TOWARDS AN INTEGRAL METATHEORY OF ADDICTION

by

GUY PIERRE DU PLESSIS

submitted in accordance with the requirement

for the degree of

MASTER OF ARTS

in the subject

PSYCHOLOGY

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF V VAN DEVENTER

November 2014

Declaration

Student number: 833-493-5

I declare that **Towards an Integral Metatheory of Addiction** is my own work and all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Mr. GP Du Plessis

1 November 2014

Summary

Addiction is one of the most significant problems facing contemporary society. Consequently many scholars, institutions and clinicians have sought to understand this complex phenomenon, as is evident in the abundance of etiological models of addiction in existence today. A literature review pointed that there is little consensus regarding the nature and etiopathogenesis of addiction, and integrative models have not yet been able to provide the sought-after integration. In addressing this problem, this study offers a theoretical analysis of the paradigmatic and meta-paradigmatic suitability of Integral Theory in the design of an integrated metatheory of addiction. The data consisted of the most prominent etiological theories and models of addiction. The study focused on several essential features constituting the architectonic of any metatheory that attempts to provide conceptual scaffolding for the construction of a comprehensive metatheory of addiction. The criteria for the construction of a metatheory were *conceptual integration*, *ontological span, ontological depth, empirical validity* and *internal consistency.* Integral Theory was critically assessed in terms of each of the abovementioned criteria. The study suggests that Integral Theory is eminently suitable as a philosophical foundation for the development of an integrated metatheory of addiction.

Key words: Integral Theory, Addiction, Substance abuse, Substance dependence, Etiological models of addiction, Ontological foundation, Integral Enactment Theory, Integral Methodological Pluralism, Integral Ontological Pluralism, Integral Epistemological Pluralism.

Dedication

This dissertation is dedicated to my mother

and my dear friends Jurie and Natascha,

who were all tragic fatalities to the disease of addiction.

Acknowledgments

- I would like thank my dissertation supervisor Professor Van Deventer for his astute and patient guidance throughout the development of this dissertation.
- A huge amount of gratitude to Ken Wilber for his support of my previous research, which lay the foundation for this dissertation.
- A big thank you to my “Integral” colleague and friend John Dupuy for his continued encouragement and friendship.
- Thank you to my father who instilled in me, from a young age, an inquiring attitude towards life and a love of good books.
- Finally to my utmost inspiration, my beautiful and beloved daughter Coco who helped me find my heart, and daily shows me the wonder of ‘being-in-the-world’.

Table of Contents

Table of Figures

Chapter 1 – Introduction

> If *Dasein*, as it were, sinks into an addiction then there is not merely an addiction present-at-hand, but the entire structure of care has been modified. *Dasein* has become blind, and puts all possibility into the service of the addiction. On the other hand, the urge 'to live' is something 'towards' which one is impelled, and it brings the impulsion along with it of its own accord. It is 'towards this at any price.' The urge seeks to crowd out other possibilities.
>
> *M. Heidegger (In Ronell, 1993, pp. 38-39).*

Clarification of Key Concepts

- *Integral Theory*: Integral Theory refers specifically to Ken Wilber's Integral model within the greater field of integral studies.
- *Metatheory:* Metatheory is an overarching theory of a group of theories.
- *Etiological model of addiction:* An etiological model of addiction attempts to explain the pathogenesis and origin of addiction in an individual or group of individuals.
- *Metatheorising*: Metatheorising is a form of conceptual research that accommodates various theories within some larger conceptual context or framework.

Background

Addiction, in its myriad forms, presents one of the foremost and mounting threats to the well-being of modern society (Fields, 1998; Kinney, 2003; Walters, 2007). Addiction is the most ubiquitous form of mental health disorder in the United States and its burden on health care is so excessive and disproportionate as to constitute a medical and economic crisis (Boji & Ruan, 2004; Virage, Cox, & Rachel, 1988). Addiction or substance dependence can be described as "a cluster of cognitive, behavioural, and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems. There is a pattern of repeated self-administration that usually results in tolerance, withdrawal, and compulsive drug-taking behavior" (DSM-IV, 1999, p. 176). In 2006, 23 million people needed treatment for illicit drug and alcohol abuse in the United States. The annual cost of illicit drug abuse to US society is estimated at 181 billion dollars (NINDA, 2008). This cost to society pales in significance in comparison to the daily human suffering that addiction causes.

As a consequence of the magnitude of this disorder, many scholars, institutions and clinicians have sought to understand this complex phenomenon – as is evident in the abundance of etiological models of addiction in existence today. How a society views and understands addiction has great significance for addicted individuals seeking treatment. In pre-modern times addiction was understood as possession by demons and seen as a moral aberration, and its consequent treatment was similarly archaic and punitive. It is only in the last 100 years that scientific theories and explanations for addiction have

come into existence, and as a result, that treatment has become more effective (DiClemente, 2003).

Today, many theories and models of addiction exist. Although our explanation of addiction has become more sophisticated, there are still serious shortcomings in our understanding of it (DiClemente, 2003; Hill, 2010, Du Plessis, 2012b). Furthermore, there is such a cornucopia of theories and models of addiction that for treatment providers and policymakers, who see a direct link between etiology and treatment protocol, it has become exceedingly difficult to integrate this vast field of knowledge into effective treatment and prevention protocols.

The United States spends billions of dollars annually on the prevention and treatment of drug and alcohol abuse. For every dollar spent on addiction treatment there is a 4 to 7 dollar reduction in drug-related crime (NIDA, 2008). However, the unfortunate reality is that most treatment programmes have high levels of recidivism, limited annual and lifetime coverage with low success rates. Furthermore, studies show that many existing rehabilitation programmes may be no more successful than the spontaneous remission occurring in the untreated population (Alexander, 2008, 2010). Despite the magnitude of addiction's negative consequences for individual and civic well-being, we have failed to make adequate progress in controlling or preventing the spread of addiction on a global level. Alexander (2010) says that a "century of scientific research has not produced a durable consensus on what addiction is, what causes it, and how it can be remedied. (p. 1).

Consequently, some scholars believe there is a need for a theory that provides a parsimonious and integrative explanation for all the existing empirical data - a theory that can incorporate and integrate the exciting theories of addiction (DiClemente, 2003; West, 2005, Hill, 2010).

What is currently taking place in the field of addictionology is what Wilber (2003a) refers to as a "legitimation crisis" – a breakdown in the adequacy of a particular mode of translating and making sense of the world. Subsequently, the current move in addictionology is towards more integrative models of addiction that can take into account new data in addiction studies, data which highlight the multidimensional, dynamic and complex nature of the addictive process.

Current integrative models lack a metatheory that adequately explains the simultaneous development, multi-causality and integration of the many factors in addiction (Hill, 2010; DiClimente, 2003). A truly comprehensive model of addiction should provide a meta-paradigmatic integrative framework highlighting how various perspectives co-arise and link together, without having to reduce one perspective to another.

Purpose of the Study

The purpose of the study was to explore whether Integral Theory (Wilber, 2000, 2003a, 2003b, 2006; Esbjörn-Hargens, 2006, 2009) is suitable as a philosophical foundation for the development of a comprehensive and inclusive metatheory of

addiction. In the present study the term philosophical foundation is used as a general term to accommodate both ontological and epistemological foundations. A comprehensive and robust integrally informed metatheory of addiction has to provide meta-linking between the disparate perspectives of all existing evidence-based single-factor etiopathogenic models, as well as the more integrative and dynamic models. The purpose of the study was not to develop an integrated metatheory of addiction, but to explore the suitability of Integral Theory as a philosophical foundation to inform and guide such an endeavor.

Significance of the Study

An adequate understanding of addiction has more than just epistemological and scientific value. It also has significant effects in the real world, because the way that we understand addiction also determines the ways in which we treat it. Therefore, the more comprehensive our understanding, the more likely it is that we will be able to develop effective and sustainable treatment modalities.

This study hopes to stir up interest among academics, clinicians and researchers regarding the eventual development of a well-researched integral metatheory of addiction and integrally informed addiction treatment protocols. It has been argued that integrally informed approaches to addiction treatment protocol design and therapy hold much promise for more comprehensive and sustainable treatment methodologies, and for better treatment outcomes (Du Plessis, 2010, 2012a, 2012b; Dupuy & Gorman, 2010; Dupuy & Morelli, 2007; Shealy, 2009).

Research Methodology

Conceptual/theoretical analysis was conducted to determine the suitability of Integral Theory (Wilber, 2000, 2003a, 2003b, 2006; Esbjörn-Hargens, 2009) as an ontological and epistemological foundation for a comprehensive metatheory of addiction The conceptual/theoretical analysis was metatheoretical because the content of analysis were theories in themselves. Metatheorising "is a form of conceptual research that recognizes the validity of each theoretical perspective, while also discovering their limitations through accommodating them within some larger conceptual context" (Edwards, 2010, p. 387).

The present study offered a theoretical analysis of the paradigmatic and meta-paradigmatic suitability of Integral Theory in the design of a metatheory of addiction. The data consisted of the most prominent etiological theories and models of addiction. In other words, the data are theories of addiction, as well as the core elements of Integral Theory.

To achieve its purpose the study focussed on several essential features constituting the architectonic of any metatheory that attempts to provide conceptual scaffolding for the construction of a comprehensive metatheory of addiction. These criteria for the construction of a metatheory were *conceptual integration*, *ontological span, ontological depth, empirical validity and internal consistency.* Integral Theory was critically assessed in terms of each of the abovementioned criteria.

Outline of Further Chapters

Chapter 2: Current Approaches to Addiction and Treatment of Addiction explores models and theories of addiction derived principally from the psychosocial and biomedical sciences. The discussion is structured under the following headings: genetic/physiological models, social/environmental models, personality/intrapsychic models, coping/social learning models, conditioning/reinforcement behavioural models, compulsive/excessive behaviour models, and spiritual/altered states of consciousness models. Finally two approaches that attempt to integrate addiction models are outlined, namely the biopsychosocial model and the Transtheoretical model.

Chapter 3: Critiques of Current Approaches to Addiction indicates that the state of addictionology presents two primary problems. Firstly, the cornucopia of theories and treatment methodologies appears to have resulted in confusion, rather than cohesion and integration. Secondly, both researchers and clinicians recognise the failure of current interventions to produce significant effects at a population level.

Chapter 4: Towards a Metatheory of Addiction: Design and Methodology outlines the research paradigm and method employed, which is a theoretical analysis, in which existing literature and data are explored. The chapter begins with a discussion of the epistemological and ontological underpinnings of the researcher, who was influenced by Integral Pluralism, part of Integral Theory's post-metaphysical epistemological perspective, which includes, but is not limited to, positivist and constructionist epistemology. The notion of reflexivity is discussed and how the author's personal and epistemological reflexivity influences the study.

Chapter 5: Integral Theory and Addiction provides a review of how the five elements of the AQAL model can and have been used to understand addiction and to inform addiction treatment. The review and discussion of the applications of the five elements of the AQAL model serves an important function in exploring one of the criteria, *empirical validity*. It further provides an in-depth evaluation of the paradigmatic and metaparadigmatic features of Integral Theory against the criteria outlined in Chapter 4 (*empirical validity, ontological span, ontological depth, internal consistency,* and *conceptual integration*).

Chapter 6: Constitution of a Integral Metatheory of Addiction identifies essential features of an integrated metatheory of addiction.

Chapter 7: Conclusion provides a summary as well as the research findings of this study. It further highlights limitations, contributions and future recommendations for the study.

Chapter 2 – Current Approaches to Addiction and Treatment of Addiction

Introduction

Developing accurate theories, models and definitions of addiction is problematic in many ways. One reason is that addiction is an abstract concept, without an objective existence or clear boundaries. Furthermore, it is socially defined, and therefore opinions can legitimately differ about the most suitable definition – it cannot be said that one definition is unequivocally correct and another incorrect, only that one is more useful or less useful than others, or that one is mostly agreed upon by experts (West, 2005). Theories, models and definitions of addiction in authoritative texts on the subject have changed over the years. At one time, addiction was defined as a state of physiological adaptation to the presence of a drug in the body so that absence of the drug led to physiological dysfunction (DiClemente, 2003). West (2005) states that: "Nowadays the term 'addiction' is applied to a syndrome at the centre of which is impaired control over behaviour, and this loss of control is leading to significant harm" (p. 10).

Another problem faced in addiction science is that theories in the field of addiction are rarely tested adequately in real-world settings, because the dominant research methodology does not allow it. However, a good theory of addiction should explain a related set of observations, generate predictions that can be tested, as well as

being parsimonious, comprehensible, coherent, internally consistent and not contradicted by any observations (West, 2005).

In the following section models and theories of addiction are explored. It should be noted that it is beyond the purpose of this study to provide an exhaustive discussion regarding theories and models of addiction. In the following discussion the most prominent explanatory approaches are presented derived principally from the psychosocial and biomedical sciences. The discussion is structured under the following headings: genetic/physiological models, social/environmental models, personality/intrapsychic models, coping/social learning models, conditioning/reinforcement behavioural models, compulsive/excessive behaviour models, and spiritual/altered states of consciousness models. Finally two approaches that attempted to integrate addiction models are outlined, namely the biopsychosocial model and the Transtheoretical Model.

