour, to addictive and potentially harmful behaviour from a behavioural perspective. Even though emotional attachment is a dominant feature of Orford's model he does not

clearly and concisely depict what a strong emotional attachment actually is. Orford differentiates weak from a strong attachment in terms of the level of conflict between wanting to engage in the activity and feeling that one should not, but does not offer a detailed explanation of other psychological concepts pertaining to attachment.

Orford (2001) refers to the motivation that drives addictive behaviours as appetites, suggesting that appetites are extensions of desires and needs that are essential to life. Embedded within the large range of appetites exists numerous activities/objects that pose a risk to people, and facilitate the development of a strong attachment. Orford proposes that strong emotional attachment to an object/activity initially evolves through complex psychological processes, including classical and operant conditioning. The repeated involvement with risky appetites reinforces specific behaviours and emotions, which are perceived by the individual to be highly rewarding. Consequently, ability to control one's behaviour is diminished, and one becomes vulnerable to developing a strong emotional attachment (Orford, 2001). The inability to control one's behaviour is the result of a breakdown of self-regulatory systems in which the impulse outweighs the social forces that control one's actions. The combination of repeated use, weakened control, and highly rewarding behaviour leads to the object/activity becoming personally significant to the individual, thus creating a sense of attachment (Orford, 1985).

Strong attachment does not manifest instantaneously but rather develops over time. Changes in one's behaviour act as a measure of attachment, whereby the progression of one's attachment is observed through adjusted attitudes, thoughts, beliefs, and overall experiences with the activity/object (Orford, 2001). Individuals who are strongly attached to an object/activity believe that consumption will alter and transform

their mood, therefore enabling people to escape personal pain or unpleasant emotions, with the expectation that they will experience pleasure (Orford, 2001). Social facets in one's life, including, erosion of personal relationships or inadequate social support may further reinforce emotional attachment (Orford, 2001). A person's social context is therefore fundamental in the development of emotional attachment to an object/activity.

Strong Emotional Attachment

It is imperative that one understands what an emotional attachment is and how it manifests when considering Orford's (2001) model of addiction. One definition suggests that emotional attachment is the outcome of a relationship between an individual and the object/activity (Shaffer, 2005). Attachments to objects are perceived to be a normal stage in development, and are mostly of little concern. In spite of this, attachments have the capability to evolve into strong emotional attachments, some of which can be dangerously unhealthy (Orford, 2001). Wickler (1976) suggests that becoming emotionally attached is a process that takes place internally, and produces noticeable changes in one's behaviour as a result of accumulated, positive experiences with the object.

A strong attachment is comprised of at least three elements, the first is an increased emotional attachment to the object/activity, the second is enhanced mental devotion to the object/activity, and the third is an increase in consumption involving the object/activity (Orford, 2001). The characteristic that distinguishes between a normal attachment and a strong attachment is the progression from moderate and controllable behaviour, into one of conflict and loss of control (Orford, 2001). According to Orford (2001), the core of addiction is not merely about attachment, but also the conflict

associated with the attachment. Conflict specific to a person's attachment is viewed as an internal struggle, resulting from two opposing motives (Orford, 2001). In relation to a drug addict, conflict would be the product of realising that using the drug is damaging while at the same time wanting to consume the drug for its emotional or other benefits. With strong emotional attachment, the conflict can be a balance of incentives, where the disincentives relate to the consequential damage from using the drug, and the incentives can be nothing more than avoiding the negative affects associated with breaking the attachment. The analogy is with the situation of being in a damaging relationship where one's attachment to the other person prevents one from leaving the relationship, despite knowing that the relationship brings more pain than joy.

Becoming emotionally attached to something produces qualitative changes in people's experiences, whereby a strong emotional attachment will result in a measurable transformation of behaviour (Shaffer, 2005). Changes in one's cognition could additionally occur, resulting in important believes and values being overshadowed. Sporadic behaviours that are usually within one's control will then become personally significant. One explanation for this is in terms of the sacrifices that a person is willing to make when they are strongly attached to a person or object (Hazan & Shaver, 1994). Previous research indicates that people with strong emotional attachments are personally committed to the object, and are willing to pay a premium price for the object (Thomson, MacInnis, & Park, 2005).

Social and Cultural Factors

One of the oldest controversies evident within the psychological field involves the nature/nurture debate. For many years psychologists have locked horns in regards to

whether one's; behaviour, genetics, or external environment is more prominent in addiction (Crabbe, 2002). Behavioural psychologists do not deny the significant contribution of genetics in addiction. They merely protest the suggestion that genes are the primary influence of behaviour. In addition, biological explanations are unable to adequately explain addiction solely by genetics. Furthermore, biological perspectives are limited in providing sufficient reasons as to why a large proportion of people, who are genetically prone to developing an addiction do not become addicted, and vice versa (Crabbe, 2002). As the knowledge on biological views of addiction broadens, social and cultural factors are becoming more significant. Both social and cultural aspects are considered to be influential in the development of people's emotional attachment to an object/activity (Shaffer, 2005). Social factors including social support, good interpersonal relationships, and an enjoyable job may protect one from forming an emotional attachment to an unhealthy activity, whilst lack of social support, victim of abuse, and unemployment are risk factors of addiction (Jessor, Jessor, & Finney, 1973).

<div align="center">Attachment Theory</div>

The notion of attachment was originally developed by Bowlby in the 1950's. Attachment theory focuses on the human attachment between an infant and his/her primary caregivers (Westmaas & Silver, 2001). Bowlby (1981) defines attachment as an element of a relationship between two people that provides warmth and security to each person involved, when in close proximity of one another. A large quantity of research has been conducted on attachment, leading one to expect that attachment would be adequately explained within the psychological literature. However, the majority of studies merely explain attachment as a 'bond', failing to thoroughly elucidate what an

emotional attachment is, and how an attachment between two people, and more importantly between a person and an object manifests (Mikulincer, Birnbaum, Woddis, & Nachmias, 2000; Peluso, Peluso, White, & Kern, 2004). In contrast, Ainsworth suggests that one's attachment acts as a "safe base".

Attachment: Model of Instinctive Behaviour

Previous discrepancies concerning the structure of attachment ultimately lead to two main perspectives being constructed (Berk, 2005). The first is the model of instinctive behaviour and the second being the theory of secondary drive. The model of instinctive behaviour is an ethological explanation of attachment which suggests that attachment is an innate response, with its purpose being to ensure survival of the species (Schickedanz, Hansen, & Forsyth, 1992). The infant inherits the capability to develop specific behavioural systems, which are designed to promote adaptive responses to stressful and life threatening events in one's environment (Hadley, Holloway, & Mallinckrodt, 1993). Thus, attachment is one behavioural system created to enhance safety and protection from the unknown, which in turn encourages survival. As a result, infants form attachments to people who efficiently respond to their needs, specifically reliant on existence.

Behavioural systems are developed from the initial experiences that the infant has with the external world, and each behavioural system has a set goal that needs to be controlled and maintained (Wilkinson, 2004). For example the initial goals of the infant's attachment behavioural system would be safety and protection. In time, the child would learn that his/her mother is a safe haven, and protects him/her from harm. Over time the child's attachment system would establish an additional goal of obtaining close proximity

to the mother when stressed (Mikulincer et al., 2000). The infant is motivated to attain the goals of attachment, in which their efforts are observed through specific attachment behaviours (Bowlby, 1981).

If the model of instinctive behaviour was applied to the attachment formed between an addict and his/her drug, one could propose that feelings of safety and security would be a primary goal of the attachment behavioural system involving a specific drug. If a person experiences a number of negative events in a short period of time, for example, losing his/her job, or the demise of a romantic relationship, one may become depressed and feel that they are unable to cope with the everyday pressures of life. Drug use is one means of coping with negative aspects of one's life. Drugs offer an escape from reality, with the potential of acting as a safe haven when consumed (Sutker & Allain, 1988). Put another way, people become emotionally attached to drugs, due to the functions of safety and security that the drug fulfills when consumed.

Attachment: Theory of Secondary Drive

Behavioural perspectives of attachment along with Freud's psychodynamic theory suggest that the formation of a human attachment between a mother and her child is the outcome of the mother immediately satisfying the infant's physiological needs (Schickedanz et al., 1992). Such views are comparable to the theory of secondary drive, which is derived from learning theory. The theory posits that the infant's needs of food and warmth are most important in the development of an attachment. The infant learns that his/her primary caregiver is the only source of his/her gratification of needs, such as hunger, warmth, and safety, and thus forms an attachment to them (Bowlby, 1981). The emotional receptiveness of caregivers is extremely essential in the formation of the

infant's attachment as they encourage feelings of emotional reassurance, calmness, and security.

If the above theory is extrapolated to the emotional attachments formed in addiction, one can suggest that a drug addict would undergo a similar process during the development of his/her attachment to a drug. The drug addict may learn from repeated use that the drug is the only source of his/her gratification. The needs that the drug satisfies however, may be different from warmth or hunger. Instead, needs of acceptance, security/safety, and affiliation may become more significant later in life. Thus a person would form an attachment to a drug that uniquely satisfies secondary needs of the individual.

Attachments to Inanimate Objects

People's emotional attachments to inanimate objects have been noted in psychological discourse for many years (Kellet & Knight, 2003), however the term emotional attachment is often not explicitly defined and the reader is expected to know what it means. It remains unclear whether or not the attachment between a person and an inanimate object is equivalent to the attachment between two people. An attachment between two people is defined in terms of an affectional bond that exists between two individuals, resulting in feelings of security and comfort when in close proximity to one another, and acting as a safe-haven throughout stressful situations (Ainsworth, as cited in Vacca, 2001). An attachment between a human and an inanimate object is defined as the acquiring of emotional significance to an object, in which the object's presence ensures feelings of protection and relief during times of stress (Steir & Lehman, 2000). The main similarity between these two definitions is in regard to the functions of safety and

calmness that both the person and the inanimate object serve during stressful events. An additional similarity between attachments to people or objects is that dependency is the foundation of both relationships (Wickler, 1976). Therefore it is plausible to suggest that an attachment between two people and between a person and an inanimate object are alike.

If the above premise was applied to addiction, one could derive an explanation of why some people, become emotionally attached to certain objects/activities. In regards to substance use, an individual may develop a sense of attachment to his/her drug, due to the feelings of security and safety that the drug provides when consumed. Feelings associated with being 'high' could provide compensatory emotional functions to the individual. Such feelings of euphoria would temporarily alleviate any self beliefs of failure or inadequacy, which would in turn intensify the reinforcement power of the drug (Flores, 2001). Continued use might further distort one's perceptions, to the extent where one believes that the drug is the only thing that can protect him or her.

Objects and Self Identity

Objects contribute to a person's sense of self, both functionally and symbolically (Wallendorf & Arnould, 1988). Without objects people would feel lost, as they would not be able to truly express who they are and what is important to them, or convey their true personalities to others. For example, earthquake victims in Japan and America who lost all of their possessions experienced feelings of self-loss in that a part of their identity was destroyed (Ikeuchi, Fujihara, & Dohi, 1999, as cited in Schultz, & Baker, 2004).

Researchers have postulated how valuable objects, which are exceptionally important to an individual, and can arouse intense feelings pleasure (Wallendorf &

Arnould, 1988). Kruger and Jakes (2003) suggest that attachments to objects evolve because they enable humans to feel secure, convey their genuine self, and represent particular connections to social groups. More importantly, attachments facilitate the construction of one's sense of self and self-identity. Attachments are prevalent in the majority of cultures, especially in western cultures, and are viewed as healthy and normal (Wallendorf & Arnould, 1988). Even though self-identity and sense of self are defined differently in various cultures, objects are universally used across all cultures to express in some way, one's sense of self (Belk, 1988; Wallendorf & Arnould, 1988).

Evidence suggests that old-aged Americans who own treasured and sentimental belongings are generally more content with their lives than people who do not (Sherman & Newman, 1977-78, as cited in Wallendorf & Arnould, 1988). However, attachments to objects can be detrimental to a person the attachment starts to dominate, and govern one's life (Belk, 1988). An example of a potentially harmful attachment involves a collector. Collectors often become immersed in extending their collection, resulting in a proportion of collectors devoting considerable hours of their time to improve their collection. A Mickey Mouse collector gave details on how his collection of Mickey Mouse toys developed into an addiction which dominated his life. The need to purchase new items became so overwhelming and controlling, that he repeatedly spent his food and house repayment money (necessary for survival), in order to obtain additional Mickey Mouse products (Belk, 1988).

The more time and effort people invest into specific objects/collections, the more meaning and purpose the object will possess (Stedman, Beckley, Wallace, & Ambard, 2004). Accordingly, the object/collection could possibly be perceived as a significant

component of a person's sense of self (Belk, 1988). The yearning to spend time improving a specific object/collection may be symbolic of self-enhancement. For example if people encounter negative events in their life, which in-turn damages their self-identity (e.g., get fired from their employer), they may invest more time into restoring the special object or adding to the collection. Such behaviour directed towards an object/collection can restore one's sense of self (Belk, 1988).