Etiological Models of Addiction

Genetic/physiological models

The most substantial evidence concerning the role of genetics in addiction is derived from studies of alcohol dependence (Shuckit, 1980; Shuckit et al., 1972). Theorists have suggested that addiction runs in families and can be transmitted across generations. Twin studies suggest that a genetic transmission of alcoholism and chemical dependence is possible, and seem to support the importance of genetics as a contributing

factor (Hesselbrock et al., 1999). What is, however, now becoming evident is that a genetic explanation for addiction will be polygenetic and complex, and will not lie in finding a single gene that can explain addiction (Begleiter & Porjesz, 1999; Gordis, 2000; Blume, 2004).

Historically, addiction and physical dependence were seen as synonymous. Addiction was traditionally characterised by increasing tolerance and onset of physical withdrawal symptoms. Theorists of the genetic/physiological model of addiction argue that the physiological aspects of tolerance and withdrawal are indicators that addictions are biological entities and medical problems. However, not all drugs and addictions produce withdrawal symptoms or create physiological dependence. Yet the physiological component of addictions remains an important one, and there have been major advances in our understanding of the neurobiology of addiction (Roberts & Koob, 1997). Advanced neurobiological insight into addiction as having a physiological component and not constituting morally reprehensible behaviour has led to it being understood within the medical model as a disease. West (2005) states that "[t]he Disease Model of addiction seeks to explain the development of addiction and individual differences in susceptibility to and recovery from it. It proposes that addiction fits the definition of a medical disorder. It involves an abnormality of structure or function in the CNS that results in impairment" (p. 76). The disease model has played a significant role in shifting society's view of addiction from one of moral deviance to one that promotes treatment and understanding. Most neuroscientists studying addiction view it as a brain disease

(Volkow et al., 2002). Addiction affects, amongst others, the mesolimbic system of the brain, the area where our instinctual drives and our ability to experience pleasure resides. This area contains the medial forebrain bundle, prevalently known as the pleasure pathway (Brick & Ericson, 1999). In addicts, the pleasure pathway of the brain is "hijacked" by the chronic use of drugs or compulsive addictive behaviour. Owing to the consequent neurochemical dysfunction, addicts perceive the drug as a life-supporting necessity, much like breathing and nourishment (Brick & Ericson, 1999).

It seems clear, based on our understanding of the neurobiology of addiction, that physiological mechanisms and genetic factors potentially play a role in addiction; however, there are many concerns about assigning sole causality to genetic/physiological factors. Although the genetic/physiological models are some of the most widely accepted models of addiction, they have also attracted much criticism (Blomqvist & Cameron, 2002; Moos, 2003). DiClemente (2003) states that "so many different individuals can become addicted to so many different types of substances or behaviors, biological or genetic differences do not explain all the cultural, situational, and intrapersonal differences among addicted individuals and addictive behaviors" (p. 11). Genetic/physiological theories apply empirical observation methodologies, but do not incorporate psychological, social and cultural perspectives.

Social/environmental models

Many models of substance abuse have been criticised for not sufficiently emphasising the role of social and contextual factors (Coppelo & Orford, 2002). In addition, many research studies have shown that some of the greatest risks of becoming addicted are related to the social factors to which a person is exposed (Srmac, 2010). The social/environmental perspective highlights the role of social influences, social policies, availability, peer pressure and family systems on the development and maintenance of addiction (DiClemente, 2003; Johnson, 1980). Furthermore, an influence on etiological factors of addiction is the prevailing degree of attitudinal tolerance toward the practice in the individual's cultural, ethnic and social class milieu. Research has pointed out that macro-environmental influences also play a significant role in the initiation of addiction (Connnors & Tarbox, 1985). For instance, since the breakdown of the apartheid system in early 1990s and the concomitant relaxation of border management, South Africa has been targeted as a conduit country for transportation of drugs, as well as a new lucrative market for the sale of drugs (Myers & Parry, 2003). Poor law enforcement, combined with sophisticated infrastructure and telecommunications systems, have further compounded South Africa's vulnerability as a lucrative drug trafficking destination, resulting in the increased use of heroin, cocaine and methamphetamine in the country (Parry et al., 2005).

Some supporters of the social/environmental models focus on the more intimate environment of family influences as a central etiological factor of addiction (Merikangas

et al., 1992; Sher, 1993). They suggest that the onset of addiction is influenced by certain variables that emerge from dysfunctional family environments (Coleman, 1980; Kandel & Davies, 1992). These theorists emphasise that problematic family situations, such as conflicted and broken marriages, difficulties with relationships, and the use of alcohol and other drugs by parents, are important influences on the child's decision to experiment with drugs or continuing addictive behaviour (Chassin et al., 1996; Jessor & Jessor, 1977). Research has identified familial dynamics such as lack of parental support and ineffective parental control practices as high-risk factors for adolescent substance abuse (Hawkins et al., 1994).

It is clear that social/environmental models have relevance to our understanding of addictive behaviour at a population level, but they often fail to explain individual initiation or cessation in any comprehensive manner (DiClemente, 2003). The social/environmental models attempt to understand and study addiction from a cultural anthropological perspective, and from a systems theory perspective.

Personality/intrapsychic models

Proponents of the personality/intrapsychic perspective link personality/intrapsychic dysfunction and inadequate psychological development to a predisposition towards addiction (Levin, 1995; Kohut, 1977; Flores, 1997; Khantzian, 1994; Ulman & Paul, 2006). For example, pre-existing antisocial disorders, depression,

low self-esteem, narcissistic disorders, hyperactivism, high novelty seeking and emotionality have been acknowledged to be possible precursors or predictors of later addiction (Jessor & Jessor, 1980; Kohut, 1977). This led theorists to seek a pre-addiction psychological profile for people who have become addicted. However, a single addictive personality type has not been established, in spite of commonly held beliefs that there is such a thing as an "addictive personality". Blume (2004) affirms this by saying that "there are certain psychological disorders with specific clusters of symptoms that have a high co-occurrence with substance abuse and dependence … but there is no single personality type for people with addictive behaviors" (p. 73).

A common explanation, from a psychoanalytic perspective, is to view the etiological and pathogenic origins of addiction as a narcissistic disturbance of self-experience (Wurmser, 1995; Meissner, 1980; Khantzian, 1999; Ulman & Paul, 2006). Kohut (1971, 1977) implies that there is an inverse relationship between an individual's early experiences of positive self-object responsiveness and their tendency to turn to addictive behaviour as replacements for damaging relationships. Scholars who support the "self-medication hypothesis" believe that addicts often suffer from defects in their psychic structure owing to poor relationships early in life (Khantzian et al., 1990; Flores, 1997; Levin, 1995). This leaves them prone to seeking external sources of gratification, e.g. drugs, sex, food, work in later life (Kohut, 1977). Khantzian (1995) says "that "substance abusers are predisposed to become dependent on drugs because they suffer with psychiatric disturbances and painful effect states. Their distress and suffering is the

consequence of defects in ego and self capacities which leave such people ill-equipped to regulate and modulate feelings, self-esteem, relationships and behavior" (p. 1). The self-medication model of addictive disorders points out that individuals are predisposed to addiction if they suffer from unpleasant affective states and psychiatric disorders, and that an addict's drug of choice is not decided randomly but chosen for its particular effect because it helps with the specific problem(s) that the person is struggling with. Therefore, initiation of drug use and the choice of drug are based on the particular psychoactive effect sought by the individual (Khantzian 1995; West, 2005).

Ulman and Paul (2006), in their fantasy-based self psychological model of addiction, believe that addiction is better conceptualised as a kind of self-hypnosis than a type of "self-medication". They state that an archaic form of narcissism, namely megalomania, is at the unconscious etiology of addiction. Like other forms of archaic narcissism, it could become developmentally arrested in the setting of a self-object milieu which lacks empathy. In certain cases, such a developmental arrest may lead to addiction in later life. When using, addicts enter into a hypnoid or dissociated state involving an archaic fantasy of being a self as a megalomaniacal being endowed with a form of magical control over psychoactive agents (things and activities), and addicts then imagine that through possession of these agents they will undergo a metamorphosis or transmogrification into a radically new state of being (Ulman & Paul, 2006).

Personality/intrapsychic approaches make a valuable contribution towards a better understanding of addiction, and personality (as well as intrapsychic factors) appears to

contribute to the development of addiction. However, as DiClemente (2003) points out, personality factors or deep-seated intrapersonal conflicts account for a possibly important but relatively small part of a comprehensive explanation needed for addiction. The personality/intrapsychic models attempt to understand addiction from a phenomenological mode of inquiry.

Coping/social learning models

Some theorists argue that addiction is often related to a person's inability to cope with stressful situations. They believe that, as a result of poor or inadequate coping mechanisms, addicts turn to addiction as an alternative coping mechanism for temporary relief and comfort. An individual's inability to cope with stress and negative emotions has been identified as an etiological factor in many theories of addiction. Therefore, the coping/social learning models relate addiction to inadequate coping skills, which result from certain personality deficits in the individual (Wills & Shiffman, 1985). According to DiClemente (2003), emotion-focused coping has been identified as a particularly important dimension from a coping model perspective. Some believe alcohol is addictive because of its capacity for tension reduction and its dampening of the stress response (Cappell & Greeley, 1987). Researchers have shown that increased drinking after rehabilitation treatment is associated with both skills deficits and the failure to use alternative coping responses (Marlatt & Gordon, 1985).

The social learning perspective emphasises more than just deficits in coping skills; it emphasises social cognition. Bandura's social cognitive theory focuses more on cognitive expectancies, self-regulation and vicarious learning as explanatory mechanisms for addiction (Bandura, 1977, 1986). Also, this perspective highlights the role of peers and significant others as models. When advertisers use prominent public figures to promote a product, they are applying social influence principles.

Although coping and social learning perspectives have become popular in addictionology, generalised poor coping skills cannot be the only causal link to addiction. However, even if coping deficits do not sufficiently provide an etiological explanation, they certainly highlight an important consequence of addiction, namely the narrowing of the addict's coping repertoire (Shiffman & Wills, 1985). The coping/social learning models attempt to understand addiction from a phenomenological mode of inquiry, from a hermeneutical-interpretive perspective, from a cultural anthropological perspective, and finally from an autopoiesis theory perspective (as do many of the cognitive sciences). Although the coping/social learning models do incorporate a multi-perspectival understanding of addiction they still chiefly focus on individuals' psychological processes.

Conditioning/reinforcement behavioural models

The compulsive use of addictive substances and process addictions is governed by reinforcement principles. Addictive substances and behaviours deleteriously affect the pleasure centres of the brain (Blume, 2004). The stimulation of the pleasure centre produces a euphoric experience that tends to positively reinforce addictive behaviour. Reinforcement can be positive or negative. Reinforcement models focus on the direct effects of addictive behaviour, such as tolerance, withdrawal and other physiological responses/rewards, as well as more indirect effects described in the opponent process theory (Barette, 1985; Soloman & Corbit, 1974). Positive reinforcement involves pleasurable consequences related to addictive behaviour. Negative reinforcement, as described by the opponent process theory, occurs when a person is rewarded through the substance reducing withdrawal or emotional distress. Both positive and negative reinforcement play a part in development and maintenance of the addictive process (Blume, 2004).

Some theorists have also suggested that Pavlovian conditioning is useful in understanding the addiction process. These individuals state that anticipatory drug-related behaviours can be linked to cues associated with the act of using the drug. Therefore, situational cues can elicit initial drug reactions and consequently lead to the resumption of the addictive behaviour (Hinson, 1985). More contemporary classical conditioning approaches include cognition and physiological mechanisms in their repertoire of cues

and responses (Adesso, 1985; Brown, 1993). This has led to an integration of conditioning and social learning perspectives (DiClemente, 2003).

Today there is significant evidence for the role of conditioning and reinforcement effects in the addictive process, and as with all of the previously mentioned models it offers insight into the nature of addiction. However, conditioning/reinforcement behavioural models do not explain all initiation or successful cessation of addiction (Marlatt & Gordon, 1985). They predominantly attempt to understand addiction from a phenomenological mode of inquiry, and by means of an autopoiesis theory perspective. These models tend to overemphasise a deterministic and behaviourist approach to addiction with disregard for many psychological factors, as well as providing an inadequate explanation from social and cultural perspectives.

Compulsive/excessive behaviour models

Some physiognomies of addiction, like the inability to successfully stop the behaviour, as well as its repetitive nature, have led theorists to link addiction with ritualistic compulsive behaviours. Theorists who link addiction to compulsive behaviours either come from an analytic or a biologically-based view. The analytic perspective views the compulsive component of addiction as reflecting deep-seated psychological conflict, whereas the biologically-based view understands the compulsive behaviour as a result of biochemical imbalances reflected in irregular neurotransmitter levels in the brain.

Adherents of the first view would see treatment in terms of analysis, whereas adherents of the latter would explore psychoactive pharmacological treatments to bring the compulsive addictive behaviour under control (DiClemente, 2003).

Some theorists view addiction as excessive appetite (Orford, 2000). Increasing appetite leads to excess and the developmental process of increasing attachment, which is similar to elements of the social learning model. Potentially addictive substances share not only the potential for excess but also a similar process of leading to access. Both the compulsive and excessive behaviour models share the notion that an addicted individual's behaviour is out of control and that the addict is attempting to satisfy a psychological conflict or need (DiClemente, 2003).

Both the compulsive and excessive behaviour models add some explanatory potential to some of the existing models. However, they do not highlight all the variables needed in order to adequately explain the etiology of addiction or why individuals continue addictive behaviour. The compulsive and excessive behaviour models attempt to understand addiction from a phenomenological mode of inquiry, and by applying empirical observation methodologies when understanding compulsive addictive behaviours from a biologically-based view.

Spiritual/altered state of consciousness models

Apart from the more well-known models of addiction there are lesser-known models, perhaps equally important, that view the pathogenic and etiological roots of addiction from a spiritual, existential and altered state of consciousness (ASC) perspective. Empirical research has shown that an inverse relationship exists between spirituality and drug addiction, suggesting that spiritual involvement may act as a protective mechanism against developing an addiction, and that a lack thereof can contribute towards developing an addiction (Miller, 1997; Laudet et al., 2006). Some theorists have suggested that addiction is a spiritual illness, a disorder resulting from a spiritual void in one's life or from a misguided search for connectedness (Miller, 1998). For addicts, drugs become their counterfeit god. Therefore, addicts may be unconsciously pursuing the satisfaction of their spiritual needs through drugs or addictive behaviour. In a letter to Bill Wilson, the co-founder of AA, Jung (in Kurtz & Ketcham, 2002) pointed out that he believed "alcohol was the equivalent, on a low level, of the spiritual thirst of our being for wholeness, expressed in medieval language: the union with God" (p.113). In a sense, addicts and alcoholics, as Jung believed, are misguided mystics.

Many addicts state that they turned to drugs initially due to an existential void in their lives. Drugs instantly provided a new and often spectacular sense of meaning for them in an otherwise barren existence. Luigi Zoja (1989) states that:

> The archetypal need to transcend one's present state at any cost, even when it entails the use of physically harmful substances, is especially strong in those who

> find themselves in a state of meaninglessness, lacking both a sense of identity and a precise societal role. In this sense it seems right to see the behavior of a drug addict who announces "I use drugs!" not only as an escape to some other world, but also as a naive and unconscious attempt at assuming an identity and role negatively defined by the current values of society (p. 15).

The author (Du Plessis, 2012b) has previously argued that viewing the etiological roots from an existential perspective is an important point of view to include in a comprehensive understanding of addiction. A sense of meaning and purpose is closely related to hope. Empirical findings show that recovering addicts who have hope are better able to cope with life's crises (Sremac, 2010). Furthermore, (and closely related to existential etiological perspectives) the author is of the opinion that in some instances the etiological roots for certain individuals' addiction may be a dysfunctional attempt, borrowing the terms from Assagiloi (1975), at "self-realisation", and the consequent flawed channelling of "superconscious spiritual energies", energies to which these type of individuals are often sensitive - but which they have not found suitable ways to actualise. This type of transpersonal etiology (an existential quest for post-conventional meaning) should not be confused with a pre-personal etiology (narcissistic disturbance of self), which will result in a type of "pre/trans fallacy" (Wilber, 1995, 2000, 2006).

Some theorists believe that humans have an innate drive to seek ASCs, because they encompass systemic natural neurophysiological processes involved with psychological integration of orholotrophic responses and reflect biologically based

structures of consciousness for producing holistic growth and integrative consciousness (Weil, 1972; Siegal, 1984; Grof, 1980, 1992). Winkelman (2001) believes that addicts engage in a normal human motive to achieve ASCs, but in a self-destructive way because they are not provided the opportunity to learn "constructive alternative methods for experiencing non-ordinary consciousness" (p. 340). From this viewpoint, drug use and addiction are not understood as an intrinsic anomaly, but rather as a misguided yearning for the satisfaction of an inherent human need. In considering possible etiological roots for our society's immense addiction problem through an ASC perspective, Winkelman (2001) states:

> Since contemporary Indo-European societies lack legitimate institutionalized procedures for accessing ASCs, they tend to be sought and utilized in deleterious and self-destructive patterns - alcoholism, tobacco abuse and illicit substance dependence. Since ASC reflect underlying psychobiological structures and innate needs, when societies fail to provide legitimate procedures for accessing these conditions, they are sought through other means (p. 240).

For a comprehensive understanding of addiction, the inclusion of spiritual and ASC perspectives is essential, although addiction is too complex for its pathogenic origins to be reduced to these elements alone. Furthermore, in some instances one could run the risk of a type of pre/trans fallacy by confusing developmentally arrested archaic narcissistic needs, and "symbiotic merging" and behaviour with post-conventional spiritual yearning, which is actually a fairly common phenomenon in certain drug

subcultures (Almaas, 1996). The spiritual/altered state of consciousness models attempt to understand addiction from a phenomenological mode of inquiry, and a cultural anthropological perspective.

The biopsychosocial model

Dissatisfaction with the partial explanations proposed by the previously described single-factor models has prompted some theorists to propose an integration of these explanations (Donovan & Marlatt, 1988; Glantz & Pickens, 1992). By calling their model the biopsychosocial model, they suggest the integration of biological, psychological and sociological explanations that are crucial in understanding addiction. This model endeavours to unify contending addiction theories into an integrated conceptual framework. According to this model, addictive behaviour is therefore best understood as a complex disorder determined through the interaction of biological, cognitive, psychological and sociocultural processes. Addiction "appears to be an interactive product of social learning in a situation involving physiological events as they are interpreted, labelled, and given meaning by the individual" (Donovan & Marlatt, 2005, p. 7). The biopsychosocial model argues for multiple causality in the accusation, maintenance and termination of addictive behaviours.

Yet there are some academics who feel that the biopsychosocial model is also inadequate in explaining addiction, and that further integrative elements are needed to

make this model's tripartite collection of factors functional. DiClemente (2003) states that "although the proposal of an integrative model represents an important advance over more specific, single-factor models, proponents of the biopsychosocial approach have not explained how the integration of biological, psychological, sociological and behavioral components occur" (p. 18). He further states that "without a pathway that can lead to real integration, the biopsychosocial model represents only semantic linking of terms or at best a partial integration" (Ibid). DiClemente (2003) says that; "[t]he biopsychosocial model clearly supports the complexity of and interactive nature of the process of addiction and recovery. However, additional integrating elements are needed in order to make this tripartite collection of factors truly functional for explaining how individuals become addicted and how the process of recovery from addiction occurs" (p. 18). Without an orienting framework that can explain how these various areas co-enact and interlink, the biopsychosocial approach often represents merely a semantic linking of terms and exhibits limited integration.

Although the biopsychosocial model has not provided the field of addictionology with a truly comprehensive and integrative model, it was one of the first models to recognise the importance of treating the whole person, and not merely the addiction. This has contributed greatly to the application of more holistic treatment protocols (Sremac, 2010). The biopsychosocial model attempts to understand addiction from a multitude of perspectives, which include a phenomenological mode of inquiry, a hermeneutical-interpretive perspective, a cultural anthropological perspective, using empirical

observation methodologies, an autopoiesis theory perspective, and finally a systems theory perspective. A comprehensive critique of the biopsychosocial model is provided in Chapter 3.

The Transtheoretical Model

In an attempt to find commonality amongst the diverse models of addiction and seek integrative elements, DiClemente and Prochaska (1998) propose their Transtheoretical Model (TTM) of intentional behaviour change. The TTM "attempts to bring together these divergent perspectives by focusing on how individuals change behaviour and by identifying key change dimensions involved in this process" (DiClemente, 2003, p. 19). The primary developer of TTM, DiClemente (2003), argues for this model by stating that "[i]t is the personal pathway, and not simply the type of person or environment, that appears to be the best way to integrate and understand the multiple influences involved in the acquisitions and cessation of addictions" (p. 19).

The TTM proposes that the process of recovery from an addictive behaviour involves transition through stages described as the precontemplation, contemplation, preparation, action and maintenance stages. Different processes are involved in the transition between these different stages, and individuals can move forwards and backwards through these stages of change (West, 2005). Proponents of this model believe a person's choices influence and are influenced by both personality and social forces, and

that there is an interaction between the individual and risk and protective factors that influence the pathogenic origin or cessation of addiction. This process requires a personal journey through an intentional change process that is influenced at various points by a host of factors, as identified in the previously discussed explanatory models. “The stages of change, process of change, context of change, and markers of change identified in the TTM offer a way to integrate these diverse perspectives without losing the valid insights gained from each perspective” (DiClemente, 2003, p. 20).

Although this model indicates an integrative principle that is common to all the previous models, and although it highlights the dynamic and developmental aspects of addiction, it does not seem to provide a meta-theoretical framework that truly accommodates all the previous perspectives into an integrative framework. The TTM predominantly focuses on one dynamic integrating principle found in all the prominent addiction models, but does not provide the meta-paradigmatic framework needed for a metatheory of addiction. The model attracted substantial criticism, West (2005) states that “reservations have emerged about the model, many of which have been well articulated (p. 68). Yet the TTM has contributed greatly to our understanding of addiction and recovery as a dynamic process, by explaining it through a developmental-contextual framework. Furthermore, it has provided clinicians with a dynamic developmental framework to understand treatment resistance and ambivalence as well as to identify certain developmental markers indicative of positive change in recovery

(Miller, 2006; Miller & Rollnick, 2002; Miller & Carroll, 2006). The TTM attempts to understand addiction applying structural-assessment techniques.

Conclusion

Addiction is one of the most significant problems facing contemporary society. Consequently many scholars, institutions and clinicians have sought to understand this complex phenomenon, as is evident in the abundance of etiological models of addiction in existence today. In this chapter the most prominent explanatory models were explored, derived principally from the social and biomedical sciences.

It is clear from the literature review that there appears to be very little consensus regarding the nature and etiopathogenesis of addiction. Furthermore, the integrative models have not yet been able to provide the sought-after integration. In the next chapter critiques of existing models will be explored in more depth, with a special emphasis on the BPS model.

Chapter 3 – Critiques of Current Approaches to Addiction

Introduction

Alexander (2010) laments the failure of the field of addictionology to bring forth adequate solutions to the problem of addiction. He provides an in-depth and scholarly study of the phenomenon of "dislocation", which he calls a "condition of human beings who have been shorn of their cultures and individual identities by the globalization of a 'free-market society' in which the needs of people are subordinated to the imperatives of markets and the economy" (p. 1). He states further that the "only real hope of controlling the flood of addiction comes from the social sciences, which are uniquely suited to replace society's worn-out formulas with a more productive paradigm" (Ibid).

Many scholars agree on two of the foremost problems in the field of addiction science and addiction treatment. The first is definitional confusion (Shaffer et al., 2004; Valliant, 1995; White, 1998; Alexander, 2008, 2010; Hill, 2010) and the second is the ineffectiveness of treatment (Shaffer, 2004; Fields, 1998; White, 1998; Alexander, 2008, 2010; Hill, 2010). The present dissertation focused on the first problem, but it has implications for treatment as etiological understanding influences treatment methodology.

Conceptual Chaos and Definitional Confusion

Currently addiction theories are so abundant and varied (Shaffer et al., 2004; Valliant, 1995; White, 1998) that the field of addictionology is described by Shaffer (in Hill, 2010), the Director of the Harvard Medical School's Division on Addictions, as "[c]onceptual chaos … a crisis of concepts and explanatory categories in the addictions …" (p. 3).

A further problem is that theories in the field of addiction are rarely tested adequately in real-world settings, because the dominant research methodology does not allow such testing. However, a good theory of addiction should explain a related set of observations, generate predictions that can be tested, and be parsimonious, comprehensible, coherent and internally consistent. Finally, a good theory should not be contradicted by any observations (West, 2005).

As DiClemente (2003) points out that in an attempt to find integration for all these divergent conceptions of addiction, amid dissatisfaction with the fractional explanations proposed by the single-factor models, there has been a movement in the last 20 years towards holistic or compound models. Furthermore, it has been suggested that the low success rate for addiction treatment is owing to substance abuse programmes applying partial and outdated treatment models (McPeake et al., 1991; Jung, 2001; Du Plessis, 2010, 2012a).

Compound Models of Addiction

In the last ten years the field of addictionology has seen a progressive movement toward compound models of addiction (DiClemete, 2003). The integrated or compound approach to addiction is an attempt to integrate the divergent and often conflicting philosophical foundations of the biomedical, psychological, and sociological perspectives of human behaviour (Graham et al., 2008; Levant, 2004; Pilgrim, 2002; Wallace, 1993).

Compound models are based on the premise that the interaction of a number of distinct factors is adequate for explaining the etiology and maintenance of addictive behaviour (Griffiths, 2005; Griffiths & Larkin, 2005; Shuttleworth, 2002; Batson, 1992; Griffiths, 2005; Wallace, 1985, 1993). Compound models of addiction have been known by a hodgepodge of names, for example, the biopsychosocial (BPS) model, the multi-component model, the multi-cultural model, the integrated model, and the complex systems model (Hill, 2010).

These models and others are indicative of the discontent with single-factor models (Gifford & Humphries, 2006; Shuttleworth, 2002). The BPS model is the most widely recognised compound approach to addiction (Griffiths, 2005; Levant, 2004; Shuttleworth, 2002; Wallace, 1993; White, 2005).

Engle (1997), a New York psychiatrist, is credited with coining the term *biopsychosocial.* Engle (1977) asserts:

> I contend that all medicine is in a crisis and, further, that medicine‘s crisis derives from the same basic fault as psychiatry‘s, namely, adherence to a model of disease no longer adequate for the scientific tasks and social responsibilities of either medicine or psychiatry ... The boundaries between health and disease, between well and sick, are far from clear and never will be clear, for they are diffused by cultural, social, and psychological considerations (p. 324).