While it is not a hypothesis that can be submitted to experimental testing, extant data are consistent with the view that objects are essential and influential in the development of one's sense of self (Belk, 1988; Schultz, & Baker, 2004; Wallendorf & Arnould, 1988). It is also evident that people form attachments to a small number of objects throughout their life, which are uniquely sentimental and personally pertinent to a person's self-concept (Wallendorf & Arnould, 1988). One can therefore suggest that the unique effects of the object are just as, if not more important than the object when considering attachment. If the above notion was applied to drug addiction, the attachment between an addict and his or her drug would be an important aspect of the person's sense of self. Objects enable people to fulfil external social needs which define who they are and how they portray themselves to others. In regards to the drug addict, the drug itself, or the character that the person becomes when intoxicated can be symbolic of the person's desirable sense of self. The consumption of the drug might provide the individual with feelings of confidence and self-worth, feelings which are unique to the drug. The attachment between a person and his/her drug would evolve from a combination of the unique properties/feelings that the drug produces and the person's desired sense of self.

An additional explanation of one's emotional attachment to a drug is based on social identity theory (Dittmar, 1992). A person with low self-esteem and a negative sense of self may initially use drugs in order to belong to a group. Being affiliated with a particular social group provides a source of self-esteem and positive self-identity (Cookman, 1996). Increased self-esteem and a constructive self perception would be extremely valuable to one's internal and external self. The individual would be motivated to comply with group norms of drug use in order to stay connected with his or her social group. In regards to attachment, a person would not become emotionally attached to the drug per se but rather the positive consequences linked with affiliation to a particular group.

Grief and Loss

Innovative research by Bowlby initially identified the connection between attachment and grief (Stroebe, Schut, & Stroebe, 2005). Grief can be defined as an emotional response to loss resulting in feelings of intense sorrow and unhappiness (Bowlby, 1981: Vol 3). A sense of loss does not only refer to the death of a person, but can also result from losing one's job, ending a relationship, or severing one's attachment with a person/object/activity. Shaver and Tancredy (as cited in, Servaty-Seib, 2004) suggest that people will become significantly distressed and experience a grief response when an attachment is severed. In regards to attachment, two perspectives propose different explanations of why people grieve when they no longer feel connected to, or are unable to obtain their object.

The first perspective, embedded in attachment theory, suggests that infants grieve when their attachment to their caregiver is severed as a result of specific needs not being

satisfied (Baker, 2001). An attachment evolves from emotional and physiological needs, essential to healthy development, being fulfilled. The person/object acts as a safe haven, provides a sense of security, and protects one from harm (Peluso, Peluso, White, & Kern, 2004). If the attachment is broken, the individual would become distressed as he or she could not seek close proximity to his/her object, and therefore, would no longer feel safe or secure. The person's emotional needs would not be satisfied, and a grief response would follow.

The second explanation is derived from a self-identity perspective. When an attachment between a human and an object is severed the person will experience a grief response which represents losing part of oneself (Belk, 1988). People view their attachments with objects as being part of their sense of self. If a meaningful object is unexpectedly lost or destroyed, one may feel as if they have lost part of themselves, part of their personality. Grief is a normal reaction to the loss of one's identity (Wallendorf & Arnould, 1988).

Both perspectives are important when trying to comprehend the grief response that a drug addict encounters when his/her attachment to the drug is broken. When considering the first perspective, the drug uniquely satisfies various emotional needs of the individual. The drug user's grief reaction could be the result of specific emotional needs not being completely satisfied. In regards to the second perspective, the drug becomes part of a person's sense of self. If a drug user's attachment to a drug was severed, his or her self-identity would be impaired. The individual would grieve for 'their' drug in conjunction with their 'old' self.

Place attachment is an additional domain that illustrates the relationship between attachment and grief. Place attachment is defined as an emotional bond produced by meaningful interactions between a person and a setting (Milligan, 1998). Place attachments satisfy people's emotional needs of safety and security, and represent stability. Furthermore, place attachments can signify a person's socio-economic status, and help construct one's self-identity (Brown & Perkins, 1992). When an attachment to a place is broken, one will experience a period of grief. Disturbances in place attachments are valuable as they provide unique insight into the functions and effects that specific attachments produce (Brown & Perkins, 1992). Severing one's attachment to a place endangers one's self-identity, especially if the disruption is involuntary.

Natural disasters, the primary cause of unintentional disruptions of place attachment, illustrate the damaging ramifications of severing one's attachment. For example, in 1972 a dam in America caved in producing a flood which left over 4000 people homeless. Those who lost all their possessions, including their family home became extremely distressed and experienced symptoms of post traumatic stress disorder. People were emotionally scarred, and the majority of people demonstrated significant changes in their personality (Titchener & Kapp, 1976, as cited in Brown & Perkins, 1992). Moreover, victims of the flood found it extremely difficult to accept their losses and reconstruct their positive self-identity. Similar outcomes could occur if a dependent drug user was suddenly forced to give up their drug use, as one may feel they have lost a significant part of their life.

Conditioning Theories

A further theory that can explain the notion of emotional attachment to objects is classical conditioning. The theory of classical conditioning, also known as Pavlovian conditioning was established by Pavlov in the early 1900s, and is a form of associative learning (Classical conditioning, 2006). The theory is purely behavioural, suggesting that behaviour in its pure form is an unconditioned response to an unconditioned stimulus. The unconditioned stimuli and responses are involuntary and innate, and are evident in all species. New behaviour is learned by pairing a neutral stimulus with an unconditioned stimulus which elicits the unconditioned response. Continued repetition of pairing the two stimuli together will eventually enable the neutral stimulus to elicit the same response of the unconditioned stimulus when presented on its own (Classical conditioning, 2006).

From a classical conditioning perspective, people develop emotional attachments to other people and objects via a number of classical conditioning processes. In regards to drug use, a person may become emotionally attached to his/her drug as a result of the unique positive feelings associated with it. Classical conditioning ideologies suggest that settings and stimuli connected with drug use facilitate the development of one's emotional attachment. However, conditioning theories in addiction are restricted by their inability to articulate the significance of the person's attachment, and the effects that it has on one's behaviour, emotion, and cognition (Classical conditioning, 2006).

Operant conditioning is an additional conditioning theory which suggests behaviour is linked with perceived consequences. The primary premise of operant conditioning implies that reinforcement consequences increase the likelihood of behaviour whereas punishment consequences act as a deterrent (Braslau-Schneck, 2003).

Positive reinforcement involves the addition of 'something' that is considered good, whereas negative reinforcement entails the removal of 'something' considered bad. Conversely, positive punishment is the addition of 'something' bad, and negative punishment is when 'something' good is taken away (Braslau-Schneck, 2003). In simpler terms, people are likely to engage in a specific behaviour if they believe that something good will happen or something bad will stop happening as a result.

A person's emotional attachment to a drug can further be explained by operant conditioning. If an individual's initial experiences with a drug are rewarding, produce positive feelings, or remove aversive thoughts, one may subsequently expect comparable effects in the future. Therefore, one may develop an attachment which is specific to the effects of the drug, such as the enjoyable properties that the drug generates (Orford, 2001). The effects of the drug may be of greater significance if a person was using drugs as a means of coping with depressing events in his/her life. When the positive rewards associated with the behaviour are continually reinforced, additional purposes encompassing powerful emotions are established, and a strong attachment is formed. Furthermore, expectations that the drug might eradicate problems in one's life could also enhance the strength of one's emotional attachment to a drug (Orford, 2001).

Applications of Attachment Theory and Specific Types of Object Attachments

In this section I provide three examples of people's attachments to objects: transitional objects, places, and brands. The review of the literature in each of these areas is focused on the three following questions which were also outlined at the beginning of this paper. First, how has attachment theory, or the constructs inherent in that theory, been applied to people's attachment to inanimate objects or activities? Second, to what

extent have researchers developed technologies (psychological measures, operational definitions, etc.) that enable empirical examination of attachment in relation to inanimate objects/activities? Finally, to what extent does the above lines of research provide researchers with a framework for operationalising and examining Orford's (2001) application of attachment concepts to a theory of addiction?

Transitional Object Attachment

The concept of transitional objects was originally established by Winnicott in the early 1950's. A transitional object is defined as an object, typically a soft toy or blanket, that satisfies specific emotional functions, protecting one from feelings of anxiety when alone (Bacher, Canetti, Galilee-Weisstub, Kaplan-DeNour, & Shaler, 1998). Children develop emotional attachments to transitional objects that possess inimitable soothing effects at bed time, as well as protective functions during times of stress (Passman, 1987). Research findings on transitional objects are fundamental to the existing notions of object attachment, given that previous studies on transitional objects were the first to demonstrate human attachments to objects. The primary constructs of transitional object attachments were derived from attachment theory, and thus share many similarities with the theory, for example, both mothers and objects having the ability to satisfy children's emotional needs. The mother and the transitional object both provide functions of protection and calmness during times of stress, which in turn facilitates attachment. The transitional object is thought to be symbolic of the mother, and is primarily used when the mother is unavailable (Davar, 2001; Passman, 1987).

Based on observational data, researchers have loosely operationalised the term transitional object attachment in regards to the emotional functions that the toy/blanket

serves, as well as consistent preference for the object (Lehman, Arnold, & Reeves, 1995).

Children's attachment to transitional objects is measured using similar methods as

attachment theory. Attachment behaviours identified in attachment theory, (e.g. seeking

close proximity to the mother during times of stress and exhibiting signs of distress when

the person/object is removed) are also used as markers of transitional object attachment

(Steir & Lehman, 2000). Researchers have developed basic methodologies for measuring

transitional object attachment. Coding techniques (which record children's attachment

behaviours) are essentially used in determining whether a transitional object satisfies

specific criteria of an attachment object (Friman, 2000). However, researchers have

neglected to develop a reliable and valid method which specifically measures the strength

of emotional attachment.

The implications of attachments to transitional objects are particularly relevant

when considering Orford's (2001) model of addiction. Although specific concepts of

transitional object attachments (e.g., transitional objects being symbolic of one's mother)

might not realistically be applied to an addict's emotional attachment to an addictive

object/activity, constructs associated with emotional needs can. Overall, attachments to

transitional objects demonstrate a person's ability to form an attachment to an object

other than another person. If a person can form an attachment to an object, one can

postulate that he/she has the capacity to form an attachment to an addictive object (a

drug) or activity (gambling).

Place Attachment

Place attachment is an alternative example of people's attachments to inanimate

objects. Place attachment is defined as an emotional bond produced by meaningful

interactions between a person and a setting (Milligan, 1998). The strength of the bond is dependent upon factors such as time, familiarity, dependency, and identity. Within the psychological literature, place identity and place dependency are identified as two separate dimensions of place attachment, which facilitate one's understanding of the different forms of place attachments that have been established (Moore & Scott, 2003).

Place identity (an emotional attachment) describes the formation of one's attachment to a place in terms of the symbolic and emotional properties one attributes to the place (Williams & Vaske, 2003). Place identity is considered to be one facet of self-identity, suggesting that special and meaningful places contribute to a person's sense of self. The strength of one's emotional attachment is dependent upon the degree of meaning and significance that one uniquely perceives the place to possess (Clark & Stein, 2003). Thus, one can presume that place attachment is an indirect attachment, resultant of the direct attachment people form to the sentimental meanings associated with the place.

Place dependence (a functional attachment), derived from an objective behavioural viewpoint, suggests that people form attachments to places that promote specific behavioural goals or beloved activities (Clark & Stein, 2003). For example a male teenager who has a passion for riding his pushbike and competes in BMX racing is likely to form an attachment to the BMX track close to his house, as it enables him to practice and enhance his skills. In addition to behavioural goals, emotional needs such as security and comfort also influence place attachment (Corcoran, 2002). Place dependence demonstrates the continuing relationship that exists between a person and a specific setting, where the goals and needs of an individual are forever changing. The strength of

one's attachment to a particular setting will vary depending on the current goals and needs of the person (Williams & Vaske, 2003).

Both cognitive and emotional factors are thought to be important in the formation of place attachment. A study by Fuhrer and Kaiser, (as cited in Inalhan & Finch, 2004) examined specific factors that were essential for establishing and maintaining place attachment. Findings suggest that emotions involving security, autonomy, and arousal were crucial to the formation of one's attachment to a place (Fuhrer & Kaiser, 1992, as cited in Inalhan & Finch, 2004). An additional study by Williams and Vaske (2003) extended previous findings by Williams and colleagues (as cited in Williams & Vaske, 2003) in hope of identifying specific factors of place identity and place dependence. Results revealed that factors of place identity were associated with emotions, meanings, and self-identity, while factors of place dependency corresponded with individual's needs and functions.

Overall, place attachment was significantly and positively correlated with frequency of visits, individual familiarity, and sentimentality of the place (Williams & Vaske, 2003). It is important to note that findings from the above study should not be deemed conclusive as previous research in the area is limited. Researchers have taken the initial steps in developing a rigorous instrument that quantifies place attachment, however further research is needed in order for the measure to progress which would in turn enhance the reliability of the factors.

Place identity (an emotional attachment) and place dependency (a functional attachment) illustrate two dimensions of place attachment. The above research enables future researchers to extrapolate the attachment constructs embedded in place identity and

place dependency to Orford's (2001) model of addiction. In regards to place identity, concepts encompassing emotional meanings and self-identity provide insight into why attachments develop, and these processes could apply to a range of objects. In terms of addiction, people may form strong attachments to objects/activities if they perceive the object/activity to be meaningful or a significant component of their identity.