Undoubtedly this approach implies that no one isolated causal factor is responsible for addiction (Griffiths, 2005; Wallace, 1993, Hill, 2010). From the BPS perspective addiction is better understood from a framework that locates underlying links - i.e. the biological, psychological and sociological - as the most vital antecedents in the establishment of addiction (Gifford & Humphries, 2006).

Although the BPS model approach could be viewed as approximating a comprehensive integrated approach, as we will see later in the study, there are still considerable positivistic, ontological and epistemological underpinnings and assumptions which hinder a comprehensive conceptual framework. It is important in the context of this dissertation to understand why the BPS model does not provide an adequate integrative conceptual framework for the many antecedent variables that it acknowledges, and for which it provides a semantic linking, at best (DiClemente, 2003; Hill, 2010; Alexander, 2008).

Hill (2010) says: “Notwithstanding the apparent willingness to acknowledge multiple factors in addiction; simply classifying a model by a compound expression, as

we will discover, does not automatically eliminate fundamentally abstractionists'[natural scientific or positivist] assumptions" (p. 107). Hill (2010) qualifies the above statement by indicating the "abstractionist use of de-contextualism, reductionism, and determinism in the biopsychosocial model of addiction" (Ibid).

Beyond The Biopsychosocial Model

Hill (2010) provides a robust critique of the BPS model by undertaking an analysis of its ontological foundations. Hill's critique of the BPS model is two-fold. He describes the BPS model's shortcomings in terms of (1) "the separation of factors" and (2) "the prioritization of factors".

Ontological foundation of the biopsychosocial model

One way to understand the shortcomings of the BPS's model is to explore the ontological foundation for this approach, and to investigate if this foundation is adequate in providing conceptual scaffolding to explain a "human-being's-addiction-in-the-world" (Hill, 2010). Therefore, we first need to discuss the nature of the ontological and epistemological assumptions underlying the social sciences when defining human behaviour - in the present case, the cluster of behaviours defined as addiction.

In philosophy the term ontology is often used within the context of metaphysics, and refers to what exists or what can exist in the world. Epistemology refers to the nature of human knowledge and understanding that can be obtained through various types of investigation (Slife, 2005).

Ontological and epistemological questions often concern what is referred to as a person's *Weltanschauung* or worldview. Philosophers and theoretical psychologists point out that all theories have ontological and epistemological ancestry or foundational assumptions, whether implicitly or explicitly stated (Bishop, 2007; Polkinghorn, 2004; Slife, 2005).

Consequently conceptions of addiction, like conceptions in any science, are based on certain philosophical assumptions, which influence the trajectory of the development of the concept (Richardson, 2002; Bohman, 1993). In addiction science these initial assumptions often go unnoticed and consequently are uncontested once treatment methodologies are employed and made the objects of research (Hill, 2010).

For example, Ribes-Inesta (2003) commented "…psychologists have paid little attention to the nature of concepts they use, to the assumptions that underlie their theories, and the ways such concepts are applied in the study of behaviour". Within the field of psychology there exists various ontological worldviews and hidden assumptions (Hill, 2010).

Consequently, Hill (2010) believes that theories about and definitions of addiction and treatment methodologies may in the same manner been influenced by ontological assumptions which often remain implicit.

In his PhD dissertation, *An ontological analysis of mainstream addiction theories*, Hill (2010) says that there are certain (often unrecognised) ontological assumptions made by those who study addiction (or any human behaviour), and he points out that most of these assumptions are abstractionist or positivist, which he believes is problematic - as a "better" alternative he suggests a "relational ontological foundation".

His thesis rests on the premise that if most addiction theories share the same ontological and epistemological foundation - all of which have not provided an adequate explanation for addiction - then perhaps an alternative ontological philosophy will bring forth unique insights.

A brief evaluation of Hill's (2010) thesis points out the foundational shortcomings of most (if not all) contemporary compound models.

Ontology of addiction

Hill (2010) believes that most of the myriad (and often conflicting) etiological models of addiction actually share a similar ontological foundation.[1] He further suggests a "solution" to the "conceptual chaos" surrounding addiction studies. He sums up his main premise by saying that:

> First, I will suggest that the conceptual confusion surrounding addiction is more apparent than real, that there is in fact, a shared unity at the ontological level; Second, if it is true that most conceptions share a similar ontological basis, then perhaps an alternative ontological viewpoint could offer a fresh approach to addiction and conceivably lead to greater treatment effectiveness (p. 5).

Hill (2010) says that there are the two major ontological categories or foundations applied in the social sciences to understand human behaviour, "ontological abstractionism" and "ontological relationality" (Bishop, 2007; Slife, 2005). Since addiction is often described in terms of human behaviour (Brodie & Redfield, 2002; Flores, 1997), he investigates how these two ontological foundations underpin many studies of addiction.

[1] Hill (2010) uses the term *ontological foundation* to collectively refer to the philosophical assumptions underlying the exploration of a phenomenon. Hill does not explicitly point out the relationship between ontology, epistemology and methodology. When the author uses the term *philosophical foundation* it refers to the collection and relationship of ontology, epistemology and methodology.

Hill (2010) discusses the ontological assumptions of the disease model, the life-process model, and the compound model (since most researchers agree that these three generalised frameworks include the full spectrum of etiological theories) (Campbell, 1996; Shaffer et al., 2004). His evaluation of these three broad classes of addiction models reveals a domination of an abstractionist or positivistic ontology.

An overview is provided of the positivistic or abstractionist ontology which, as Hill (2010) astutely points out underlies most addiction models, as well as of the biopsychosocial model - which ironically originated as a "rebellion" against reductionist, or against what Wilber calls, "flatland approaches". Thereafter, an synopsis follows of Hill's (2010) suggestion of a "relational ontology" as an "alternative foundation" for addiction studies.

Ontological abstractionism of addiction. Abstractionism is a way of viewing the world that identifies or considers all ontological reality as independent and isolated (Slife & Richardson, 2008). Abstractionism attempts, therefore, to isolate events from the context in which they occur, in order to obtain an "unbiased' understanding. Bishop (2007) states "The key idea [behind abstractionism] is to isolate the properties in question from the rest of the environment and analyze them in as context-free a manner as possible" (p. 114).

Ontological abstractionism therefore "assume[s] that all things, including the self, are the most real and best understood when they are separated from the situations in which they occur" (Slife in Hill, 2010, p. 15). This isolation gives rise to "law-like connections between causes and effects" (Bishop, 2007, p. 115). Hill (2010) says that, "Addiction concepts from the abstractionist perspective would therefore only accept a contextless and individualist approach as the most fundamental way in which to understand and treat the disorder" (p. 15) An abstractionist ontology of addiction is to be "found in self-contained or isolatable factors considered to be basically unchanged and or at least similar from context to context" (Hill, 2010, p. 16).

The assumption of "unchangeableness" implies that addiction within an individual remains basically unchanged from context to context. Many contemporary models of addiction underscore this abstractionist notion of "unchangeableness" (Flores, 1997; White, 1998). For example, the disease model views addiction as residing within the individual, and continues to live on "within" the individual even after many years of abstinence (Flores, 1997; Menninger, 1938; Valliant, 1985).

In short, addiction from the abstractionist position is viewed as "consistent regardless of the context in which the individual is found" (Hill 2010, p. 16).

Ontological relationality. In contrast to this abstractionist ontology, Hill (2010) proposes a relational ontology as a foundation for understanding addiction. He suggests, "Ontological relationality, by contrast, is a philosophy that asserts individuals and their

behaviors can only be understood in relation to the contexts in which the individual exists or the behavior occurs" (p. 16).

Hill (2010) says further:

> Addiction from a relational perspective would likewise not only value the similarities evident from context to context, but would also acknowledge the influence of contexts and relationships on the most basic meanings of addiction. Furthermore, factors associated with addiction would be conceived of not as self-contained or autonomous but as inter-related and *mutually constitutive* of other pertinent factors. Mutually constitutive refers to how each factor never exists as a self-contained entity but only in relationship to other factors. Pertinent factors are thus necessary for addiction to occur but not sufficient in and of themselves to account for the disorder. This suggests that factors of addiction, e.g. genetics, environment, and the contexts in which they occur, are not sufficient or "the cause" in and of themselves because they are not self-contained and do not remain fixed from context to context (p. 17).

Hill (2010) implies that the concept of addiction is subject to context. Essentially, "a relational approach would view contexts and relationships as indispensable when trying to comprehend, conceptualize, and therefore treat addiction" (p. 17).

Critique of the Biospsychosocial Model

On the surface, the BPS model of addiction seems to offer an integrative approach. As its name suggests, the researchers who adhere to this approach are often uncomfortable with the theoretical shortfalls of single-construct approaches (Levant, 2004; Wallace, 1993; Whitbourne, 2000). Griffiths (2005) echoes this: "Research and clinical interventions [for addiction] are best served by a biopsychosocial approach that incorporates the best strands of contemporary psychology, biology, and sociology" (p. 195).

Separation of factors. Griffiths' (2005) postulation that "interventions are best served" by the "best strands" (p. 195) of biological, psychological, and sociological units implies that they are also best conceptualized as separate or "self-contained individualities" (Slife, 2005, p. 3). Hill (2010) says:

> Consequently, the biological context is decontextualized from the psychological context, etc. That is to say biology is abstracted from or does not serve as a context for the psychological … Thus, the phenomenon of addiction as a "whole", according to the BPS model, is most meaningful when thought of as decontextualized or self-contained "strands" (p. 536).

Engle (1980) confirms the existence of abstractions, by means of self-contained entities, in the BPS model by stating:

> Each system [within the BPS framework] as a whole has its own unique characteristics and dynamics ... The designation "system" bespeaks the existence of a stable configuration in time and space ... Stable configuration also implies the existence of boundaries between organized systems ... Each level in the hierarchy represents an organized dynamic whole, a system of sufficient persistence and identity to justify being named. Its name reflects its distinctive properties and characteristics (pp. 536-538).

Here the BPS model is regarded as a hierarchical system with "... its own unique characteristics and dynamics ... a stable configuration in time and space [which also] implies the existence of boundaries ..." (Engle, 1980, pp. 536-538). Therefore, each of the systems is abstracted from the other. Such a view point naturally diminishes the "whole" of a disease to an assortment of "table configurations in time and space" (Engle, 1980, p. 536).

When we apply Engle's viewpoint of disease to addiction it can be reduced to a "stable configuration [with] boundaries between organized systems" (Engle, 1980, p. 536). Separation of factors is thus assured since when each of these self-contained factors demonstrate "sufficient persistence and identity to justify being named" (Engle, 1980, p. 536).

As Hill (2010) rightly points out when there are, albeit implicitly, a separation of factors present within the conceptual scaffolding of the BPS model, it cannot be called a

truly integrated approach, and it does not adequately explain the "co-existing" and "co-arising" of the various factors.

Prioritising of factors. In the previous section I highlighted the BPS model's supposition that "separating [the] factors of addiction" is the best way to "conceptualize the disorder" (Hill, 2010, p. 112). As a result of these factors being "separated" it is tempting for most researchers to prioritise certain factors. Many leading supporters of the BPS model emphasise the role of neurobiology, in the etiology and maintenance of diseases such as addiction (Hill, 2010).

In his Presidential Address for the journal *Psychosomatic Medicine*, Williams (cited in Hill, 2010, p. 112) says, "My major message is that optimal growth in our understanding of how biopsychosocial factors interact in the etiology and course of human disease will come only if our research incorporates theories and techniques from neurobiology and cellular and molecular biology" (p. 308).

Further highlighting Williams' prioritising of biological factors, he states that the "serotonin deficiency hypothesis" is a fundamental explanation for early death due to "disease ... cancer ... and increased alcohol consumption" (pp. 310-311). Williams (cited in Hill, 2010) asserts:

> Rather than saying that a hostile personality trait somehow "causes" the clustering of the characteristics making up the hostility syndrome, I am proposing that all the characteristics [including smoking, eating, and alcohol use] ... could be the result

> of a single underlying neurological condition [or] mechanism: deficient central nervous system (CNS) serotonergic function ... Low CNS serotonin function has effects on biology and behavior that could be responsible for both the biobehavioral traits and consequent high rates of disease and death that have been found associated with high hostility ... There is very convincing and extensive evidence that weak brain serotonin function contributes to increased alcohol consumption (pp. 112-113).

Locating "a single neurological condition [or] mechanism" as the primary causal factor of a variety of diseases illustrates the reductionist conception to attribute "the material of the body (biology) alone for explaining our minds and behaviors" (Slife & Hopkins, 2005, p. 2).

In referring to Williams' comments, Hill (2010) "point[s] out three ways in which abstractions [reductionist/natural scientific foundations] underlie this particular approach to addiction" (p. 103). Firstly, death is reduced to "coronary disease ... cancer ... and increased alcohol consumption", which is reduced to "hostility", which is reduced to "low serotonin function ... [in the] CNS" (p. 113). With "low serotonin function" being the final reduction there is clearly a prioritisation of neurological structures.

Secondly, Hill (2010) points out that the primacy and supremacy of "neurological ... mechanisms" are implicit by situating "a single underlying condition", i.e. "serotonin deficiency", as the primary "underlying" causal link to which disease states such as "increased alcohol consumption" are attributed. Thus, the "underlying condition" of "low

serotonin function" is established as the principal feature of both "biology and behaviour", which in turn determines to a great extent "increased alcohol consumption" (pp. 113-114).

Finally, Hill (2010) points out that Williams labels human behaviours as "those that may otherwise be listed under a psychosocial heading, e.g. increased smoking, increased eating, and increased alcohol use", as "biobehavioral traits" (pp. 114-115), even further distancing these factors from their overall context.