With respect to place dependency, attachments are a product of specific needs being satisfied. The notion of fulfilling psychological and biological needs are comparable to attachment theory, as the theory suggests that people form attachments to people/objects that satisfy their emotional and physiological needs (Soares, Lemos, & Almeida, 2005). The concept of needs further coincides with Orford's (2001) model in regards to developing an emotional attachment. Pertaining to Orford's model, a strong emotional attachment could be dependent on unique functions of the object/activity, for example, satisfying one's emotional needs of protection and affiliation. Future research into addiction should explore concepts of self-identity (internal and external) and emotional needs via qualitative interviews with addicts, in an attempt to discover specific factors pertinent to the development of emotional attachment to an addictive object/activity.

Attachments to Brands

Attachments to brands are a recent phenomenon which emphasise people's attachments to objects. The concept of emotional attachment is proving to be valuable to other fields besides psychology (Thomson, 2005). From a marketing perspective it has been suggested that consumers who are emotionally attached to a brand are willing to pay

a premium for brand items. Subsequently, business owners are showing increasing interests in specific causes and factors of emotional attachment.

A study by Thomson, MacInnis, and Park (2005), investigated the effects of emotional attachment on consumer spending. Brand attachment is defined as an emotional bond that connects consumers to specific brands (Thomson, 2005). The notion of brand attachment stems from attachment theory, in which researchers endeavour to understand how one forms and develops significant relationships with consumption objects. Thomson and colleagues conducted five studies on brand attachment, the first two aimed at developing an instrument that measured consumer's emotional attachment to brands, and the last three assessed the reliability and validity of the scale. Extant views on attachment suggest that the strength of an individual's bond influences the level of commitment that he/she devotes to maintaining the relationship (Hazan & Shaver, 1994). Thus, one may suggest that an accurate measure of emotional attachment to objects should incorporate a person's commitment to the object. Furthermore, the instrument should determine the investment value of the object, for example sacrifices that one is prepared to make in order to attain the object (Thomson et al., 2005).

In study one of Thomson et al., (2005) 68 participants were required to consider a brand that they felt strongly emotionally attached to, and then answer a survey that consisted of 39 words associated with attachment. A seven-point Likert scale that ranged from 'not at all' to 'very well', was used in the survey to assess the degree to which the words expressed how one felt towards a brand (Thomson et al., 2005). Words that had a mean Likert rating value less than four were discarded from the study in order to reduce the number of factors.

In study two, 120 different participants took part in the study. The method,

survey, and Likert scale was the same as study one. A number of exploratory factor

analyses were conducted on the words that had an average of at least four in study one

(Thomson et al., 2005). Results from the factor analyses indicated that 10 words best

described emotional attachment. The ten items were loaded on three factors. Factor one

was labeled affection, and was comprised of affectionate, friendly, loved, and peaceful.

Emotions related to affection encompassed feelings of warmness. Factor two was named

passion, and contained passionate, delighted, and captivated (Thomson et al., 2005). In

regards to passion, emotions indicated the passionate and positive feelings that

consumer's felt towards their brand. Lastly, factor three was labeled connection, and

included connected, bonded, and attached. Emotions associated with one's connection to

their brand illustrated the strong bond that was felt by the person (Thomson et al., 2005).

Findings from the current study suggest that affection, passion, and connectedness are all

important facets of emotional attachment. The 10 feelings associated with the three

primary factors of emotional attachment are essential in the formation of an instrument

which measures the strength of emotional attachment.

Studies three and four evaluated the reliability and validity of the emotional

attachment scale, which contained the 10 items developed in the first two studies. The

reliability of the emotional attachment scale was high (Cronbach's reliability coefficient

of .88; Thomson et al., 2005). Study four evaluated the convergent validity of the

emotional attachment scale. Behaviours that displayed the intensity of a person's

attachment, including proximity to the object during times of stress, as well as signs of

distress when the object is threatened to be, or actually is taken away were also measured

(Thomson et al., 2005). The inclusion of attachment behaviours in the scale is crucial when considering the strength of one's emotional attachment as they have previously been identified as determinants of attachment (Bowlby, 1981).

Participants in study four were required to select a brand that they were either strongly or weakly attached too, and then had to answer questions that related to the 10 factors of emotional attachment. When examining the accumulative score of both weak and strong attachment, results revealed significant differences on all 10 factors of emotional attachment identified in study two. Participants who were strongly attached to a brand displayed significantly higher scores on all elements of emotional attachment compared to participants with weak attachments. Furthermore, attachment behaviours (as identified in attachment theory) were significantly related to strong emotional attachment (Thomson et al., 2005). Study five measured the predictive validity of the scale. Results reflected Thomson and colleagues' beliefs that consumers stay loyal to their brand, even if it meant paying a premium. Similar findings were displayed by Moore and Scott (2003) who suggest that personal commitment is a primary predictor of place attachment.

Researchers have operationalised emotional attachment in terms of a strong bond that ties consumers to brands. Research findings have enabled researchers to devise a sound measure that evaluates the strength of consumer's emotional attachment. Strong attachment is determined by intense feelings of affection, passion, and connectedness towards a specific brand. Furthermore, personal commitment, and attachment behaviours specific to attachment theory (e.g. seeking proximity, and separation anguish) are also prevalent in a strong attachment (Thomson et al., 2005).

The above research has a behavioural influence, and suggests that people form attachments to objects that satisfy emotional needs. Such views coincide with Orford's (2001) model of emotional attachment demonstrating the immeasurable potential of the findings. The 10 factors of emotional attachment discovered in study two (affectionate, friendly, loved, peaceful, passionate, delighted, captivated, connected, bonded, and attached) could be used by future researchers as an initial starting point when devising a measure of emotional attachment to an addictive object or activity.

Conclusion

In summary, this review illustrates the diverse ways in which specific constructs of attachment theory can be extrapolated to other psychological domains, particularly addiction. According to Bowlby (1981), children's attachment to caregivers is instinctual. However, Orford (2001) explains the development of an emotional attachment to an addictive object/activity in terms of conditioning and secondary drive theory. Is the attachment formed in addiction simply a learned response, or do people have an innate instinct to form attachments to things which satisfy their needs? This question cannot be answered at present, so future research into Orford's model of addiction is required.

Psychological theory and research was examined to describe and explain people's attachments to objects. Some theorists adapted theories of self-identity to explain the formation of object attachment in terms of one's sense of self and affiliation with groups, while conditioning theories clarify attachments from a behavioural perspective. Grief and loss were included to reveal the correlation with attachment. The relationship between grief and attachment is significant in that it demonstrates specific grief responses that a person experiences when one's attachment is severed.

Transitional objects, place attachment, and brand attachment are examples of people's attachments to inanimate objects that were described in detail. Each domain encompasses identifiable concepts embedded in attachment theory, and research findings were evaluated and then extrapolated to Orford's (2001) model of addiction. Research on transitional objects has not progressed very far in developing a measure of strong attachment. Transitional object researchers are primarily concerned with classifying the object in terms of whether the child is or is not attached to the object rather than measuring the strength of the child's attachment. Findings merely validate one's ability to form attachments to objects, other than people. Research on place attachment is more advanced than transitional object research, but it is still in the initial stages. Results indicate that place attachment is significantly and positively correlated with frequency of visits, individual familiarity, and sentimentality. Such concepts could be incorporated by researchers when considering the progression of an emotional attachment to an addictive object or activity. Even though a few studies have attempted to measure place attachment, a reliable instrument is yet to be devised. Findings on brand attachment surpass transitional object and place attachment, as research has led to the development of a sound and reliable measure of strong attachment. This enables researchers to empirically investigate underlying attachment processes. Moreover, researchers can draw on the developments regarding brand attachment and extrapolate them to Orford's model of addiction.

Further research is needed to operationalise Orford's (2001) concept of strong attachment to a drug or addictive activity. Future exploratory research on addiction should attempt to tease out specific aspects of emotional attachment to a drug.

Subsequent findings could be used by researchers to develop a psychometrically sound measure of emotional attachment to substances. Once established, researchers could test the instrument on different types of addictive objects/activities outlined in Orford's (2001) model, (e.g., sex, gambling, exercise) in order to increase the domain of the measure. Empirical examinations of Orford's model of addiction would then be possible.

References

Bacher, E., Canetti, L., Galilee-Weisstub, E., Kaplan-DeNour, A., & Shaler, A.Y. (1998). Childhood vs adolescence transitional object attachment, and its relation to mental health and parental bonding. *Child Psychiatry and Human Development, 28,* 149-167.

Baker, J. E. (2001). Mourning and the transformation of object relationships: Evidence for the persistence of internal attachments. *Psychoanalytic Psychology, 18*, 55-73.

Belk, R. W. (1988). Possessions and the extended self. *Journal of Consumer Research, 15,* 139-168.

Berk, L.E. (2005). *Infants, children, and adolescents* (5th ed.). Needham Heights, MA: Allyn & Bacon.

Bowlby, J. (1981). *Attachment and Loss: Volume 1- Attachment.* New York: Penguin Books.

Bowlby, J. (1981). *Attachment and Loss: Volume 3- Loss.* New York: Penguin Books.

Braslau-Schneck, S. (2003). An animal trainer's introduction to operant and classical conditioning. Retrieved, 01.08.06, from: www.wagntrain.com/OC/#Learning

Brown, B.B., & Perkins, D.D. (1992). Disruptions in place attachment. In I. Altman, & S.M. Low (Eds.), *Place attachment* (pp. 279-303). New York: Plenum Press.

Clark, J.K., & Stein, T.V. (2003). Incorporating the natural landscape within an assessment of community attachment [Electronic version]. *Forest Science, 49,* 867-876.

Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, 58, 644-

663.

Cookman, C.A. (1996). Older people and attachment to things, places, pets, and ideas [Electronic version]. *Journal of Nursing Scholarship, 28,* 227-231.

Corcoran, M.P. (2002). Place attachment and community sentiment in marginalised neighbourhoods: A european case study [Electronic version]. *Canadian Journal of Urban Research, 11,* 47-67.

Crabbe, J.C. (2002). Genetic contributions to addiction. *Annual Review of Psychology, 53,* 435-463.

Davar, E. (2001). The loss of the transitional object: Some thoughts about transitional and 'pre-transitional' phenomena. *Psychoanalytic Counselling, 7,* 5-26.

Dittmar, H. (1992). *The social psychology of material possessions: to have is to be.* New York: St. Martin's Press.

Flores, P.J. (2001). Addiction as an attachment disorder: implications for group therapy. *International Journal of Group Psychotherapy, 51,* 63-82.

Friman, P.C. (2000). "Transitional objects" as establishing operations for thumb sucking: A case study. *Journal of Applied Behavior Analysis, 33,* 507-509.

Hadley, J.A., Holloway, E.L., & Mallinckrodt, B. (1993). Common aspects of object relations and self-representations in offspring from disparate dysfunctional families. *Journal of Counseling Psychology, 40,* 348-356.

Hazan, C., & Shaver, P.R. (1994). Attachment as an organizational framework for research on close relationships [Electronic version]. *Psychological Inquiry, 5,* 1-22.

Inalhan, G., & Finch, E. (2004). Place attachment and sense of belonging [Electronic version]. *Facilities, 22,* 120-140.

Jessor, R., Jessor, S., & Finney, J. (1973). A social psychology of marijuana use: longitudinal studies of high school and college youth. *Journal of Personality and Social Psychology, 26,* 1-15.

Kellett, S., & Knight, K. (2003). Does the concept of object-affect fusion refine cognitive-behavioural theories of hoarding? *Behavioural and Cognitive Psychotherapy, 31,* 457-461.

Kruger, L.E., & Jakes, P.J. (2003). The importance of place: Advances in science and application [Electronic version]. *Forest Science, 49,* 819-821.

Lehman, E.B., Arnold, B.E., & Reeves, S.L. (1995). Attachments to blankets, teddy bears, and other non social objects: a child's perspective. *Journal of Genetic Psychology, 156,* 443-460.

Mikulincer, M., Birnbaum, G., Woddis, D., & Nachmias, O. (2000). Stress and accessibility of proximity related thoughts: exploring the normative and intraindividual components of attachment theory [Electronic version]. *Journal of Personality and Social Psychology, 78,* 509-523.

Milligan, M. (1998). "Interactional past and potential" [Electronic version]. *Symbolic Interaction, 21,* 1-33.

Moore, R.L., & Scott, D. (2003). Place attachment and context: Comparing a park and a trail within [Electronic version]. *Forest Science, 49,* 877-884.

Orford, J. (2001). Conceptualizing addiction: Addiction as excessive appetite. *Addiction, 96,* 15-31.

Orford, J. (1985). *Excessive appetites: A psychological view of addictions.* West Sussex: John Wiley & Sons, LTD.

Orford, J. (2001). *Excessive appetites: A psychological view of addictions* (2nd ed.). West Sussex: John Wiley & Sons, LTD

Orford, J., Morison, V., & Somers, M. (1996). Drinking and gambling: a comparison with implications for theories of addiction. *Drugs and Alcohol Review, 15,* 47-56.

Passman, R.H. (1987). Attachments to inanimate objects: Are children who have security blankets insecure? *Journal of Consulting and Clinical Psychology, 55,* 825-830.

Peele, S. (1977). Redefining addiction 1: making addiction a scientifically and socially useful concept. *International Journal of Health Services, 7,* 103-123.

Peluso, P.R., Peluso, J.P., White, J.F., & Kern, R.M. (2004). A comparison of attachment theory and individual psychology: A review of the literature. *Journal of Counseling and Development, 82,* 139-146.

Robinson, T.E., & Berridge, K.C. (2003). Brain mechanisms and behavior. *Addiction, 54,* 25-53.

Schickedanz, J.A., Hansen, K., & Forsyth, P.D. (1992). *Understanding children* (2nd ed). Mountain view, CA: Mayfield.