The above is an example of how "... the central proposition of neuroscience is that the mechanisms of biology are sufficient to explain the human mind and behaviors [such as addiction] ... whereby other, nonmaterial and nonbiological are viewed as less than fundamental or unimportant" (Slife & Hopkins, 2005, pp. 2-3).

Although some researchers have established a relationship between biological factors, heritable personality traits, and psychosocial factors the "relationship is ontologically weak due to the reduction of factors to the self-contained properties of each" (Hill, 2010, p. 116). Moreover, biology is so profoundly decontextualised or self-contained that the interaction of the ontologically less basic "psychosocial factors" does not fundamentally change the essence of biology but only amplifies its self-contained properties.

In contrast, Hill (2010) points out the value of a relational approach: "By comparison, relationality would assume that biological and psychosocial factors share a

mutually constitutive relationship with one another. They are each necessary conditions for the phenomenon being explained; no single condition is more or less necessary than - or more or less in control of - any of the others" (p. 124). Therefore, biology - as a self-contained entity - is not "amplified by [self-contained] psychosocial factors", but rather each "entity" serves to give meaning and identity to one another (Paris in Hill, 2010, p. 117).

As indicated, there are clear epistemological priorities given to certain elements in the BPS model by its proponents and consequently this prevents it from delivering its anticipated promise of integration.

Ineffectual Treatment

Treatment is not the focus of this study, but it would be useful to briefly touch upon the current state of addiction treatment, because there is a relationship between definitions and models of addiction, and the choice of treatment protocol.

Considering the variety of treatment options, treatment efficacy for addiction is ostensibly low (Dawson, Grant, Stinson, & Chou, 2006; Alexander, 2008). Hill (2010) indicates that "large population analyses indicate relapse rates following treatment of alcohol dependence disorders to be between 70% and 90% and success in treating illicit drugs is even more discouraging, with recidivism rates exceeding 90% in many demographics" (p. 4).

White (1998), the author of *Slaying the dragon: the history of addiction treatment and recovery in America,* echoes the above sentiment by saying that: "With our two centuries of accumulated knowledge and the best available treatments, there still exist[s] no cure for addiction, and only a minority of addicted clients achieves sustained recovery following our intervention in their lives" (p. 342).

It is important to note that the treatment ineffectiveness is not due to a lack of attention or lack of genuine exertion by concerned groups (Flores, 1995; Ray & Ksir, 2004; White, 1998). Progress in public health in such issues as sanitation, epidemiology, emergency medicine, and drug therapies has instilled hope that many diseases could also be effectively treated (Hoffman & Goldfrank, 1990; Maxmen & Ward, 1995; O'Brian, 1997). Unfortunately the progress in public health has not been duplicated with regards to the treatment of addiction (Fields, 1998; Ray & Ksir, 2004; White, 1998).

Alexander (2010) says, "A paradigm shift is urgently needed in the field of addiction because, while the institutions of global health have expended vast resources over the past couple of centuries to control addiction to drugs, alcohol, and hundreds of other habits and pursuits, the flood of addiction has continued to deepen and spread (p. 2).

Conclusion

After reviewing the various critiques of etiological models, the current "conceptual chaos" and poor treatment results it is clear that a "paradigm shift" is desperately needed in the field of addiction studies. The current state of addictionology presents a "twofold problem" (Hill, 2010). Firstly, the cornucopia of theories and treatment methodologies appears to have resulted in confusion rather than cohesion and integration (Shaffer, 1997). Secondly, despite the wealth and variety of theoretical and treatment approaches to addiction, both researchers and clinicians recognise the failure of current interventions to produce significant effects at a population level (Armstrong & Armstrong, 1991; Levine, 1978; Hill. 2010).

The thesis of the present study is that a functional integrated metatheory of addiction is required to create a paradigm shift for a truly comprehensive understanding of addiction. The functional integrated metatheory has to account for and integrate the multitude of etiological models, while not falling prey to the disadvantages of the BPS model. The next chapter explores a model that could possible provide the philosophical foundation for such an integrated metatheory of addiction.

Chapter 4 - Towards a Metatheory of Addiction: Design and Methodology

Introduction

The previous chapters pointed out that addiction theories are currently abundant and varied (Valliant, 1995; White, 1998) that the field of addictionology is described as conceptual chaos (Hill, 2010). Consequently this has lead to the need for conceptual integration or for an integrated metatheory. As DiClemente (2003) points out, there has been a movement in the last 20 years towards holistic or compound models. Unfortunately as the study highlights, compound models, such as the BPS model, have not accomplished the much needed integration.

There are currently many scholars in the social sciences who suggest alternative perspectives for studying human behaviour (Gantt, 2005; Gergen, 1987; Reber & Osbeck, 2005; Richardson, 2005; Slife, 2005). Similarly, there are also scholars in the addiction sciences who argue for alternative perspectives in the study of addiction (Jay & Jay, 2000; Prentiss, 2005; Shaffer, 1995, 2007; White, 1998).

This study represents the begging of such an attempt at an alternative explanation which may provide adequate conceptual integration. The following section outlines the research paradigm and method employed. This study was a theoretical analysis of existing texts and data. Although it is a theoretical analysis it still follows the broad

outline of research methods, data collection and data analysis - which are influenced by the perspective of the researcher.

Research Methodology

Epistemological and ontological position

All research has epistemological underpinnings. The study was influenced by Integral Pluralism, part of Integral Theory's post-metaphysical epistemological perspective - which includes positivist epistemology and constructionist epistemology (Wilber 2003a, 2003b; Esbjörn-Hargens, 2010). Integral Pluralism points out that what is perceived to exist depends on the methodology and the developmentally-determined capacity of the observer (Murray, 2010, 2011). Integral Theory's post-metaphysical stance allows both the positivist and constructionist approaches to be equally valid, yet it is important that with both these approaches, given their respective injunctive paradigms (in the Kuhnian sense of the word), the researcher is aware of their epistemological and hermeneutic limitations. Both the modern and the postmodern perspectives are necessary for an inclusive understanding. When they are applied with "ontological humility", with awareness of their limitations, they bring valuable insights, with neither of their different "lenses" having epistemological priority.

The researcher has taken an equidistant position between the positivism and constructivist perspectives, this position being influenced by Integral Theory's post-metaphysical approach.

Another epistemological position that influenced this study is what could be called an "existential epistemology" similar to that articulated by Boss (1983), who in turn was influenced by the German existential philosopher Heidegger (1962/1927). Boss points out that the natural scientific method has limitations when explaining the human realm, as it originated from and is only sovereign in the nonhuman realm (i.e. the natural sciences). In short, this type of existential epistemology states that only by including epistemologies that are capable of truly "knowing" our "human-being-in-the-world" will we be capable of understanding complex human behaviour such as addiction.

Furthermore, the ontological position held by the researcher takes the view that addiction is fundamentally ontologically pluralistic. Ontological pluralism underscores that addiction is not a single "pre-given" entity, but rather a multiplicity of third-person realities. Moreover, as indicated in this study, the miscellany of the ontological realities of addiction has a special enactive relationship with etiological theories and their respective methodologies (Esbjörn-Hargens, 2010; Murray, 2011, 2013).

Reflexivity

How has the researcher's involvement with a particular study influenced, and informed this research? How has the research question defined and limited what can be "found"? To answer such question one needs to consider the notion of reflexivity. There are two types of reflexivity: personal reflexivity and epistemological reflexivity. Personal reflexivity involves reflecting upon the ways in which our own values, experiences, interests, beliefs, and social identities have shaped the research. Epistemological

reflexivity encourages us to reflect upon the assumptions that we have made in the course of the research, and it helps us to think about the implications of such assumptions for the research and its findings.

Personal reflexivity

The author has worked in the field of addiction treatment for over 13 years, which stimulated interest in this topic. It became apparent to the author that the conventional definitions and methods of addiction treatment and recovery were only partially useful, and that more inclusive, comprehensive, and effective approaches were achievable. This led the researcher to seek a more effective and integrative approach to addiction treatment and recovery.

When the author discovered Integral Theory he began to formulate an integrally informed addiction treatment model for a clinical environment. In July 2007, in his capacity as Head of Treatment of Tabankulu, he implemented the initial version of the Integrated Recovery (IR) Model (Du Plessis, 2010).[2] The IR model is at its core a 12 Step-based approach. The IR model is a comprehensive, balanced, multi-phased and

[2] Subsequent to its implementation at Tabankulu Secondary Recovery Centre in 2007, the Integrated Recovery Model has been applied in several other treatment facilities in Cape Town. At the Tabankulu Secondary Recovery Centre, informal quantitative research was conducted by the staff, measuring by the proportion of ex-clients who achieved a year's clean time (abstinence from all mood-altering substances), using a sample of 23 ex-clients. The study showed a success rate of 80%. The author is aware of that the validity and reliability of these results can be questioned, and does not wish to present these results as conclusive proof of this model's efficacy. However, the results may serve as an indication of the possibility of a higher success rate with an integrally informed treatment approach. A postgraduate outcomes-based evaluative research project was done at Tabankulu Secondary through the University of Cape Town, Department of Psychology. The research project showed promising results (Duffett, 2010).

multi-disciplinary approach to addiction treatment and recovery. Its philosophy is derived from an integration of 12-Step abstinence-based philosophy and methodology, mindfulness-based interventions, positive psychology, and Integral Theory.

Shortly thereafter the author (Du Plessis, 2012a) developed an integrally informed individual psychotherapy for addicted populations known as Integrated Recovery Therapy (IRT). In order to treat the numerous areas affected by addiction, many therapists working with addicted populations evolve an approach which has been described as eclectic. Without a sound orienting framework, this can result in syncretism, wherein therapists haphazardly pick techniques without any overall rationale, resulting in confusion (Corey, 2005). By applying Integral Theory as a metatheoretical conceptual framework, a therapist can avoid syncretistic confusion through a genuine integrative meta-therapeutic orientation in the treatment of addicted populations.

IRT represents one of the various novel, integrally informed methodologies in the newly emerging field of Integral addiction treatment and Integral addiction studies (Du Plessis, 2010, 2012a, 2012b, 2013; Dupuy & Gorman, 2010; Dupuy & Morelli, 2007; Shealy, 2009). Because IRT is informed by Integral Theory, therapists are provided with a multiperspectival orientation that enables them to work in an inclusive and comprehensive manner. In addition, this approach provides a metatheoretical and transdisciplinary orientation (Forman, 2010; Ingersoll & Zeitler, 2010). Since it deals with more than intra- and interpersonal changes that commonly characterise counselling and psychotherapy, IRT is better understood as a broad-based individual therapy.

The researcher has published several articles in the *Journal of Integral Theory and Practice* and has also presented a paper at the Integral Theory Conference in San Francisco (Du Plessis, 2010, 2012a, 2012b, 2013). Given his investment in pursuing this approach to treating addiction, the researcher obviously has a bias in favour of seeing this research having a positive outcome.

Epistemological reflexivity

The research question, by its very nature, limited this study to only analysing one metatheory, namely Integral Theory. Moreover, the researcher's epistemological and ontological view of the world is strongly influenced by Integral Theory. Using an Integral worldview to evaluate the validity of Integral Theory can be seen as problematic, since epistemology, ontology and methodology are mutually enactive. Therefore, having a worldview strongly informed by Integral Theory could influence the research to only "enact" aspects of reality that fit within the conceptual framework of Integral Theory.

The researcher's choice of criteria was influenced by what he considers to be important in a metatheory in the context of addiction. There are many other criteria that the researcher could have chosen from the modernist and postmodern traditions. It could be said that the author's *a priori* understanding of metatheory influenced the research question and discussion - by perhaps choosing criteria that the author assumed would be satisfied by Integral Theory, and perhaps leaving out criteria that Integral Theory would fail to satisfy.

Research Method

As indicated previously, the research methodology of this dissertation involves a [meta] conceptual/theoretical analysis of the existing theories of addiction as well as of an existing metatheory (Integral Theory). Since the data to be analysed are theories and an existing metatheory, this type of conceptual/theoretical analysis is commonly known as metatheorising. Mark Edwards (2010) states that metatheorising "is a form of conceptual research that recognizes the validity of each theoretical perspective, while also discovering their limitations through accommodating them within some larger conceptual context" (p. 387).

Ritzer and Colomy identify four types of metatheorising, signified by their particular aims (Edwards, 2010). Metatheorising can be used: (1) to understand existing theories; (2) to develop mid-range theories; (3) to develop an overarching metatheory for multiparadigm study of some field; and (4) to evaluate the conceptual adequacy and scope of other theories. The type of metatheorising that will be applied throughout this dissertation is the third type: the, multiparadigm study of some field [addiction], and elements of the fourth type, the evaluation of the conceptual adequacy and scope of other theories [Integral Theory].

Any researcher who attempts to metatheorise moves into murky waters. There are several difficulties facing any researcher using this research methodology. Wallis (2010) is of the opinion that although metatheorising is a method that is used often, it is currently in a similar position to pre-modern science, owing to there neither being acknowledged formal methods in existence, nor recognition by academia that it is an important form of

research. Although there has been a resurgence of metatheorising in recent years, traditional forms of scholarship still hold sway in this field. Wallis (2010) says that metatheorising has as yet no formal research method, and there exists no thorough endeavour at appraisal of the (meta) theory itself. Ritzer (1991) has been calling, for several decades now, for the institutional recognition and establishment of metatheorising as a core academic activity. He says that metatheorists have been pursuing their endeavours in a "half-hidden and unarticulated way" and under increasing criticism from those who undervalue the role of integrative knowledge. "Metatheorists often feel defensive about what they are doing, because they lack a sense of the field and institutional base from which to respond to the critics ... Progress in meta-theorising has been hampered by these criticisms and the lack of institutionalised base to respond to the critics" (p. 318).