Schultz, K.S., & Baker, S.M. (2004). An integrative review of material possession attachment. *Academy of Marketing Science Review, 2004,* 1-35.

Servaty-Seib, H. L. (2004). Connections between counseling theories and current theories of grief and mourning. *Journal of Mental Health Counseling, 26,* 125-146.

Shaffer, H.J. (2005). What is addiction?: a perspective. Retrieved, 20.06.06, from: www.divisiononaddictions.org/html/whatisadiction.htm.

Soares, I., Lemos, M.S., & Almeida, C. (2005). Attachment and motivational strategies in

adolescence: Exploring links [Electronic version]. *Adolescence, 40*, 129-154.

Stedman, R., Beckley, T., Wallace, S., & Ambard, M. (2004). A picture and 1000 words:

Using resident-employed photography to understand attachment to high amenity

places [Electronic version]. *Journal of Leisure Research, 36*, 580-606.

Steir, A.J., & Lehman, E.B. (2000). An observational measure of children's attachments

to soft objects. *Child Study Journal, 30*, 253-271.

Stroebe, M., Schut, H., & Stroebe, W. (2005). Attachment in coping with bereavement: A

theoretical integration. *Review of General Psychology, 9*, 48-66.

Sutker, P.B., & Allain, A.N. (1988). Issues in personality conceptualizations of addictive

behaviors [Electronic version]. *Journal of Consulting and Clinical Psychology,

56*, 172-182.

Thomson, M. (2005). Emotional attachments to brands: The implications for marketers.

Retrieved, 20.06.06, from: www.acrwebsite.org/topic.asp?artid=136

Thomson, M., MacInnis, D.J., & Park, C.W. (2005). The ties that bind: Measuring the

strength of consumers' emotional attachments to brands. *Journal of Consumer

Psychology, 15*, 77-91.

Vacca, J.J. (2001). Promoting positive infant-caregiver attachment: The role of the early

interventionist and recommendations for parent training [Electronic Version].

Infants and Young Children, 13, 1-10.

Wallendorf, M., & Arnould, E.J. (1988). "My favorite things": A cross-cultural inquiry

into object attachment, possessiveness, and social linkage. *Journal of Consumer

Research, 14*, 531-547.

Walters, G.D. (1996). Addiction and identity: exploring the possibility of a relationship. *Psychology of Addictive Behaviors, 10,* 9-17.

Westmaas, J.L., & Silver, R.C. (2001). The role of attachment in responses to victims of life crises. *Journal of Personality and Social Psychology, 80,* 425-438.

Wickler, W. (1976). The ethological analysis of attachment: Sociometric, motivational, and sociophysiological aspects. *Zeitschritt fur Tierpsychologie, 42,* 12-28.

Wikipedia. (2006). Classical conditioning. Retrieved 01.08.06, from: http://en.wikipedia.org/wiki/Classical_conditioning#overview.

Wilkinson, R.B. (2004). The role of parental and peer attachment in the psychological health and self-esteem of adolescents. *Journal of Youth and Adolescence, 33,* 479-493.

Williams, D.R., & Vaske, J.J. (2003). The measurement of place attachment: Validity and generalizability of a psychometric approach [Electronic version]. *Forest Science, 49,* 830-840.

Guidelines for Contributions by Authors

Australian Journal of Psychology

Preparing files for production. If your manuscript is accepted for publication, please follow the guidelines for file formats and naming provided at Preparing Your Accepted Manuscript for Production. If your manuscript was mask reviewed, please ensure that the final version for production includes a byline and full author note for typesetting. Information for contributors to the Australian Journal of Psychology

All manuscripts should be sent to:

Professor Michael Innes
Editor, Australian Journal of Psychology
Faculty of Health Sciences
Psychology
University of Adelaide, 5005
Australia

Online manuscript submissions

You can submit a manuscript online for the Australian Journal of Psychology using the online submission system. You will need to create a login account for this.

- Submit a manuscript online

Preparation of manuscripts

1. Contributions should follow the general style described in the Publication Manual of the American Psychological Association, (4th ed., 1999), except that spelling should conform to The Macquarie Dictionary (2nd ed.). For matters of style not covered in these two publications the Style Manual for Authors, Editors and Printers (5th ed., Australian Government Publishing Service) should be consulted. Page references in the following notes are to the Publication Manual. The attention of authors is especially drawn to changes in the fourth edition (pp. xxviii–xxx).

2. Manuscripts (pp. 1–7, 237–248), not normally to exceed 4,500 words, should be typed on A4 (297 x 210 mm) paper, double-spaced throughout and with margins of at least 4 cm on all four sides. Four copies are required. Duplicated or photocopied copies are acceptable if they closely resemble typed copies. Manuscripts will not be returned to authors.

3. Title page (pp. 7,8 248–250) for the manuscript should show the title of the article, the name(s) and affiliation(s) of the authors, a running head and, at the bottom of the page,

the name and address (including postal code) of the person to whom proofs and reprint requests should be sent.]

4. An abstract (pp. 8–11, 250) should follow the title page. The abstract of a report of an empirical study is 100–150 words; the abstract of a review or theoretical paper is 75–100 words.

5. Abbreviations (pp. 80–89) should be kept to a minimum and in particular not be used for "participant" and "experimenter." Full stops are omitted for many abbreviations, for example: cm, kg.

6. Metric units (pp. 105–110) are used according to the International System of Units (SI), with no full stops when abbreviated.

7. Statistics (pp. 15–18, 111–119) should be seen as an aid to interpretation and not an end in themselves. Authors are encouraged to state their rejection rate once (e.g., $p = .05$) and then simply state whether a given statistic is significant or not, by that criterion.

8. Tables (pp. 120–141) should be typed on separate sheets with rules (if any) in light pencil only. Indicate approximate location in the text.

9. Figures (pp. 141–163) that have been produced as line art (e.g., graphs, flow charts, drawings) on a computer should be presented as Laser or photographic bromide output only at a minimum print density of 600 dpi. Figures should not include shaded areas of grey as these will be difficult to reproduce clearly; instead, use repeating patterns of lines or crosses (see Example 2 on p. 145). Half-tone art (e.g., photographs, photomicrographs) should be presented as prints rather than transparencies. Include only one figure per page and place the figure number and caption on the bottom of the page. Figures will only be accepted on disk if supplied in either Adobe Illustrator, EPS, or TIFF formats.

10. References (pp. 20, 168–222) are given at the end of the text. All references cited in the text must appear in the reference list.

11. The author should keep a copy of the manuscript for proofreading.

12. Blind review. AJP has provision for blind review, in which the author's identity is anonymous to the referees. Authors who wish to have their manuscripts evaluated by blind review must submit four copies of their manuscript with all author-identifiable pages removed but submitted together with the covering letter. Blind review will be provided only when explicitly requested by the author and when the manuscript is submitted appropriately.

13. Reprints. The Australian Psychological Society Ltd. allows authors to purchase up to 100 reprints of their journal articles. Reprints must be ordered on the form that accompanies the first page proofs.

14. Upon acceptance of their article for publication, authors who have prepared the manuscript on an IBM-compatible PC or Apple Macintosh computer should submit a copy of their work on disk in addition to the final printed copies. All copies of the manuscript are to be set out in the same manner as described above for typed manuscripts. Acceptable word processing program formats are: Word or RTF (Rich Text Format).

Disks may be supplied in 3.5-inch format. The word processing program used and version number are to be specified in writing on the title page of the manuscript. Computer disks should be packed in an Australia Post Postpak (DM size) and placed with the manuscript copies in a large sturdy envelope. Indicate on the outside of the envelope that a computer disk is contained inside.

Running Head: EXPLORING ORFORD'S CONCEPT OF STRONG

ATTACHMENT

A Step Towards Operationalising Orford's Concept of Strong Attachment in Addiction

Kate E. Baily

Edith Cowan University

A Step Towards Operationalising Orford's Concept of Strong Attachment in Addiction

Abstract

Within Orford's (2001) model of addiction, a person's emotional attachment to a substance (drug) or activity (e.g., gambling) is considered a central aspect of developing an addiction to that substance or activity. The aim of this study was to determine how emotional attachment to a substance manifests behaviourally, cognitively, and emotionally so that an operational definition of emotional attachment can be constructed. Data were collected via semi-structured interviews and analysed using Creswell's (2003) thematic content analysis. The 23 cognitive and emotional themes that were detected appear to be central to defining attachment to a substance, whereas the 16 behavioural manifestations are difficult to distinguish from standard indicators of dependence. Consequently, a measure of attachment to a substance should focus on the emotional and cognitive aspects in order that it not be confounded with measures of dependence.

Name: Kate Baily

Supervisor: Dr Greg Dear

30th October 2006

A Step Towards Operationalising Orford's Concept of Strong Attachment in Addiction

Orford (1985) was the first to argue that forming an emotional attachment to a substance (e.g., alcohol) or activity (e.g., gambling) is one stage in the process of developing an addiction to that substance or activity. The concept of emotional attachment in addiction is of considerable interest to professionals, particularly those in the addiction domain, given that the prevalence of non-physiological and physiological addictions continues to escalate (Orford, 2001). Including emotional attachment in a theory of addiction offers an alternative perspective to biological and disease theories.

Orford's (2001) model of addiction is a contemporary theory with great potential as it accounts for social, behavioural, cognitive, and moral facets of addiction. Given that emotional attachment is central to Orford's model, he defines addiction as "an attachment to an appetitive activity, so strong that the person finds it difficult to moderate the activity despite the fact that it is causing harm" (Orford, Morison, & Somers, 1996, p. 48). Exploratory research of Orford's (2001) model will lead to innovative developments in terms of explaining how addiction manifests as well as successful treatments. Even though emotional attachment is a dominant feature of Orford's model, and the strength of attachment is believed to be a crucial factor in forming an addiction, the theory fails to identify specific constructs that differentiate a weak from a strong attachment. Orford and colleagues have however recognised the need to measure central psychological processes, in particular emotional attachment, using a method that will enable researchers to differentiate addiction from physiological dependence (Orford et al., 1996).

Orford, Morison, and Somers (1996) have made some initial attempts in developing an instrument that measures emotional attachment. They devised an

attachment questionnaire, which measured emotional attachment in terms of strong desire, preoccupation, acting against judgment, loss of control, non-social activity, acquiring money for the activity by special means, feeling addicted or dependent, feeling depressed or guilty as a result, being criticised by others, and feeling the need to change (Orford et al., 1996). The items in the attachment questionnaire predominantly focus on behaviour, and overlap significantly with diagnostic indicators of dependence making it difficult to differentiate between attachment and dependence. Therefore, the constructs of emotional attachment and drug dependence cannot be separately measured to examine questions such as which leads to which.

The attachment questionnaire was utilised by Orford and colleagues in a study which aimed to measure the strength of attachment, and additionally characterise addiction in terms of emotional attachment rather than physiological dependence. Participants included in the study consisted of individuals with significant drinking or gambling problems (Orford et al., 1996). Suitable participants were required to complete two questionnaires, the first measuring emotional attachment and the second measuring physiological dependence, in order to distinguish any noteworthy differences between problem gamblers and drinkers.

Results revealed no significant differences between problem drinkers and gamblers in terms of the strength of their emotional attachment to alcohol or gambling. In contrast, comparisons of the physiological dependence questionnaires suggest that problem drinkers experience significantly more withdrawal symptoms than gamblers (Orford et al., 1996). The above findings demonstrate that addiction, as characterised by Orford (1985, 2001), can exist with or without physiological dependence, and that the

strength of an individual's emotional attachment to alcohol or gambling is comparable (Orford et al., 1996). If the results were extrapolated to a wide range of addictive objects/activities, one may suggest that the process of forming a strong emotional attachment is analogous to all objects/activities.

Although Orford et al., (1996) made some initial steps in developing and operationalising attachment, the areas covered in Orford's attachment questionnaire (as stated above), are more suitable for a questionnaire measuring dependence (standard measures of dependence include items concerning; strong desire, preoccupation, acting against judgment, and feeling addicted or dependent) rather than attachment. Furthermore, the constructs of attachment, evident in the attachment questionnaire were derived from Orford et al.'s knowledge on emotional attachment and not from previous research on emotional attachment, which further reduces the validity and reliability of the attachment questionnaire. This preliminary attempt did not successfully disentangle the constructs of emotional attachment and dependence. Orford has not progressed further in developing a sound measure of attachment as conceptualised in his model (Jim Orford, personal communication, March 2006).

The concept of attachment in addiction is potentially valuable to the field, yet the lack of available research minimises its true credibility. Even though attachment is new in the addiction domain, the notion of attachment has been recognised in psychology for many years (Peluso, Peluso, White, & Kern, 2004). Researchers have developed measures of attachment in other domains of psychological theory; for example, children's attachments to transitional objects, and people's attachments to places, and brands. Previous research on attachment has played a pivotal role in explaining specific facets of

behaviour, especially in terms of the attachment bond that is formed between a mother and her child (Bowlby, 1981). Attachment theory is primarily concerned with the attachment that is formed between two people rather than people's attachments to objects or place, suggesting that people have an instinctual drive to attach themselves to those who satisfy their needs (Mikulincer, Birnbaum, Woddis, & Nachmias, 2000).