Considering the lack of a formal, and academically accepted, method and science of metatheorising, what guidelines are there to evaluate the soundness of a metatheory? Turner (1990) argues that "metatheory is best done as a means for producing better theory rather than an end in itself ... metatheory should be a tool for generating and improving theories" (p. 38). He believes that much of metatheory does not achieve this goal and for metatheory to be useful as a science he proposes several guidelines for metatheorists:

> My answer is that metatheory could now (1) evaluate the clarity and adequacy of concepts, propositions, and models; (2) suggest points of similarity, convergence, or divergence with other theories; (3) pull together existent empirical (including

historical) studies to assess the plausibility of a theory; (4) extract what is viewed as useful and plausible in a theory from what is considered less so; (5) synthesize a theory, or portions thereof, with other theories; (6) rewrite a theory in light of empirical or conceptual considerations; (7) formalize a theory by stating it more precisely; (8) restate a theory in better language; and (9) make deductions from a theory so as to facilitate empirical assessment. No one metatheorist could perform all of these activities, of course, but the point is that there would be much for varying types of metatheorists to do (p. 40).

Data Collection

In this dissertation traditional scholarship and a literature review were used for data collection, where the data consisted of the most common etiological theories and models of addiction. In other words, the data are theories of addiction. Edwards (2008a) says, "The 'data' of metatheory is not found within this empirical layer of sense-making but within the 'unit-theories' themselves (i.e. the individual theories that are the focus of study for metatheorists)" (p. 65). Metatheories do not focus on empirical events but rather on the analysis of other theory "Metatheory is grounded on the analysis of other theory in the same way that middle-range theory is grounded on empirical data ...Where theory takes empirical phenomena as its source of data, metatheory takes other theories as its 'data' to be explored and analyzed" (Edwards, 2008a, Ibid).

The data (categories of etiological models of addiction) was adequately represented. Furthermore, for this study it was not necessary to have an exhaustive representation of all exiting data, but it was satisfactory for the argument of the dissertation to have major represented categories of evidence-based addiction models. It is not the aim of the dissertation to analyse the truth claims of the various models, nor the foundational truth claims of Integral Theory as a metatheory.[3] Moreover, for the purpose of this research it is not of fundamental importance that the etiological models are entirely accurate. Rather, what is of real significance is that the sample data [theories] are sufficiently representative of the variety of addiction models.[4]

Toward a Functional and Comprehensive Ontological and Epistemological Foundation of Addiction

Hill (2010) has argued that the compound models of addiction, such as the BPS model are - often implicitly - built on a positivistic foundation, which by default will

[3] This is beyond the scope of this dissertation and would require an extensive study. For studies on the metatheoretical validity of Integral Theory see Edwards, 2008; 2010; and Murray, 2013.

[4] Apart from this dissertation's primary research aim, a secondary - albeit implicit endeavour - is the hope that it will contribute (in whatever small capacity) to the development of metatheory, and help to develop academic legitimacy for metatheory in the social sciences and, in particular, in the field of addiction science.

provide a less than adequate conceptual framework for complex human behaviour-in-the-world, such as addiction.[5]

The author agrees with Hill (2010) to the point that a fundamental departure from conventional ontology is essential to arrive at a satisfactory explanation of addiction. However, the author critically reflects on the idea that the potential solution is to be found in his suggested relational ontology. This study explores the possibility of another ontological foundation. Hill has done valuable work in pointing out natural scientific and abstractionist ontological foundations (as well as epistemological foundations, with their correlated empirical research methods) as the underlying paradigm of addiction studies, but ironically his "solution" will fall prey to similar reductionist problems to the problems that he highlights.

This study presents another solution which differs from Hill's (2010) "relational ontology". Instead of proposing that the "conceptual confusion surrounding addiction is more apparent than real", and that there is "a shared unity at the ontological level", the author proposes that "what" creates the so-called "conceptual confusion" in addiction sciences is "real" (from an epistemological perspective), and is a result of what the author terms "ontological reductionism". Furthermore, the author does not entirely agree "that most conceptions share a similar ontological basis", and would prefer to state that each

[5] Boss (1983) in his book, *The Existential Foundations of Medicine and Psychology*, provides a robust critique similar in nature.

conception enacts a certain ontological reality and implies its own unique triadic relationship between ontology, epistemology, and methodology.

Hill (2010) identifies the need for an "alternative ontological viewpoint" that "could offer a fresh approach to addiction and conceivably lead to greater treatment effectiveness". But this seems viable only when placed in the above-mentioned triadic relationship. It is not clear that his "alternative ontological viewpoint" can provide conceptual integration.

The premise of this chapter is that the "solution" is not to be found in a "relational approach", but rather in an integrative meta-approach, a unifying approach - a pluralistic ontological and epistemological foundation for the study of addiction. A premise of this study is that the application of Integral Theory as an epistemological and ontological (as well as a methodological) foundation would provide a conceptual philosophical framework and scaffolding for the construction of a comprehensive integrated metatheory of addiction.

The reason for Integral Theory

Wilber's (2000, 2006) Integral Theory is often referred to as the AQAL model, with AQAL representing all quadrants, all levels, all lines, all states and all types, with these five elements signifying some of the most basic repeating patterns of reality. Integral scholars believe that including all of these elements increases one's capacity to ensure that no major part of any solution is left out or neglected (Esbjörn-Hargens, 2009).

Integral Theory is both "complexifying", in the sense that it includes and integrates more of reality, and simplifying, "in that it brings order to the cacophony of disparate dimensions of humans with great parsimony" (Marquis, 2009, p. 38). The strength of Integral Theory is its ability to integrate vast fields of knowledge and, according to Marquis (2008), Integral Theory provides a "meta-theoretical framework that simultaneously honours the important contributions of a broad spectrum of epistemological outlooks while also acknowledging the parochial limitations and misconceptions of these perspectives" (p. 24). Wilber (2006) states that Integral Theory is comprehensive rather than reductionistic, and sees it as "a comprehensive map of human potentials" (p. 1).

Integral Theory has been applied in over 35 disciplines (Esbjörn-Hargens, 2006, 2009). The field of addiction studies and recovery is only one of these fields. Most of the articles published to date about the application of Integral Theory and substance abuse have focused on treatment design (Du Plessis, 2010; 2012a; Dupuy & Gorman, 2010; Dupuy & Morelli, 2007; Shealy, 2009; Amodia et al., 2005), and only recently have articles been published exploring the application of the Integral Theory in relation to etiological models of addiction (Du Plessis, 2012b, 2013).

What makes Integral Theory particularly useful for this study is its post-metaphysical stance and metatheoretical ability. Integral Theory is "derived from the analysis of other theories, philosophies, and cultural traditions of knowledge" (Edwards, 2008a, p. 65). It is important to point out that Integral Theory is not strictly a theory. In

theory, data is the relevant set of empirical and conceptual experiences about which the theory makes some validity claim (Meehl, 2002). Integral Theory is metatheoretical in that its elements are derived from the analysis of other theories. In other words, it "is not a theory because its subject matter is other theory and *not* the empirical world of immediate experience and the concepts and symbols that mediate those experiences" (Edwards, 2008a, p. 65). Edwards (2008a) points out a feature of Integral Theory which encapsulates the value it holds for this particular study, in that it "has the capacity to adjudicate on how theories, and the core second-order conceptual elements that constitute them, relate to each other, how they appear in balanced or in distorted forms, and how they are combined to develop systems of knowledge, categories of social policy, and forms of practice that can either emancipate or enslave us and our communities" (p. 66).

Simply put, in the context of this study, Integral Theory could have the capacity (but is not limited) to evaluate:

- how existing etiological models of addiction arise, depending on the specific methodology applied, and accompanied by their underlying foundational worldviews (epistemological pluralism)
- how and why etiological models enact only certain specific features of addiction (ontological pluralism)
- a specific model's triadic relationship between epistemology, ontology and methodology

- the various conceptual shortcomings, as well as the strengths of different models
- how the various models give rise to specific injunctions, and
- how Integral Theory could provide an integrated meta-conceptual scaffolding.

Considering these envisioned capabilities of Integral Theory it was tentatively concluded that a study which explored its possible value as an adequate metatheoretical foundation for the pursuit of an integrated and functional metatheory of addiction would be valid.

Criteria for evaluating Integral Theory as a foundation for an integrated metatheory of addiction

To evaluate the hypothesis that Integral Theory can provide a meta-theoretical and meta-conceptual foundation for an integrated metatheory of addiction, the study suggested several criteria, to be appraised in the next chapter.

It has briefly been pointed out the problems that any metatheorist or metatheory encounters when trying to prove its legitimacy within academia. These include, but are not limited to, a lack of agreement regarding method, a lack of an institutional base, and limited acceptance into the canon of what constitutes good science. Moreover, there is a general dearth of literature and consensus regarding what constitutes a good science of

metatheory. One of the few scholars who have described evaluative criteria for metatheory in recent years is Edwards (2008a).

Evaluating metatheory

Edwards (2008a) proposes two ways in which metatheory can be scientifically evaluated: (1) "the evaluation of the metatheory via commonly applied logical criteria" and (2) "evidence from the analysis of the unit-level theories on which the metatheory is based" (p. 67).

As with the construction of "unit-level theory", the "logical criteria" approach to metatheory building can be evaluated through the application of a number of formal criteria. Many frequently used criteria already exist in social science research, for example, parsimony (minimal theoretical concepts variant), conservatism, and internal consistency (Ritzer, 1992). These criteria derive either from a modernist or a postmodern perspective, or from both. Edwards (2008a) believes that although metatheories generally strive to be much more than just rational explications of some phenomenon, they can still be accessed via rational arguments.

The second approach which Edwards (2008a) suggests for evaluating metatheory is an "evidence-based approach" - which "involves the testing of propositions according to their capacity to explain the 'data' within a particular domain" (p. 67). This approach is carried out by considering the relationship between the metatheory and its "unit theories". This approach evaluates how well the metatheory accounts for the relevant

empirical data, which means that all important theories must be included and accommodated.

Edwards (2008a) says that both these evaluative approaches are commonly used in theory building and he proposes that they will also have significance on a metatheoretical level (Bacharach, 1989; Brookfield, 1992). There are many other criteria for evaluating theory but Edwards (2008a) is of the opinion that these two suggested approaches (logic and evidence) are the minimum criteria that any metatheory should meet in order to be regarded as scientifically valid. If these two criteria are not met then a metatheory is not scientifically based, and should be regarded as merely a form of speculative philosophical metatheorising.

In summary, a scientific metatheory can reveal the soundness of its truth claims through both logical and evidential arguments. "These grounds constitute a minimal level of evaluation for the rigorous evaluation of metatheory" (Edwards, 2008a, p. 69). The evaluative criteria used in this research included a combination of both these means of assessment.

Evaluative criteria

To evaluate the suitability of Integral Theory as a philosophical foundation for an integrated metatheory of addiction, several criteria which comprise of both Edwards' suggestion of logic and evidence were proposed. These criteria may be considered essential features of the architectonic of any metatheory that attempts to provide the conceptual scaffolding in the construction of a comprehensive metatheory of addiction.

These evaluative criteria were c*onceptual integration*, *ontological span, ontological depth, empirical validity* and *internal consistency.* They are described in further detail below:

- ***Conceptual integration***. The metatheory must provide a conceptual framework which is able to accommodate and integrate the various (and often conflicting) explanatory theories of a given phenomenon. In short, the theory should provide integration of methodological and epistemological pluralism in the field of study. This criterion correlates with the oft-used principle of organisation. Organisation refers a useful theory attempting to bring together several concepts and to make sense of them. It does not treat concepts in isolation, but helps describe their relationships. In addition, it systematically builds on and expands current knowledge.

- ***Ontological span.*** The metatheory must explain why different theories and their accompanied methodologies enact different aspects of the same phenomenon (ontological pluralism). It should be able to provide an integrative framework that can explicate and place the various ontological enactments of various epistemologies and methodologies.

- ***Ontological depth.*** Whereas ontological span refers to ontological pluralism, ontological depth provides a framework for understanding addiction as a multiple object on a continuum of ontological complexity, and for understanding how

various etiological models address addiction at various degrees or stages of ontological complexity. The metatheory should be able to show how the various etiological models correlate with various degrees of ontological complexity and integrate it into a logically consistent framework.

- ***Empirical validity.*** Finally, the metatheory must be able to explain the major observations (theories) relating to the phenomenon. It must be able to explain why certain theories are included or omitted in its design. If certain theories cannot be accommodated, the validity of the conceptual design will be questioned. Empirical validity can be understood as an "evidence-based criterion" (Edwards, 2008). Moreover, it must also accommodate the observations of clinicians, researches and the phenomenological experience of addicts themselves.

- ***Internal consistency.*** This means that the various criteria listed above, as well as the main hypothesis, must be internally consistent with each other within the metatheory. Internally consistency refers to the concepts and propositions contained within the theory must be logically consistent with each other. They should be logically related, build on each other, or contribute to the explanatory power of each other.