Research on transitional object (e.g., blanket or soft toy) attachment was the first of its kind to demonstrate human attachments to objects. The primary constructs of transitional object attachment were derived from attachment theory, and thus share many similarities, for example satisfying children's emotional needs. The transitional object is thought to be symbolic of the mother, and is primarily used when the mother is unavailable (Davar, 2001; Passman, 1987). Based on observational data, researchers have loosely operationalised the term transitional object attachment in regards to the emotional functions that the toy/blanket serves (Lehman, Arnold, & Reeves, 1995). Researchers have developed basic methodologies for measuring transitional object attachment in which coding techniques (that record children's attachment behaviours) are essentially used in determining whether a transitional object satisfies specific criteria of an attachment object (Friman, 2000). The implications of transitional object attachments are particularly relevant when considering Orford's (2001) model of addiction as research findings pertaining to transitional object attachments demonstrate a person's ability to form an attachment to an object other than another person. If a person can form an attachment to an object, one can postulate that he/she has the capacity to form an attachment to an addictive object (a drug) or activity (gambling).

Place attachment is another example of people's attachments to inanimate objects. Place attachment is defined as an emotional bond produced by meaningful interactions between a person and a setting (Milligan, 1998). The strength of the bond is dependent upon factors such as time, familiarity, dependency, and identity. Within the psychological literature, place identity and place dependency are identified as two separate dimensions of place attachment that facilitate one's understanding of the different forms of place attachments (Moore & Scott, 2003). Cognitive and emotional factors are thought to be important in the formation of place attachment.

A study by Fuhrer and Kaiser (as cited in Inalhan & Finch, 2004) examined specific factors of place attachment that were considered essential for establishing and maintaining the attachment. Findings of this study suggest that emotions comprised of security, autonomy, and arousal were crucial to the formation of one's attachment to a place (Fuhrer & Kaiser, 1992, as cited in Inalhan & Finch, 2004). An additional study by Williams and Vaske (2003) extended the previous findings by Williams and colleagues (as cited in Williams & Vaske, 2003) to identify specific factors of place identity and place dependence. Results revealed that factors of place identity were associated with emotions, meanings, and self-identity, while factors of place dependency corresponded with individual's needs and functions. Overall, place attachment was significantly and positively correlated with frequency of visits, individual familiarity, and sentimentality of the place (Williams & Vaske, 2003). Although these findings appear sound, these results should not be considered conclusive as studies that attempt to measure place attachment are rare. Researchers have taken the initial steps in developing a rigorous instrument that quantifies place attachment, however further research is needed to enhance the reliability

of the factors, which in turn will lead to a consistent measure of emotional attachment being devised.

Attachment to brands is a recent phenomenon that has only been examined recently, yet research on brand attachment has demonstrated people's attachments towards specific consumer brands (Thomson, 2005). The concept of emotional attachment is proving to be valuable to other fields beyond psychology (Thomson, 2005). From a marketing perspective it has been suggested that consumers who are emotionally attached to a brand are willing to pay a premium for brand items. Consequently, business owners are showing increasing interests in specific causes and factors of emotional attachment. This is one area of psychological research where emotional attachment to an inanimate object (e.g., a brand) has been operationalised.

A study by Thomson, MacInnis, and Park (2005) devised and tested an instrument that measured consumer's emotional attachment to brands. Thomson (2005) defines brand attachment as an emotional bond that connects consumers to specific brands. Thomson and colleagues conducted five studies on brand attachment. The aims of the first two studies were to develop an instrument that measured consumers' emotional attachment to brands, whilst the last three studies assessed the reliability and validity of the scale devised in studies one and two.

In study one, 68 participants were required to consider a brand that they felt strongly emotionally attached to, and then answer a survey that consisted of 39 words associated with attachment. A seven-point Likert scale that ranged from not at all to very well, was used in the survey to assess the degree to which the words expressed how one

felt towards a brand (Thomson et al., 2005). Words that had a mean Likert rating value less than four were discarded from the study in order to reduce the number of factors.

Study two evaluated the results of study one on 120 different participants varying in age and gender. The method, survey, and Likert scale were the same as study one. A number of exploratory factor analyses were conducted on the words that had an average Likert rating of at least four in study one (Thomson et al., 2005). Results from the factor analyses indicated that 10 words best described emotional attachment. The ten words were loaded on three factors. Factor one was labeled affection, and was comprised of affectionate, friendly, loved, and peaceful. Emotions related to affection encompassed feelings of warmness. Factor two was named passion, and contained passionate, delighted, and captivated. In regards to passion, emotions indicated the passionate and positive feelings that consumers felt towards their brand. Lastly, factor three was labeled connection, and included connected, bonded, and attached. Emotions associated with one's connection to their brand illustrated the strong bond that was felt by the person (Thomson et al., 2005). Findings from the study suggest that affection, passion, and connectedness are all important facets of emotional attachment. The 10 feelings associated with the three primary factors of emotional attachment are essential in the formation of an instrument which measures the strength of emotional attachment.

Studies three and four evaluated the reliability and validity of the emotional attachment scale, which contained the 10 items developed in the first two studies. The reliability of the emotional attachment scale was high (Cronbach's reliability coefficient of .88; Thomson et al., 2005). Study four evaluated the convergent validity of the emotional attachment scale. Results revealed significant differences on all 10 factors of

emotional attachment. Participants who were strongly attached to a brand displayed significantly higher scores on all elements of emotional attachment compared to participants with weak attachments. Study five measured the predictive validity of the scale. Results reflected Thomson and colleagues beliefs that consumer's stay loyal to their brand, even if it meant paying a premium. Similar findings were displayed by Moore and Scott (2003) who suggest that personal commitment is a primary predictor of place attachment.

Marketing researchers have operationalised emotional attachment in terms of a strong bond that ties consumers to brands. Research findings have enabled researchers to devise a sound measure that evaluates the strength of consumers' emotional attachment. Strong attachment is determined by intense feelings of affection, passion, and connectedness towards a specific brand. Furthermore, personal commitment, and attachment behaviours specific to attachment theory (e.g., seeking proximity and separation anguish) are also prevalent in a strong attachment (Thomson et al., 2005).

One element of attachment that appears to be consistent between the different types of attachment (e.g., person, transitional object, place, brand) is the grief response that one experiences when his/her attachment is severed (Baker, 2001; Belk, 1988; Brown, & Perkins, 1992: Stroebe, Schut, & Stroebe, 2005: Wallendorf & Arnould, 1988). In this paper, grief is defined as an emotional response to loss resulting in feelings of intense sorrow and unhappiness (Bowlby, 1981). The majority of previous research on person, object, and place attachment have stipulated how pertinent the grief response is after an attachment is severed (Bowlby, 1981; Brown & Perkins, 1992; Shaver & Tancredy, as cited in Servaty-Seib, 2004; Wallendorf & Arnould, 1988). One may

therefore propose that a grief response is inevitable when severing an attachment, and thus should be thoroughly evaluated in future research on attachment.

Due to a lack of research exploring emotional attachment in addiction, researchers are yet to define specific constructs of emotional attachment. The purpose of this study is to undertake the initial steps required in operationalising emotional attachment in terms of Orford's (2001) model of addiction. Such results will subsequently enable future researchers to develop an instrument that measures emotional attachment. The aim of this study was to determine how strong attachment to a substance manifests behaviourally, emotionally, and cognitively among dependent drug users. The reported experiences of dependent drug users were examined in hope of discovering emotional, cognitive, and behavioural factors specific to emotional attachmement. The sample population was chosen because the constructs of interest are likely to be salient within their minds as a result of their struggle with severing their attachment to the substance.

Method

Research Design

The current exploratory study was a qualitative study, designed to investigate the subjective experiences of reformed drug users. A phenomenological approach was utilised throughout, as the primary aim of the study was to capture the richness of each participant's unique experience with becoming attached to their drug/s of choice and the emotional, behavioural and cognitive experience of trying to sever that attachment. Phenomenology was the most suitable paradigm for this research as emphasis is placed on the notion that meaning is acquired through subjective experiences as opposed to an accumulation of objective facts, and thus if one wants to understand a person's

experience as accurately as possible, it is essential that one explores the subjective nature of such experiences (Hayes, 1997).

Sample

A purposive sample was used to ensure that the sample consisted of male and female dependent drug users. Nine individuals, two female and seven male, agreed to partake in the research, each of whom were recruited from one of the following drug-treatment programs: four participants were recruited from a residential therapeutic community; three participants from a medical base facility that offered Naltrexone implants, medical management, and psychological counselling; and, two participants from a non-residential treatment program which is based on principles of social learning. In order to be a suitable participant for this research, individual's had to satisfy the following criteria:

1. Have an age greater than 18;

2. Be an existing client of a drug treatment agency; and,

3. Been previously diagnosed with drug dependence, according to the DSM-IV or ICD-10.

The type of drug was not controlled in the present study, given that Orford (2001) suggests that specific constructs embedded in emotional attachment are comparable across a range of appetitive activities including; drugs/alcohol, gambling, eating, exercise, and sex. By including a diverse range of drugs the researcher is able to extrapolate the findings to the entire sample population, thus increasing the transferability of the results.

Participants were recruited via residential and non-residential drug treatment agencies. Convenience sampling was used in the recruitment phase in order to obtain the desired number of participants. This sampling method is appropriate in the present study as the aim of qualitative analysis is to reach saturation in the data (Banister, Burman, Parker, Taylor, & Tindall, 1996), and not to attain an estimate of some population parameter. Suitable participants (that satisfied the set criteria) were first contacted by their treatment agency, given an information letter that adequately explained the present study, and then later asked if they would agree to participate in a research project concerning substance use. The specific time and date of the interviews were decided in accordance with each person's availability.

Data Collection Procedures

After receiving ethics approval, the researcher and her supervisor made arrangements to meet with four treatment agencies to provide staff with an insight into the background of the study, and discuss the research aims and procedure etc. During the meeting, members of each agency were provided with the proposal, ethics application form, and an information letter (refer Appendix A), which explained the study in detail. If at that stage the agency decided to support the research, suitable participants (decided at the agency's discretion, and according to the above selection criteria) were contacted by a member of the agency, who liaised with participants, informed them of the study and gave them an information letter. If the client agreed to participate in the study, an appropriate time to conduct the interview (for both parties) was arranged through the agency.

Semi-structured interviews were employed in the present study to allow participants to interpret issues and voice their own understandings and experiences. Participants of a residential-treatment agency were interviewed in an empty railway carriage at the treatment agency, and participants of non-residential treatment agencies were interviewed either at their home, or in an empty room at the treatment centre. Each interview took between 20-60 minutes to complete, depending on how much participants chose to divulge. The structure of the interview (refer Appendix B) consisted of five open ended questions that predominantly focused on one's emotional attachment to his/her drug. Prompts, such as; tell me more about…, and how did that make you feel… were also used by the researcher to gain a more thorough understanding of particular issues concerning emotional attachment. The combination of open-ended questions and prompts provided a comprehensive insight into participants' overall experiences of being attached to their drug. Furthermore, the interview questions were designed to evoke specific issues and emotions that were pertinent to forming, and then severing an emotional attachment.

Participants were asked general questions concerning their overall experience of using drugs, which also included the experience of severing their attachment (refer to Appendix for the entire interview schedule). Audiotapes were used to record all interviews in order to ensure that interviewer bias was excluded from the recording process, and to further verify the accuracy of the documented data (Banister et al., 1996). Recorded interviews were subsequently transcribed verbatim to facilitate thematic analysis.

Prior to the interview, informed consent (refer Appendix C) was obtained and each participant was given the opportunity to ask any questions. The researcher gave a

brief overview of the study, along with the 'aims of the study' before the commencement of the interview in an attempt to eradicate possible demand characteristics, and build a rapport with each participant. In addition, participants were reassured of their confidentiality to try to make the participants feel comfortable and gain their trust. If participants trust the interviewer, and additionally feel comfortable talking to him/her, they are more likely to divulge a more personal and accurate account of their experience (Hayes, 1997). Furthermore, interview questions were consistent for all interviews, and the researcher conducted all interviews, in an effort to minimise experimenter effects (Banister et al., 1996). The above methods were utilised in the present study to enhance the credibility of the findings, and to ensure that all data was of a high quality.

As there was a small risk that interview questions may cause individuals to become anxious/distressed, all participants were debriefed at the end of each interview. In addition, participants of a residential treatment agency had access to their counsellor immediately after the interview if required, and phone numbers of free counselling services were made available to clients of non-residential treatment agencies. A follow up interview (also known as member checking) was conducted with participants in an attempt to 'authenticate' the researcher's interpretations and conclusions of the interviews (Banister et al., 1996).

Data Analysis

Data attained from face to face, semi-structured interviews with dependent drug users were analysed using Creswell's (2003) eight steps of thematic content analysis. Creswell's thematic content analysis was appropriate for the current study as the process enables the researcher to categorise data which is then made accessible for quantification.

In an attempt to minimise researcher effects the researcher identified her own biases, (which included having a negative perception regarding the effects that drugs have on people, as well as having difficulties understanding why drugs are so important to dependent drug users) prior to the data analysis process. As the primary aim of qualitative thematic content analysis is to identify themes pertinent to the research question, the researcher read over each transcript several times in order to become familiar with the data. During the reading process, the researcher underlined specific parts of the transcripts that she thought were of importance, and once confident that all significant components had been identified she wrote a summary of each transcript. The summary consisted of issues, quotes, and themes that related to emotional, cognitive, and behavioural aspects of attachment. Data were subsequently reduced by listing the issues and themes detected within the transcripts, in which significant sections were placed under the relevant issues/themes. To reduce the data further and acquire the true essence of the interviews, common themes and issues were grouped together. Next, the researcher wrote a summary statement comprised of significant themes and quotes pertinent to emotional attachment, thus representing specific constructs essential to attachment. First-order themes were then grouped according to second-order themes.

Due to delays in the data collection process, thematic analysis was initially conducted on the first four interviews. The subsequent five transcripts were analysed separately against existing themes and in detail against themselves. No new themes emerged from the second set of analyses indicating that saturation was attained in the data.

Results

Themes relating to emotions and cognitions were difficult to disentangle, so primary and second order attachment themes directly related to emotions and cognitions were grouped together in one domain. Twenty-three first-order themes pertaining to emotional and/or cognitive aspects of attachment were identified. These were systematically grouped into the following six second-order themes; personification of drug, functions of attachment, grief reaction when attachment is severed, positive emotions, negative emotions, and self-identity (see Table 1 at end of paper). Behavioural aspects of attachment were additionally determined and grouped into seventeen first-order themes. The behavioural themes were subsequently reduced to six second-order themes including; controlled your life, talk about it to others with admiration, continued use despite costs, secrecy, change in character, and shift in focus (see Table 2 at end of paper). Both tables provide illustrative quotes from the interviews to demonstrate how the themes were derived. In addition, a number of themes emerged that are not directly related to the concept of attachment, some of which include; consistency in life, control of drug use, escape from reality, fear of change, and lack of understanding by non-users in society. Since these themes are not related to the research question, they are not discussed further.

Discussion

Results of the study demonstrate the behaviours, emotions, and cognitions that are pertinent to substance attachment. In terms of identifying unique constructs of emotional attachment to a substance, the behavioural themes evident in Table 2 significantly overlap with diagnostic criteria for dependence, thus creating difficulties when trying to

differentiate between attachment and dependence. Similarities between behavioural themes of attachment, the DSM-IV, and the ICD-10 are discussed below.

'Excessive use', a first-order behavioural theme of attachment, is demonstrated by one participant who said "it got to the stage where no-one could remember a time where I wasn't drinking." The above theme is similar to criteria two of the ICD-10 measure of substance dependence which reads, "impaired capacity to control substance taking behaviour in terms of its onset, termination, or levels of use" (The ICD-10 classification of mental and behavioural disorders: Diagnostic criteria for research, 1993, p. 57)

'Do anything to obtain the substance', is an additional first-order theme that is grouped under the second-order theme, controlling one's life. All of the participants would have done anything to obtain their drug, for example, one participant stated that "nothing else matters, I would do anything if it meant I could get it." This theme is similar to criteria five of the DSM-IV diagnostic criteria for substance dependence which reads "a great deal of time is spent in activities necessary to obtain the substance" (Diagnostic and statistical manual of mental disorders, 1994, p. 197).

'Affected everyday living', is a further first-order theme, under the second-order theme 'controlled your life'. 'Affected everyday living' is comparable to criteria six of substance dependence in the DSM-IV; "important social, occupational, or recreational activities are given up or reduced because of substance use" (Diagnostic and statistical manual of mental disorders, 1994, p.197). The similarity between the behavioural theme and the DSM-IV is further illustrated by one participant who stated; "it got to the point where I couldn't go to work, I couldn't do anything really."

'Preoccupation' is a first order behavioural theme, that is grouped under the second-order theme 'shift in focus'. The theme suggests that people who are attached to a substance, continuously think about the substance and make it their first priority. 'Preoccupation' is further illustrated by one participant who "abandoned all [her] friendships, family, everything that was important to [her], and [she] just put drug use before anything and everything else, it was [her] first priority." Preoccupation, as identified in this paper, is comparable to criteria five of the ICD-10 substance dependence checklist which reads "preoccupation with substance use, as manifested by important alternative pleasures or interests being given up or reduced because of substance use" (The ICD-10 classification of mental and behavioural disorders: Diagnostic criteria for research, 1993, p.57)

Desirability is an additional similarity that exists between diagnostic indicators of dependence and behavioural themes of attachment. 'Strong desire' is an additional first-order theme that is grouped under the second-order theme 'shift in focus'. One participant said that "sometimes the desire to consume the drug is overpowering." The preceding quote is comparable to criteria four of the DSM-IV, "a persistent desire or unsuccessful efforts to cut down or control substance use" (Diagnostic and statistical manual of mental disorders, 1994, p. 197), and criteria one of the ICD-10 substance dependence checklist, "a strong desire or sense of compulsion to take the substance" (The ICD-10 classification of mental and behavioural disorders: Diagnostic criteria for research, 1993, p.57).

The final similarity to be discussed is regarding one's choice to continue using despite significant costs. Criteria six of the ICD-10, "persistent substance use despite clear evidence of harmful consequences" (The ICD-10 classification of mental and

behavioural disorders: Diagnostic criteria for research, 1993, p.57), is similar to the second-order behavioural theme; 'continued use despite costs'. Participants acknowledged that their drug related behaviour destroyed personal relationships, ruined their health, and often left them penniless, yet they still continued their drug use.

The behaviours outlined above seem to be more appropriate for a measure of dependence rather than attachment. The second-order behavioural theme that is an exception to this generalisation is; 'Talk about substance with admiration'. Findings suggest that referring to one's substance as a friend, and speaking about one's substance with fondness, or as if it were extremely precious are behavioural indicators of substance attachment. When referring to the substance as a friend, one is articulating the nature of his/her friendship as if it is a personal relationship. In a sense the preceding theme is a behavioural version of personification.

The above findings demonstrate noticeable changes in behaviour that arise when a person becomes dependent on, his/her substance. In addition to displaying many similarities with diagnostic indicators of dependence, the behavioural themes identified in the current study are comparable with Orford's scale of attachment (Orford, Morison, & Somers, 1996). The results of the present study combined with the existing similarities to the DSM-IV and ICD-10 strengthen the earlier assumption that suggests Orford's measure of attachment is more appropriate for a measure of dependence.

The behavioural themes of attachment are thought to be unique to substance attachment as they are not comparable to research on transitional objects, place attachment and brand attachment. A possible reason for this uniqueness is that attachment behaviours indicative of an attachment between two people are primarily used to measure

the child's attachment to his/her transitional object (Friman, 2000). Furthermore, place attachment generally focuses on specific functions of attachment (Milligan, 1998), and research on brand attachment is predominantly concerned with positive emotions symbolic of emotional attachment (Thomson et al., 2005), often resulting in attachment behaviours being neglected.

Emerging emotional/cognitive themes, determined via thematic content analysis exemplify the authenticity of the drug users' emotional attachments to their drug. The findings of the current study coincide with attachment research on transitional objects, places, and brands which all illustrate one's ability to form emotional attachments (Lehman et al., 1995; Moore & Scott, 2003; Thomson et al., 2005). First-order and second-order themes pertaining to emotions/cognitions demonstrate the diversity of constructs embedded in Orford's (2001) notion of emotional attachment. Each of the second-order emotional/cognitive themes are discussed in turn.

Personification.

Personification of the participants' drug of choice was common amongst all participants, however, the way in which they personified their drug varied. Three participants personified their drug by comparing their relationship with their drug to an unhealthy relationship, for example, one participant used the analogy of being in a "bad relationship" and "although you know it's something that is not good for you, it's just too hard to change... something you get used to." Whereas another participant compared it to a "love affair" as it is "always on [her] mind." In spite of the contrasting views, all participants identified the difficulties in trying to end their relationship, which is clearly illustrated by one participant who states; "it takes a lot to stop, like all relationships

there's something that keeps you going back." Numerous participants saw their drug as a true friend, "it always had time for [them] and was never busy," however they were also aware that their drug was "deceitful" and sometimes "lied to [them]." First-order themes pertaining to personification of drug appear to be mostly unique to emotional attachment to a substance, as previous research on place and brand attachment have not reported any findings relating to personification. Personification is partly evident in the transitional object literature which suggests that some children choose to name their transitional object (Passman, 1987).

Functions of Attachment

Functions of one's attachment including, safety, comfort, protection, and satisfaction were all mentioned by at least one participant. In terms of safety, just "thinking about [the drug] made one participant feel safe. Safety, as a function of attachment is comparable to research findings regarding transitional objects (Bacher, Canetti, Galilee-Weisstub, Kaplan-DeNour, & Shaler, 1998), place attachment (Corcoran, 2002), and brand attachment (Thomson et al., 2005). Another function of attachment to a substance is comfort. Participants felt comfortable with their drug of choice, as it made them feel "so comfortable" when they were "with it." Such findings are also demonstrated in research on transitional objects (Davar, 2001) and place attachment (Corcoran, 2002), which both mention the comforting qualities of the objects. Protection and satisfaction are two additional attachment themes that were identified during the data analysis process. Participants "felt protected from the world" and "from anything that was wrong" when they were with their substance. Furthermore, participants' drug of choice made them feel "satisfied", and "content". In regards to protection, similar functions of

attachment are also identified by research on transitional objects (Passman, 1987), brand attachment (Thomson et al., 2005), and place attachment (Fuhrer & Kaiser, 1992, as cited in Inalhan & Finch, 2004), whereas satisfaction seemed to be unique to substance attachment.

Grief Reaction When Attachment is Severed

Nearly all the participants acknowledged the grief reaction that one experiences after his/her attachment to a substance is severed. Such responses are in accordance with research on transitional objects, place attachment, and brand attachment, with each domain placing an emphasis on grief (Brown & Perkins, 1992; Peluso et al., 2004; Thomson et al., 2005; Wallendorf & Arnould, 1988). Three participants, who perceived their drug as a friend, similarly compared the grief associated with severing their attachment, to the loss of a friend or partner. The above findings are most comparable to research on children's attachments to transitional objects, as children have been known to name their blanket or soft toy, and sometimes refer to it as their friend. When the child's transitional object is suddenly removed, the child also grieves for his/her object (Steir & Lehman, 2000).

Sense of loss and loss of self-identity are two additional first-order themes that emerged when discussing issues associated with grief. Eight of the nine participants felt a sense of loss after their attachment to their substance was severed. Such findings are comparable to place attachment research which has demonstrated people's sense of loss, when specific places to which they are attached are suddenly destroyed (Brown & Perkins, 1992). A further ramification of severing one's attachment encompasses the breakdown of one's self-identity. Four participants in the current study also grieved for

the loss of their self-identity. One participant said that he "would probably feel the same without [his] left foot, a part of [him] is missing. Over time, the attachments that people form with their substance significantly contribute to how they see themselves as a person, as well as influence others' perceptions of them. Losing one's self-identity has a significant impact on one's life, as it creates uncertainties of who one is as a person. Research on place attachment, in particular place identity, identifies the loss of one's self-identity as a significant aspect of the grief that one encounters when his/her attachment to a place is severed. For example Titchener and Kapp (1976, as cited in Brown & Perkins, 1992) found that people who lost all their possessions, including their family in a natural disaster, became extremely distressed and experienced symptoms of post traumatic stress disorder. Furthermore, the majority of people also demonstrated significant changes in their personality.

An interesting finding from the current study in terms of grief is that of denial. Participants who had not yet fully grieved for their drug still acknowledged the grief response that occurs after an attachment to a substance is broken. They believe that the reason why they had not experienced a significant grief reaction was because they had not completely accepted that their substance is gone forever. The preceding premise is further illustrated by one participant who states that "the strength of denial can block out your grief… and when I truly realise that I can't do it ever again, that's when it will really hit me." In regards to severing one's attachment to a substance, grief appears to be an integral process that does not occur until after the individual has entirely come to terms with and accepted that he/she will never engage with his/her substance ever again, and

that even an inkling of hope can affect how one grieves. In other words, grief only happens when the attachment is severed.

Positive Emotions

Positive emotions consisting of love, happiness, desire/captivation, and passion were evident within the data, and included as first-order themes. Similar findings were reported by Thomson and colleagues (2005), who included love, delight, captivation and passion as items in their measure of brand attachment. In regards to the positive emotions associated with emotional attachment to a substance, research on brand attachment is most similar to the above findings as items incorporated in brand attachment predominantly focus on emotions, rather than functions or behaviours (Thomson et al., 2005). Transitional object and place attachment research are the least comparable as functions of attachment are of greater interest.

Negative Emotions

Negative emotions were also present within the data. Feelings of loneliness, frustration/anger, betrayal/heartbreak, and jealousy are identifiable throughout the transcripts, and are most apparent when participants discuss issues of not being able to obtain their drug. The range of negative emotions varied between participants, for example, four participants felt "rage and frustration" when they could not get their drug, whereas others "felt heartbroken and betrayed." Research findings pertaining to transitional objects are analogous to the findings of the current study in terms of frustration/anger. Previous research suggests that children become frustrated and angry when their transitional object is taken away from them (Steir & Lehman, 2000). The other first-order themes of loneliness, betrayal/heartbreak, and jealousy are absent in prior

research on transitional objects, place attachment, and brand attachment, which is not surprising as such research does not explore negative elements of attachment.

Self-Identity

Over half of the participants consider their drug to be a part of who they are. One participant summarised her notion of self-identity with a bizarre analogy, stating that "you wouldn't feel right going out wearing a skirt without underwear it becomes a part of you." Issues relating to self-identity may be pertinent to the challenges that one faces when he/she contemplates giving up a drug. Research on place attachment, in particular place identity, recognises self-identity as a crucial component in developing an emotional attachment to a place (Clark & Stein, 2003).