The remainder of this study evaluates Integral Theory's rigour when tested against these criteria – i.e. when applied as an epistemological, ontological (and methodological)

conceptual foundation for the development of a comprehensive integrated metatheory of addiction.

The evaluation continues in the following chapters:

- Chapter 6: In this chapter Integral Theory is applied in the context of addiction, and evaluated against the abovementioned criteria.
- Chapter 7: This chapter follows on from the results of the previous chapter, and tentatively outlines an integrally informed metatheory for addiction.

Chapter 5 – Integral Theory and Addiction

Introduction

Integral Theory has been applied in integrally informed approaches to recovery (Du Plessis, 2010, 2012a; 2012b; Gorman, 2012; Dupuy & Gorman, 2010; Dupuy & Morelli, 2007; Shealy, 2009; Amodia et al., 2005a), and tentative explorations of its relevance have been used to help understand the nature and etiology of addiction (Du Plessis, 2012b, 2013). However, no extensive academic research has been undertaken in exploring the usefulness of Integral Theory in these areas or its integrative value in addiction studies. This research study represents the first in-depth attempt at such an investigation.

This chapter is comprised of two main sections. The first section will be a review of how the five elements of the AQAL model can and have been used to understand addiction and to inform addiction treatment (Du Plessis, 2010, 2012a). The review and discussion of the applications of the five elements of the AQAL model serve an important function in exploring one of the criteria, *empirical validity*. It is pointed out how the various elements of Integral Theory are able to integrate and explain many empirical observations made by researchers and clinicians, as well as correlate with the phenomenological experience of individuals in active addiction and recovery.

The remainder of the chapter is an in-depth evaluation of the paradigmatic and metaparadigmatic features of Integral Theory against the criteria outlined in the previous

chapter (*empirical validity, ontological span, ontological depth, internal consistency,* and *conceptual integration*).

AQAL: Addiction and Addiction Treatment

The quadrants

Integral Theory states that reality has at least four irreducible perspectives, the subjective, intersubjective, objective, and interobjective, which must be consulted when attempting to fully understand any aspect of reality (Esbjorn-Hargens, 2009). These four universal perspectives are known as the quadrants. This section of the chapter briefly explores addiction and recovery from these four perspectives. In previous articles researchers have pointed out that any treatment programme will be incomplete if it does not account for all four quadrants in its therapeutic understanding and design (Du Plessis, 2010, 2012a, 2012b; Gorman, 2012; Dupuy & Gorman, 2010; Dupuy & Morelli, 2007; Shealy, 2009; Amodia et al., 2005).

Upper-Right Quadrant (objective). In attempting to understand addiction and recovery through exploring objective aspects of an individual - from the upper-right quadrant perspective - we notice all the positivistic and objective perspectives of individual structures, events, behaviours and processes (Marquis, 2008). From this perspective addiction can be classified as a "brain disease". Addiction affects the mesolimbic system of the brain, the area where our instinctual drives and our ability to

experience emotions and pleasure reside. In this area is the medial forebrain bundle, popularly known as the pleasure pathway (Brick & Ericson, 1999). The pleasure pathway of the brain is "hijacked" by the chronic use of drugs or compulsive addictive behaviour. Due to the consequent neurochemical dysfunction the individual perceives the drug as a life-supporting necessity, much like breathing, or meeting the demands of thirst or hunger (Brick & Ericson, 1999). This explains why most addicts cannot stop on their own in spite of adverse consequences and why addicts need external support.

As addiction affects both physical and neurological well-being, an effective recovery model needs to address these areas. It is curious that most treatment programmes place very little emphasis on physical and neurological aspects. Holford et al., (2008) emphasises the importance of diet and nutritional supplements in the treating of addictions and maintenance of recovery. Holford et al., (2008) believes that most addicts suffer from reward deficiency, which is a neurochemical imbalance in brain chemistry that translates into negative emotions such as anxiety, feelings of emptiness and hypersensitivity. Many addicts have deficiencies in brain chemistry even prior to their addiction. There are many factors that can create a reward-deficient brain chemistry, such as genetics, prenatal conditioning, malnutrition, stress, lack of sleep, physical or emotional trauma and the long-term use of mood-altering substances. If not rectified, this brain chemistry deficiency will continue indefinitely through an addict's recovery period, resulting in recovering addicts being prone to relapse, even though they are abstinent and doing psycho-spiritual work. The symptoms of reward deficiency will only abate when

the neurochemical imbalance is corrected. Erickson (1989) suggests that for treatment to be effective it requires a combined physiological and psychological approach and without improving an addict's neurophysiology, treatment is often fruitless or incomplete. To ensure an effective addiction treatment programme and sustainable recovery physical and neurological health is imperative.

Upper-Left Quadrant (subjective). Exploring addiction and recovery from the Upper-Left Quadrant perspective includes the subjective and phenomenal dimensions of individual consciousness. Addiction wreaks havoc in the addict's inner phenomenal world and has disastrous consequences for the addict cognitively, existentially, emotionally and spiritually. The addict starts to lose control of his or her inner world as the "addict voice" becomes progressively "louder". Addicts often regress developmentally to egocentric childlike states of self-centeredness and unreasonableness. Addiction is progressive and will eventually negatively alter the interior phenomenal world of the addict. Nakkin (1998) believes addiction develops from a definite, though often seemingly indistinct beginning, toward a specific end-point. The end-point of the addictive process is complete control of the self by the illness.

Addicts are known to have turbulent and overwhelming inner worlds. From a psychodynamic perspective, addiction is often referred to as an attempt at self-medicating the addict's painful and confused inner world (Khantzian, 1999). Owing to defects in ego and self-capacities, the substance of choice becomes the addict's main method of mood management, which temporarily restores inner equilibrium. Flores (1997) says that

addiction can be "viewed as a misguided attempt at self-repair. Because of unmet developmental needs, certain individuals will be left with an injured, enfeebled, uncohesive, or fragmented self ... alcohol, drugs, and other external sources of gratification (i.e., food, sex, work, etc.) take on a regulating function while creating a false sense of autonomy, independence, and denial of need for others (p. 233).

Therefore, an essential component of recovery is learning healthy ways to self-soothe and to cope with stress (Khantzian, 1999; Levin, 1995). If not addressed, these individuals' addictions will continually migrate, seeking dysfunctional ways to deal with their turbulent inner worlds, ineffective object-relations, and unresolved trauma (Flores, 1997).

A vital component of a comprehensive therapeutic protocol is some form of psychotherapeutic process that deals with unresolved trauma, family-of-origin issues, shadow work, and the building of emotional literacy. According to Ulman and Paul (2006), psychotherapy can serve as a transitional self-object, dispensing functions that serve as "psychopharmacotherapeutic" relief. In other words, a psychotherapist can replace the faulty self-object-like functioning of a client's drug of choice, and help the client to re-experience "archaic moods of narcissistic bliss" in a therapeutic, rather than an addictive fashion. "Such an altered state of consciousness may eventually supersede and supplant an addicted patient's dependence on an addictive state of mind" (Ulman & Paul, 2006, p. 63).

Any recovery process that does not provide cognitive, emotional, existential and spiritual healing and education will be partial and ineffective in providing sustainable sobriety.

In a letter addressed to Bill Wilson, the co-founder of AA, Carl Jung stated: "You see, alcohol in Latin is *spiritus* and you use the same word for the highest religious experience as well as for the most depraving poison. The helpful formula therefore is: *spiritus contra spiritum*" (Kurtz & Ketcham, 2002, p. 118). Jung was pointing out to Wilson that at the heart of a cure for alcoholism there often is a spiritual transformation, because he also believed that the thirst for alcohol "was the equivalent, on a low level, of the spiritual thirst of our being for wholeness, expressed in medieval language: the union with God" (Kurtz & Ketcham, 2002, p. 113). So, in a sense, addicts and alcoholics are misguided mystics. Ronell (1993) echoes this sentiment and states that addiction is "mysticism in the absence of God, a mystical transport going nowhere" (p.103). Thanks to the influence of Jung and others, such as William James (1961/1901), whose book *The Varieties of Religious Experience* was studied by Bill Wilson in depth, AA and subsequent 12-Step groups have seen the need for healthy spirituality as a central component of the recovery process (Kurtz & Ketcham, 2002). Furthermore, James's pragmatic thinking - he was one of the primary proponents of the philosophical system of pragmatism - had a huge influence on AA's pragmatic and pluralistic approach to spirituality (Flores, 1997; Kurtz, 1982). Rioux (1996) illustrates how certain spiritual healing techniques can play a role in a holistic addiction counselling approach, as they

focus on inner realities that produce harmony and self-wholeness. Winkelman (2001) further suggests that spiritual practices can also free addicts from ego-bound emotions and provide balance for conflicting internal energies. Spiritual practices can help addicts achieve a sense of wholeness to counter the sense of self-loss which lies at the core of addictive dynamics. These practices enhance self-esteem by providing connectedness beyond the egoic self, with a "higher power of your understanding" as suggested in 12-Step programs.

An essential component of the spiritual recovery dimension is the focus on finding existential meaning for the individual in recovery. Spiritual practice plays an important role in the healing of addiction by providing a sense of meaning to life often found lacking in the addict population (Miller, 1997, 1998).

Lower-Left Quadrant (intersubjective). Understanding addiction and recovery from the Lower-Left Quadrant, the "we" space or perspective includes the intersubjective dimension of the collective (Marquis, 2008). Addiction progressively erodes relationships and is often caused by eroded relationships. Addiction may be viewed as an intimacy disorder as addicts often have an inability to form healthy intimate relationships (Carnes, 2008). Family and friends often become perplexed and outraged by the addict's behaviour – as it transgresses cultural norms held by the addict's family and friends. Eventually many addicts undergo a cultural shift and enter the "world of addiction" with its own rules and cultural norms. Addicts find themselves in a new culture where their addictive behaviours are accepted and often encouraged. They are now given new

culturally relevant information and a new set of rules. William White (1996), states, "The physiological, psychological, and spiritual transformations that accompany the person-drug relationship occur within and are shaped by the culture of addiction (p. xxiii).

It is these cultural and relational aspects of addiction that many addicts find the hardest to give up. It is very difficult for non-users to understand the thrill, meaning, brotherhood and adventure that addiction can provide – that is, while the going is good. Obviously, in the end all the benefits of the addiction culture are also destroyed by addiction, but often the addict continues searching in vain for those early care-free days – that appear like a mirage enticing them, but always out of reach. Burroughs (in White, 1996) says this about heroin addiction: "Junk is not just a habit. It is a way of life. When you give up junk, you give up a way of life" (p. 2). Any form of treatment that does not acknowledge and understand the principles behind the culture of addiction as well as the need for a healthy recovery culture is bound to be ineffective. "Addiction and recovery are more than something that happens inside someone. Each involves deep human needs in interaction with a social environment. For addicts, addiction provides a valued cocoon where these needs can be, and historically have been met" (White, 1996, p. xxvi).

Scholars who support the self-medication hypothesis believe that addicts often suffer from defects in their psychic structure due to poor relationships when they were young (Flores, 1997; Khantzian et al., 1990; Levin, 1995). This leaves them prone to seek external sources of gratification, such as drugs, sex, food, work, and so forth, in later life (Kohut, 1971, 1977). Khantzian (1994) asserts that "[s]ubstance abusers are predisposed

to become dependent on drugs because they suffer with psychiatric disturbances and painful affect states. Their distress and suffering is the consequence of defects in ego and self capacities which leave such behaviour" (p. 1).

For addicts to develop a healthy and stable sense of self, they need to be in a supportive and knowledgeable social environment. The addict's psychic troubles are born from poor relationships and can only be modified via new relationships (Kohut, 1997; Khantzian, 1994; Kurtz, 1982). Some object-relation theorists believe 12-Step fellowships provide the ideal social environment for addicts to heal their psychic deficits (Flores, 1997).

Lower-Right Quadrant (interobjective). Exploring addiction and recovery from the Lower-Right Quadrant includes the interobjective perspective of systems, addressing observable aspects of societies such as economic structures, civic resources, and geopolitical infrastructures (Marquis, 2008). Addiction affects this realm profoundly, especially those addicted to "hard drugs' such as crack and heroin. Drugs cost a lot of money. Addicts often lose their jobs, get evicted, get into trouble with the law and may be incarcerated. As is said in Narcotics Anonymous, the result of addiction is "Jails, Institutions and Death". While there are many acultural addicts who manage to keep their jobs and have financial stability, for the majority of addicts this quadrant is severely compromised. The culture of addiction has its own infrastructure - crack houses, bars, night clubs, casinos, strip clubs, areas of prostitution, etc. As addicts progressively migrate from one culture to the next they start spending more time within the

infrastructure of addiction culture. The more addicts frequent and live within the infrastructure of the culture of addiction the more their behaviour is normalised, which ultimately reinforces their denial of the problem.

Maslow (1968), in his theory of human motivation, proposes that motivation is determined by a hierarchy of needs. He suggests that there are at least five sets of basic needs. These are physiological, safety, love/belonging, esteem, and self-actualisation needs. Simply put, these five needs form a hierarchy that orders our urgency to satisfy these needs — for example, a hungry person with no home is usually not that concerned with aesthetic or spiritual well-being until his/her hunger and safety needs have been satisfied. Addiction exemplifies this theory. In most cases, addicts' addiction needs take precedence over most of their other higher needs. Addiction primarily manifests as physiological/safety needs, with the result that when these are not satisfied, all other needs become much less of a priority, resulting in a compulsive drive to meet the addiction needs at the expense of all other areas of life.