Operationalising the Construct of Emotional Attachment to a Substance

Findings of the current study suggest that the emotional/cognitive themes are most accurate in depicting specific constructs of emotional attachment, and thus should be incorporated when operationalising the concept. One may therefore propose that behaviour is a product of emotional attachment, which better reflects addiction or dependence rather than attachment. This is essentially what Orford's (2001) model states; that addiction stems from a strong emotional attachment. The conclusion that seems warranted is that a measure of attachment to a substance should focus on the emotional and cognitive themes outlined in Table 1 as opposed to specific behaviours. By focusing on the emotional and cognitive themes, researchers would be able to test hypotheses, and discover whether an emotional attachment develops prior to behaviours of addiction.

Strengths of the Study

Numerous strengths were identified in the current study and are discussed below. The first strength is regarding the diversity of drug treatment programs that were included in the study. Participants were recruited from three different types of treatment agencies, each of which have different philosophies underlying their program. The significant similarities between each transcript indicate that participants' responses are indicative of their true feelings and emotions and not the result of the methods employed at each treatment agency. The other strength of the study is regarding the follow up interviews that were conducted with each participant. Follow up interviews involved checking the researcher's conclusions with each participant to make sure they are correct and in line with what they said. By doing this the researcher is authenticating their interpretations which in turn strengthens the credibility of the findings.

Limitations of study

Two limitations were also identified in the current study and are discussed below. The first limitation is that the interview questions were not pilot tested. By not pilot testing the interview questions, the researcher can not be sure that participants understood the essence of each question. However during the interviews, all participants seemed to understand each question, and answered all questions accordingly, so the researcher is confident that the questions were suitable for the current study.

The second limitation concerns the clinical population that was studied. All participants were clients of a drug treatment agency and were currently attempting to give up drugs. If the sample also included dependent users who were not attempting to give up their drug use, additional attachment themes might have been discovered. However, most participants were able to articulate very clearly their emotional attachment and what it

was like before they decided to give up drugs. Furthermore, those trying to give up their substance are able to provide good accounts of the grief process whereas non-clinical participants might not be aware of those issues.

Implications and Future Research

The results of the current study provide a valuable insight into the specific emotions and cognitions pertinent to emotional attachment. The cognitive/emotional themes that emerged cover the range of specific constructs that comprise the broader construct of emotional attachment to a substance. The study is the first of its kind to explore the notion of emotional attachment to a substance, which led to a rich understanding of the psychological constructs underlying emotional attachment. Researchers will be able to build on the current findings and develop a measure of emotional attachment to a substance, which could then be used by practitioners and treatment programs in the addiction domain.

The next stage in the research process is thus to develop a draft instrument that measures emotional attachment to a substance. In order to achieve this, one needs to develop specific items that precisely reflect the first and second order emotional/cognitive themes, previously identified in Table 1. Moreover, quotes that effectively illustrate attachment themes can be utilised by future researches to facilitate question formation; for example, one of the quotes used to convey the first-order theme, personal relationship is "it takes a lot to stop, like all personal relationships there's something that keeps you going back." In order to be an appropriate item for a self-report measure, this quote could be rephrased as; I feel like I am in a personal relationship with my drug, there is something that keeps me going back to it. If a measure is going include all facets of

emotional attachment to a substance, at least one item for each first-order, emotional/cognitive theme needs to be devised. For example there would be a question pertaining to each of the first-order themes under personification, such as unhealthy relationship, deceitful relationship, true friend, and love affair. As some first-order themes are more extreme than others, a higher level of attachment would be indicated by more items being endorsed.

In regards to a measure of emotional attachment, a five-point Likert scale may be an appropriate response format, where one is: never feel/think like this, and five is: always feel/think like this. The above examples demonstrate how emotional/cognitive themes of attachment can be re-structured in order to be suitable for a self-report measure of emotional attachment to a substance. However, it is worth noting that some quotes will be harder to convert than others, and will consequently require a greater amount of effort and time when devising items that accurately measure one's emotional attachment to a substance.

Once a draft measure of emotional attachment to a substance is developed, extensive research can be conducted to test the reliability and validity of the instrument. Items would need to be pilot tested in order to make sure that the wording of the questions is easily understood by the population. Researchers would also be able to assess the psychometric properties of the measure, and examine the internal structure of the instrument. In addition, the instrument could be modified accordingly and then tested on individuals who are addicted to gambling, sex, eating, or exercise, all of which are identified in Orford's (2001) model as risky appetites.

Conclusion

In conclusion, a diverse range of substances and different treatment approaches were apparent amongst the participants who took part in the current study. The combination of achieving saturation in the data, and the significant overlap in content from one interview to the next, I am confident that all themes pertinent to the concept of emotional attachment to a substance were obtained. Themes identified during the data analysis process provide sufficient basis for future researchers to construct items for a self-report measure of emotional attachment to a substance. Given that the behavioural themes of attachment share many similarities with clinical measures of substance dependence, emotional/cognitive themes of attachment should be incorporated in a measure of emotional attachment to a substance.

References

Bacher, E., Canetti, L., Galilee-Weisstub, E., Kaplan-DeNour, A., & Shaler, A.Y. (1998). Childhood vs adolescence transitional object attachment, and its relation to mental health and parental bonding. *Child Psychiatry and Human Development, 28,* 149-167.

Baker, J. E. (2001). Mourning and the transformation of object relationships: Evidence for the persistence of internal attachments. *Psychoanalytic Psychology, 18,* 55-73.

Banister, P., Burman, E., Parker, I., Taylor, M., & Tindall, C. (1996). *Qualitative mehods in psychology: A researchers guide.* Buckingham, UK: University Press.

Belk, R. W. (1988). Possessions and the extended self. *Journal of Consumer Research, 15,* 139-168.

Bowlby, J. (1981). *Attachment and loss: Volume 1- attachment.* New York: Penguin Books.

Brown, B.B., & Perkins, D.D. (1992). Disruptions in place attachment. In I. Altman, & S.M. Low (Eds.), *Place attachment* (pp. 279-303). New York: Plenum Press.

Clark, J.K., & Stein, T.V. (2003). Incorporating the natural landscape within an assessment of community attachment [Electronic version]. *Forest Science, 49,* 867-876.

Corcoran, M.P. (2002). Place attachment and community sentiment in marginalised neighbourhoods: A european case study [Electronic version]. *Canadian Journal of Urban Research, 11,* 47-67.

Cresswell, J.W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches,* Thousand Oaks: Sage Publications Inc.

Davar, E. (2001). The loss of the transitional object: Some thoughts about transitional and 'pre-transitional' phenomena. *Psychoanalytic Counselling, 7,* 5-26.

Diagnostic and statistical manual of mental disorders (4th ed.). (1994). Washington D.C: American Psychiatric Association.

Friman, P.C. (2000). "Transitional objects" as establishing operations for thumb sucking: A case study. *Journal of Applied Behavior Analysis, 33,* 507-509.

Hayes, N. (1997). *Doing qualitative analysis in psychology.* East Sussex, UK: Psychology Press.

Inalhan, G., & Finch, E. (2004). Place attachment and sense of belonging [Electronic version]. *Facilities, 22,* 120-140.

Lehman, E.B., Arnold, B.E., & Reeves, S.L. (1995). Attachments to blankets, teddy bears, and other non social objects: a child's perspective. *Journal of Genetic Psychology, 156,* 443-460.

Mikulincer, M., Birnbaum, G., Woddis, D., & Nachmias, O. (2000). Stress and accessibility of proximity related thoughts: exploring the normative and intraindividual components of attachment theory [Electronic version]. *Journal of Personality and Social Psychology, 78,* 509-523.

Milligan, M. (1998). "Interactional past and potential" [Electronic version]. *Symbolic Interaction, 21,* 1-33.

Moore, R.L., & Scott, D. (2003). Place attachment and context: Comparing a park and a trail within [Electronic version]. *Forest Science, 49,* 877-884.

Orford, J. (1985). *Excessive appetites: A psychological view of addictions*. West Sussex, UK: John Wiley & Sons, LTD.

Orford, J. (2001). Conceptualizing addiction: Addiction as excessive appetite. *Addiction, 96,* 15-31.

Orford, J. (2001). *Excessive appetites: A psychological view of addictions* (2nd ed.). West Sussex, UK: John Wiley & Sons, LTD.

Orford, J., Morison, V., & Somers, M. (1996). Drinking and gambling: a comparison with implications for theories of addiction. *Drug and Alcohol Review, 15,* 47-56.

Passman, R.H. (1987). Attachments to inanimate objects: Are children who have security blankets insecure? *Journal of Consulting and Clinical Psychology, 55,* 825-830.

Peluso, P.R., Peluso, J.P., White, J.F., & Kern, R.M. (2004). A comparison of attachment theory and individual psychology: A review of the literature. *Journal of Counseling and Development, 82,* 139-146.

Servaty-Seib, H. L. (2004). Connections between counseling theories and current theories of grief and mourning. *Journal of Mental Health Counseling, 26,* 125-146.

Steir, A.J., & Lehman, E.B. (2000). An observational measure of children's attachments to soft objects. *Child Study Journal, 30,* 253-271.

Stroebe, M., Schut, H., & Stroebe, W. (2005). Attachment in coping with bereavement: A theoretical integration. *Review of General Psychology, 9,* 48-66.

The ICD-10 classification of mental and behavioural disorders: Diagnostic criteria for research. (1993). Geneva: World Health Organisation.

Thomson, M. (2005). Emotional attachments to brands: The implications for marketers. Retrieved, 20.06.06, from: www.acrwebsite.org/topic.asp?artid=136

Thomson, M., MacInnis, D.J., & Park, C.W. (2005). The ties that bind: Measuring the strength of consumers' emotional attachments to brands. *Journal of Consumer Psychology, 15,* 77-91.

Wallendorf, M., & Arnould, E.J. (1988). "My favorite things": A cross-cultural inquiry into object attachment, possessiveness, and social linkage. *Journal of Consumer Research, 14,* 531-547.

Williams, D.R., & Vaske, J.J. (2003). The measurement of place attachment: Validity and generalizability of a psychometric approach [Electronic version]. *Forest Science, 49,* 830-840.

Appendix A

Dear Participant,

My name is Kate Baily and I am an Honours student in the School of Psychology at Edith Cowan University. I am currently conducting research into people's experience of drug use as a relationship – like having a relationship with a substance. The title of my thesis is called A Step Towards Operationalising Orford's Concept of Strong Attachment in Addiction. This research project is being undertaken as part of the requirements of an Honours Degree at Edith Cowan University.

Participation in this research requires you to take part in a semi-structured individual interview with the researcher, which will take between 20 minutes to one hour depending on how much you want to say about the issues raised. Please note your participation in this research is entirely voluntary and you are free to withdraw your consent at any time. Your decision not to participate will not disadvantage you or involve any penalty. All data will be locked in a filing cabinet and kept in my supervisor's office. All the information you provide, as well as your identity will be kept anonymous. In the event that this research is published, you will not be identifiable in that report. Your name and other identifying information will be removed from the interview transcript and replaced with a pseudo name. Following that, only researchers who need to analyse the data will have access to the anonymous transcript.

This project has been approved by the Edith Cowan University Human Research Ethics Committee. Prior to your participation, please ensure that you give your consent at the beginning of the interview, to acknowledge that you are giving voluntary and informed consent to participate in this research. If you have any questions regarding the research project you can contact me via my supervisor Greg Dear on 6304 5052 or e-mail me at baily_kate@hotmail.com. If you have any concerns or complaints about the research project and wish to speak to an independent person you can contact Kim Gifkins, Research Ethics Officer, on 6304 2170 or at research.ethics@ecu.edu.au

If you wish to talk with a counsellor about any of the issues that arise from the interview, that can be arranged with you at the end of the session.

Thank you for taking the time to read this information letter. Your assistance in this research is greatly appreciated.

Kate Baily

Appendix B

Interview Questions

Some people with drug dependence talk about their drug of choice in terms of being in a relationship with the drug. This means different things to different people. The aim of this study is to examine drug users' views about that concept and how it relates, or doesn't relate, to their experience.

1. Is this an idea that makes sense to you? If so tell me about it...

2. Have you ever felt this way about your drug at any time while you were using?

3. If this does not make sense to you, tell me why... How would you describe your feelings for your drug of choice?

4. Tell me about your drug of choice, and what it means to you personally. Both the good and the bad things.

5. What sort of things come to mind, when you think about giving up your drug of choice? Tell me about both the good things about giving up and some of the losses.

Appendix C

I _____ (The Participant) have been provided with an information letter explaining the research study and have read and understood the information. Any questions that I have asked in regard to the research have been answered to my satisfaction.

I understand that all information that I provide will only be used for this research project and will be kept confidential. My identity will also be confidential and will not be disclosed to anyone unless I agree.

I agree to participate in this study and agree for the interview to be audio-taped. I agree to the tapes being destroyed after coding.

Signed _____

Tables

Table 1. *Themes of attachment related to emotions and cognitions*

First- and second-order themes	Illustrative quotes from interviews
Personification of drug	
Personal relationship	M: "It takes a lot to stop, like all personal relationships there's something that keeps you going back." D: "It was a very intense relationship." P: "It's such a personal relationship." J: "You form a relationship with it."
Unhealthy relationship	G: "Although you know its something that is not good for you, it's just so hard to get out of." S: "It is like a bad relationship like a love/hate sort of thing." Z: "I became a slave to it." R: "It's like a love/hate relationship, you love it when you're on it and hate it when you're off."
Drug was deceitful and clouded one's reality	S: "It has lied to me." M: "It was a deceitful relationship a dishonest one where one of you is cheating. Alcohol was the one cheating on me because it was clouding what I was seeing." D: "It led me down the garden path, it deceived me." C: "It's not very faithful to you, it always wants more out of you."
True friend	D: "I could rely on it, it was there for me, it always had time for me and was never busy, it was my friend" M: "It was like my best mate, I didn't have a girlfriend anymore but I still had my friend." D: "It was my friend, it was my lover, you have everything that makes you who you are." Z: "It was my only friend." C: "You see it as a friend because you are with it everyday."
Love affair	P: "Something keeps you going back it's a bit like a love affair really." Z: "It was a bit of a love affair really, it is always on your mind always."
Functions of attachment	
Safety	D: "It makes me feel safe, when I think about it or when I

have it."

G: "I feel safe, it's something I know."

Z: "It made me feel safe."

Comfort	M: "I was just so comfortable with it." G: "That's where I felt most comfortable." Z: "It comforted me too." P: "It makes you feel comfortable."
Protection	D: "I felt protected from the world, protected from anything that was wrong." S: "It was my armour, my protector."
Satisfaction	D: "It makes you feel satisfied, really satisfied, just totally content and fulfilled." Z: "My drug knew what I needed."
Grief reaction when attachment is severed	
Loss of a friend/girlfriend	Z: "You lose your only friend, and you don't know how to function without it… It's like your best buddy is gone." D: "Think more not of the loss of the drug but the loss of someone you loved very much." M: "I don't have a friend anymore… and it hurts." M: "The way I look at it is pretty much like if a girlfriend broke up with you." C: "You go through the same emotions as when you break up with a partner like who's going to love me now, what am I going to do now, you lose your self confidence."
Denial	M: "the strength of denial can block out your grief." G: "One of the hardest things for me to say is never again." R: "I know it sounds stupid, but you always know that it is there to go back too." M: "I get worried when I think about never drinking ever again." M: "When I truly realise that I can't do it ever again… That's when it will really hit me." D: "I grieved for the gold ring that I was attached to and lost… I was distraught, but with drugs in the back of my mind I always think about the day when we will meet again." J: "You don't want to admit to anyone, even yourself that you have a problem."

Feelings of sadness	Z: "Without it, I feel a great sadness really." P: "It made me sad to know that I had to stop." J: "I felt sad and all over the place when I stopped." C: "I'd just pine for the drug." R: "I'm going to miss it."
Sense of loss	S: "There was an absence inside me." M: "The attachment, the memories of association, I think I definitely am feeling a sense of loss." Z: "Heroin was the biggest grief I have ever experienced." D: "I feel anguish and heartbreak." G: "I've felt lost without it." R: "It's like a part of the jigsaw puzzle is missing." C: "I think the whole time there is some element of grief for the drugs you give up."
Loss of self-identity	D: "I would probably feel the same without my left foot, a part of me is missing." M: "It's a part of me that has been taken… I am alone without it." M: "It's like if you got shot in the leg in a war and they couldn't save it and had to hack it off, you would grieve for it. C: "It's such an integral part of what you're doing… there is definitely a gap there now, like a part of me is missing."
Positive Emotions	
Love	G: "I loved it." D: "It was purely love for me… the love was unexplainable, nothing could come close. Z: "It's a love like no other." C: "I love it, I do, I love it." R: "Yeah I love it."
Happiness	D: "It made me happy… it makes your whole life happy." Z: "I smile when I think about it."
Desire	S: "The desire to have it was so strong." G: "Part of you knows that you don't need it but the rest of you is screaming for it." D: "The desire to have it consumed me."
Passion	Z: "The emotion that best describes how I felt towards my drug was passion! … Passion is a big one."

Negative Emotions

Lonely without it	G: "I've gone back to it because I've been, I guess lonely." M: "I am alone without it." S: "Yeah I miss it." D: "I feel there is something missing… I think I always will, it can never be replaced." R: "I'm going to miss it."
Frustrated and angry	M: "I felt rage and frustration when I couldn't get it, I'd do anything." G: "I felt rage and frustration." C: "It's the peak of frustration." C: "Frustrated, angry, you can't believe it." R: "Lost and frustrated."
Betrayed and heartbroken when couldn't get it	M: "It betrayed me when it wasn't there for me." D: "When it wasn't there I felt heartbroken and betrayed."
Jealous	G: "I used to get jealous when I knew other people were having it and I knew I couldn't have it."

Self-identity

The drug was a part of their self-identity	M: "It became a part of me." S: "It became apart of me… You wouldn't feel right going out wearing a skirt without underwear it becomes a part of you." D: "It's part of what makes me who I am… It's almost like a relationship with my self." C: "You do something so many times… it becomes a part of yourself."

Note. Upper case letter before each quote denotes which participant made that comment.

Table 2. *Themes of attachment related to behaviours*

Themes of attachment related to individual behaviours	Illustrative quotes from interviews
Controlled your life	
Excessive use	M: "It got to the stage where no-one could remember a time where I wasn't drinking."
Do anything to get it	G: "Nothing else matters, I'd drop anything if it meant I could get it." Z: "I became its slave." M: "It started to control my life." Z: "There is a life line and one end you live and the other end you are prepared to die for it, it's all or nothing." G: "I sold my car once just to get together a few hundred bucks to get on."
Affected everyday living	G: "I got tot the point where I couldn't go to work, I couldn't do anything really, I became immersed, the drug became everything." Z: "It literally takes over your whole world." Z: "I would stop seeing all my friends and family just so I could get it. I stopped all my responsibilities." P: "There were times where my wife wanted to get intimate with me and I just couldn't be bothered. I was only interested in the way I felt about my drug." R: "It lost me a couple of jobs, relationships, lost me my skating scholarship." R: "Your whole daily routine goes to shit."
Plan life around your drug	M: "I made all my appointments before 10am just so I could go to the pub which opened at 11am." G: "When you have a relationship with drugs there is not room for much else." R: "To me it always came first, like it doesn't matter what I was doing, I'd always plan my drinks and then I'd plan what I was going to do for the day."
Talk about it to others with admiration	
Talk to others like it was their friend	D: "You could tell if someone was attached to it if they talked about it as if it was their friend... Like it was their

whole world."

Fondness	D: "They would talk about their drug with a fondness in their voice."
Very precious	S: "Talk about it like it was gold, like they had found an oil field and they were rich." D: "If they put it (their drug) on a pedestal.

Continued use despite costs

Destroyed friendships	S: "My friends disowned me." G: "Drugs destroyed my friendships." Z: "I stopped seeing all my friends."
Destroyed family relationships	S: "Ruined my relationships with my family." D: "The love for your drug is more important than the love for your own family… I chose my drug over my family." Z: "I stopped seeing all my family." J: "I lost my relationship over it, and my little boy." C: "Your relationships suffer."
Destroyed finances	G: "It was expensive." Z: "I ended up selling my body just so I could pay for my drug." R: "It destroyed my finances."
Ruined Health	P: "My health suffered." R: "It lost me my health, I was showing liver damage and I'm only 20."

Secrecy

Hid use from family	M: "I wouldn't drink at 7.50am in front of them I'd wait till 8.00am when they had left the house." P: "I did it in secret." P: "When you do it in secret like that you feel like you're getting away with something."

Change in character

Dishonesty	M: "I was constantly lying to myself and my family saying that I had control." G: "Drugs made me a dishonest person." J: "My behaviour changed, I became a very dishonest

person."

Acting against morals	D: "I stole my mother's credit card and took all her money out." Z: "I didn't go to Christmas's or birthdays because at that time drugs were more important. S: "I'd go and spend $300 on speed instead of buying my Mum a birthday present." C: "My behaviour would become really out of character, for example I put a $350 bet on a football game and I have never gambled that much money in my whole life." P: "It makes you do stuff that you wouldn't normally do and it starts ruining your life."
Selfishness	G: "I became a very selfish person, selfish, unreliable, yeah very selfish, which is something that I'm usually not either."
Unreliable	G: "I became… unreliable." M: "I started turning up to work late."
Shift in Focus	
Preoccupation/First priority	G: "The drug became everything." G: "When I didn't have it, that's all I thought about anyway." S: "I couldn't get it off my mind." Z: It becomes your whole life." D: "It didn't matter what else was happening in my life, as long as I had my drug… It was all that mattered." M: "I put alcohol before anything else." Z: I abandoned all my friendships, family, and I just put drug before anything and everything else. It was my first priority." Z: "You are constantly thinking about it… 24 hours around the clock." P: "It was my first priority, it was more important than my family and everything." J: "I put drugs before anything else." C: "You're so focused on getting on."
Things that were important suddenly became unimportant	G: "I didn't care about anything else either." D: "It's more about your detachment of other things, all the things that were so important to me became unimportant, except for one thing." P: "I was more concerned with getting my drug than

	spending time with my family."
Strong desire	C: "Sometimes the desire can be overpowering."
	Z: "The drive to get my drug was so strong."

Note. Upper case letter before each quote denotes which participant made that comment.

Guidelines for Contributions by Authors

Australian Journal of Psychology

Preparing files for production. If your manuscript is accepted for publication, please follow the guidelines for file formats and naming provided at Preparing Your Accepted Manuscript for Production. If your manuscript was mask reviewed, please ensure that the final version for production includes a byline and full author note for typesetting. Information for contributors to the Australian Journal of Psychology

All manuscripts should be sent to:

Professor Michael Innes
Editor, Australian Journal of Psychology
Faculty of Health Sciences
Psychology
University of Adelaide, 5005
Australia

Online manuscript submissions

You can submit a manuscript online for the Australian Journal of Psychology using the online submission system. You will need to create a login account for this.

- **Submit a manuscript online**

Preparation of manuscripts

1. Contributions should follow the general style described in the Publication Manual of the American Psychological Association, (4th ed., 1999), except that spelling should conform to The Macquarie Dictionary (2nd ed.). For matters of style not covered in these two publications the Style Manual for Authors, Editors and Printers (5th ed., Australian Government Publishing Service) should be consulted. Page references in the following notes are to the Publication Manual. The attention of authors is especially drawn to changes in the fourth edition (pp. xxviii–xxx).

2. Manuscripts (pp. 1–7, 237–248), not normally to exceed 4,500 words, should be typed on A4 (297 x 210 mm) paper, double-spaced throughout and with margins of at least 4 cm on all four sides. Four copies are required. Duplicated or photocopied copies are acceptable if they closely resemble typed copies. Manuscripts will not be returned to authors.

3. Title page (pp. 7,8 248–250) for the manuscript should show the title of the article, the name(s) and affiliation(s) of the authors, a running head and, at the bottom of the page,

the name and address (including postal code) of the person to whom proofs and reprint requests should be sent.]

4. An abstract (pp. 8–11, 250) should follow the title page. The abstract of a report of an empirical study is 100–150 words; the abstract of a review or theoretical paper is 75–100 words.

5. Abbreviations (pp. 80–89) should be kept to a minimum and in particular not be used for "participant" and "experimenter." Full stops are omitted for many abbreviations, for example: cm, kg.

6. Metric units (pp. 105–110) are used according to the International System of Units (SI), with no full stops when abbreviated.

7. Statistics (pp. 15–18, 111–119) should be seen as an aid to interpretation and not an end in themselves. Authors are encouraged to state their rejection rate once (e.g., p = .05) and then simply state whether a given statistic is significant or not, by that criterion.

8. Tables (pp. 120–141) should be typed on separate sheets with rules (if any) in light pencil only. Indicate approximate location in the text.

9. Figures (pp. 141–163) that have been produced as line art (e.g., graphs, flow charts, drawings) on a computer should be presented as Laser or photographic bromide output only at a minimum print density of 600 dpi. Figures should not include shaded areas of grey as these will be difficult to reproduce clearly; instead, use repeating patterns of lines or crosses (see Example 2 on p. 145). Half-tone art (e.g., photographs, photomicrographs) should be presented as prints rather than transparencies. Include only one figure per page and place the figure number and caption on the bottom of the page. Figures will only be accepted on disk if supplied in either Adobe Illustrator, EPS, or TIFF formats.

10. References (pp. 20, 168–222) are given at the end of the text. All references cited in the text must appear in the reference list.

11. The author should keep a copy of the manuscript for proofreading.

12. Blind review. AJP has provision for blind review, in which the author's identity is anonymous to the referees. Authors who wish to have their manuscripts evaluated by blind review must submit four copies of their manuscript with all author-identifiable pages removed but submitted together with the covering letter. Blind review will be provided only when explicitly requested by the author and when the manuscript is submitted appropriately.

13. Reprints. The Australian Psychological Society Ltd. allows authors to purchase up to 100 reprints of their journal articles. Reprints must be ordered on the form that accompanies the first page proofs.

14. Upon acceptance of their article for publication, authors who have prepared the manuscript on an IBM-compatible PC or Apple Macintosh computer should submit a copy of their work on disk in addition to the final printed copies. All copies of the manuscript are to be set out in the same manner as described above for typed manuscripts. Acceptable word processing program formats are: Word or RTF (Rich Text Format).

Disks may be supplied in 3.5-inch format. The word processing program used and version number are to be specified in writing on the title page of the manuscript. Computer disks should be packed in an Australia Post Postpak (DM size) and placed with the manuscript copies in a large sturdy envelope. Indicate on the outside of the envelope that a computer disk is contained inside.