Lines of Development

According to Integral Theory, each aspect of the quadrants has distinct capacities that progress developmentally; these are known as lines of development (Esbjörn-Hargens, 2009). Wilber (2000) has theorised that each person has multiple lines of development, similar to Howard Gardner's (1993) conception of multiple intelligences.

These developmental lines can be plotted on a psychograph. Although the concept of multiple lines of development is a non-dominant notion in developmental psychology, and empirical proof for separate lines of development is inconclusive, it nevertheless remains a useful clinical metaphor (Forman, 2010; Ingersoll & Zeitler, 2010). Viewing and quantifying the recovery process metaphorically from a "lines of development" perspective provides easily accessible insight to therapists and clients as to what aspects of the client's recovery programme can be improved.

The integral psychograph is an artefact of Integral Theory which is believed to have considerable therapeutic value for clinicians (Wilber, 2006). Although the integral psychograph is useful as a clinical metaphor, it is problematic when it is used to try to reduce the complex and interrelated developmental processes of an individual, as well as slightly "quadrant absolutist" to measure lines of development from an upper-left quadrant perspective, rather than framed in the context of the other quadrants as well. It is impossible to have a quantitative measure of all these lines in one "static" graph. Although useful as a broad orienting generalisation, it may be clinically counterproductive to view a client's development through this "model", and a clinician may run the risk of oversimplifying a complex phenomenon. On the other hand, if one views the psychograph as a "static impression" of a fluid model of various potentials a client may inhabit at a specific point in time related to specific cognitive and environmental states, it then moves closer to reflecting the mercurial and complex process of development.

In working with addicted patients at various stages of their recovery, and in trying to apply the psychograph model to their processes, the researcher noted that what would be referred to as "healthy" emotional development for somebody with a month of clean time, i.e. a month free of acting on the addiction, would be considered "unhealthy" development for somebody with 10 years of clean time. (In the same way that receiving 50% for grade 1 reading skills is acceptable when you are 8 years old, but problematic if you are 25 years old.) Using a standard developmental model and psychograph one could easily arrive at the conclusion that somebody in early recovery has "low" emotional development and somebody with 10 years clean has "higher" emotional development. This type of "scoring" is not useful and does not take into account what healthy emotional development should look like at different stages. Therefore, what would score "high" on a psychograph of an individual with a month of clean time would score "low" on a psychograph for an individual with 10 years of clean time. This means that for each stage of development an "independent" psychograph needs to be developed. Furthermore, we can add another axis to the graph to indicate potential pathology in each line.

Levels of Development

When viewed as lines of development, each of these six recovery dimensions progress and fluctuate through a sequence of developmental altitudes, known in Integral Theory as stages or levels of development (Wilber, 2006). An insight into addiction and recovery from a stage perspective is imperative for truly all-inclusive understanding and

treatment (Du Plessis, 2010, 2012a; Dupuy & Gorman, 2010; Dupuy & Morelli, 2007). A therapist could incorporate three types of developmental stage models into his/her therapeutic orientation. The first is the client's general stage of development (Cook-Greuter, 2004; Piaget, 1977; Wilber, 2006). A client's overall development or centre of gravity "is a key factor in treatment planning, profoundly influencing which categories of intervention are likely to be optimal, neutral, or contraindicated" (Marquis, 2009, p. 18). The second type is the client's stage of change as defined by the transtheoretical model of intentional behaviour change (DiClemente & Prochaska, 1998). It must be noted that a client can be at different stages of change for different aspects of his addiction and elements of his recovery; for instance, at the maintenance stage for crack addiction, the pre-contemplative stage for sex addiction, and the contemplative stage for giving up junk food and adopting healthier eating habits. Finally, the third type is the general attitude to recovery of a client based on clean time and stage of recovery using recovery-based developmental approaches (Bowden & Gravitz, 1998; Nakken, 1998; Whitfield, 1991). Depending on the client's stages of development, various recovery practices and therapies are suggested.

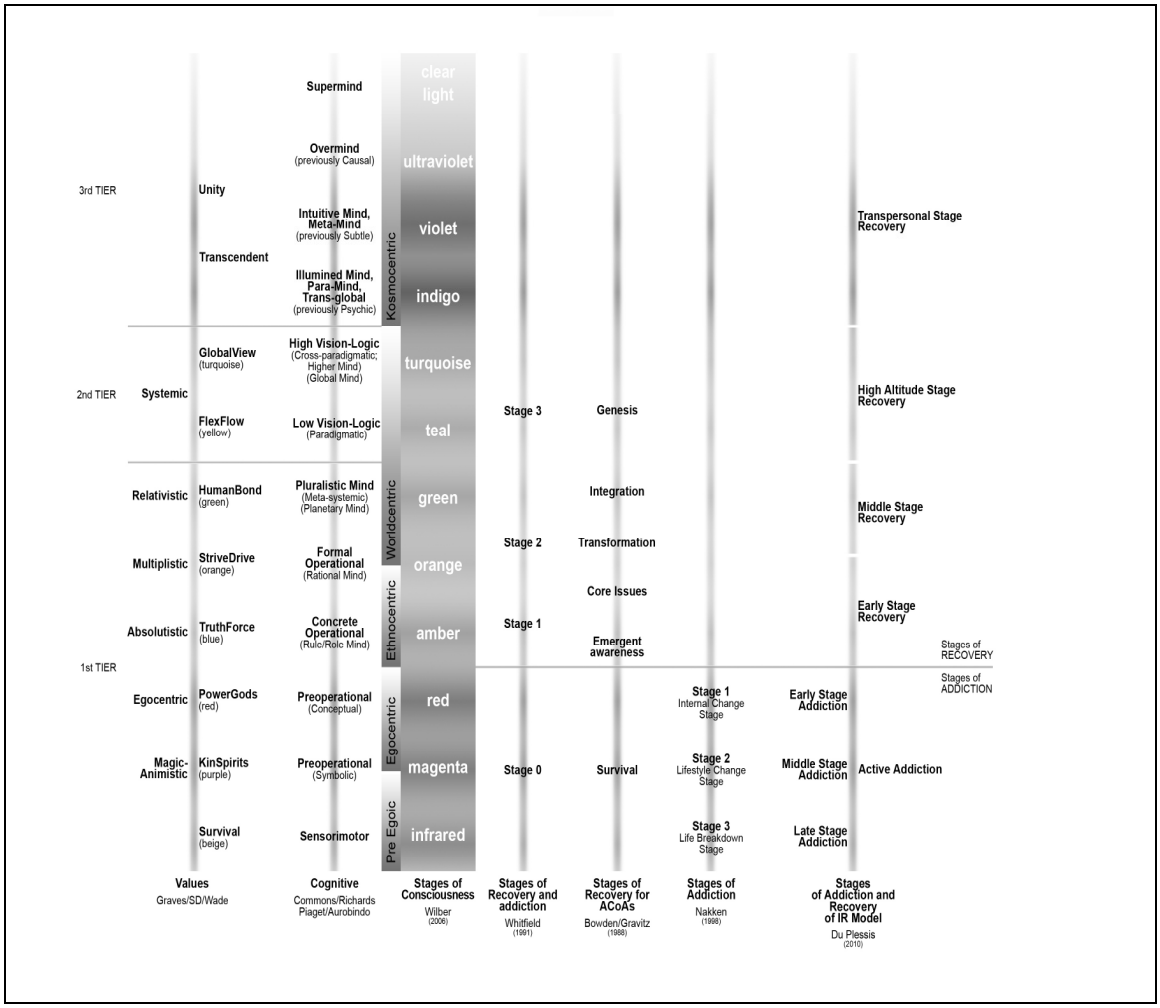

Figure 1: Developmental models of addiction and recovery

Figure 1 shows various developmental models used in Integral Theory, i.e. developmental models of addiction and recovery, as well as the author's own composite developmental model (Du Plessis, 2012b). Although the stages of addiction and recovery may be better understood as chronological stages or phases, there may be a correlation between the stage model as articulated in Integral Theory and the various stages (or phases) of recovery models. Simply put, earlier stages of recovery may correlate with

early developmental stages, and later stages of recovery may correlate with more complex developmental stages. The figure is a simplification of the developmental stages at which a client's centre of recovery gravity can possibly rest. It must be noted that the figure is speculative regarding how the stages of recovery and addiction relate to other developmental models, and is best used as a clinical metaphor.

States of Consciousness

"In addition to levels and lines there are also various kind of states associated with each quadrant. States are temporary occurrences of aspects of reality" (Esbjörn-Hargens, 2009, p. 13). Understanding addiction and recovery from a state perspective may be one of the missing links in contemporary addiction treatment programmes' attempts to create sustainable treatment protocols. Addicts are obviously experts on states. Using substances or engaging in any mind-altering behaviour is an attempt to create an altered state of consciousness (ASC), and the specific psychoactive effect of various drugs and mind-altering behaviour creates various types of ASCs (Milkman & Sunderwirth, 2010). It follows that viewing addiction in terms of an ASC perspective is crucial for a complete understanding of the nature of addiction (Winkelman, 2001).

Some researchers have argued that the majority of addiction treatment programs fail to integrate a huge body of literature that highlights the therapeutic benefits for addicts in experiencing ASCs. They propose that a principal reason for the high relapse

rate in treatment programs is the failure of those programs to address the basic need to achieve ASCs (McPeake et al., 1991). Some scholars believe that humans have an innate drive to seek ASCs (e.g., McPeak et al. 1991; Weil, 1972; Winkelman, 2001; Ken Wilber, personal communication, January 13, 2011). They believe that addicts follow a normal human motive to achieve ASCs, but they use maladaptive methods because they are not provided with the opportunity to learn "constructive alternative methods for experiencing non-ordinary consciousness" (McPeak et al., 1991, as cited in Winkelman, 2001, p. 340). From this viewpoint, drug use and addiction are not understood as an intrinsic anomaly, but rather as a yearning for an inherent human need to be met.

In some instances the etiological roots for certain individuals' addiction may be a dysfunctional attempt, borrowing terms from Robert Assagiloi (1975), at "self-realization", and the consequent flawed channeling of "superconscious spiritual energies," energies to which these individuals are often sensitive but which have not found suitable ways to be actualised. It is obvious that drug use and addiction are associated with an alteration of consciousness; however addiction has seldom been analysed from the perspective of consciousness theory or cross-cultural patterns of the use of ASC. Weil (1972) and Siegal (1984) propose that humans have an innate drive to seek ASC. From this perspective, drug use and addiction are not understood as an inherent abnormality but as a striving to meet an innate human need.

Alcoholics Anonymous (AA) acknowledges the importance of an alteration of consciousness for recovery to be effective: it calls for "a new state of consciousness and

being" (Alcoholics Anonymous, 1987, p. 106) designed to replace the self-destructive pursuit of alcohol-induced states with a more healthy life-enhancing approach. AA advocates meditation, a change in consciousness, and spiritual awakening as fundamental in achieving and maintaining sobriety.

Blum (1995) believes that addicts often have a neurologically based inability to experience pleasant feelings within simple life experiences and suggests that a neurological-normalising shift may happen as a result of neurotherapy which rectifies the endless quest for neurotransmitter balance, as explained by his Reward Deficiency Syndrome Model. In Integral Theory, states refer to the various states of consciousness available at any stage of development (Wilber, 2006).

Every human being engages in various activities to feel good. Feeling good and avoiding unnecessary pain are universal needs. To feel good, we seek out activities that alter our brain chemistry. Addiction can be understood as this normal need gone awry. Milkman and Sunderwirth (2010) state, "In light of the seemingly universal need to seek out altered states, it behooves researchers, educators, parents, politicians, public health administrators, and treatment practitioners to promote healthy means to alter brain chemistry" (p. 6). Addicts have found a dysfunctional way to meet this innate need through substances or certain behaviours to which they become addicted. Addicts normally have three dominant ways of seeking comfort and altering their consciousness: "We repeatedly pursue three avenues of experience as antidotes for psychic pain. These preferred styles of coping - satiation, arousal, and fantasy - may have their origins in the

first years of life. Childhood experiences combined with genetic predisposition are the foundations of adult compulsion. The drug group of choice - depressants, stimulants, or hallucinogens - is the one that best fits the individual's characteristic way of coping with stress or feelings of unworthiness. People do not become addicted to drugs or mood-altering activities as such, but rather to the satiation, arousal, or fantasy experiences that can be achieved through them" (Milkman & Sunderwirth, 2010, p. 19).

The quotation above clearly points to the need for addicts in recovery to find healthy behaviours and activities to manifest their preferred coping style, since this preferred coping style (satiation, arousal, or fantasy) correlates with their drug of choice (Du Plessis, 2012).

Types

Mark Forman (2010) states, "The notion of types in the Integral model describes the diverse styles that a person (UL or LL) may use to translate or construct reality within a given stage of development" (p. 231). "Types are the variety of consistent styles that arise in various domains and occur irrespective of developmental levels. As with the other elements, types have expression in all four quadrants" (Esbjörn-Hargens, 2009, p. 15). We can therefore have various classifications of different "types" in the context of addiction and recovery in each of the four quadrants, i.e. types of addictions (heroin, crack, etc.), types of cultural enmeshment (acultural, bi-cultural, and culturally

enmeshed), types of dual-diagnosis, types of "kinship" in sub-cultures (punk, trance, hip-hop, criminal, etc.), "brain state" types, DSM-V axis II disorder types and many more. For a therapist to have a comprehensive understanding of a client, he or she needs to identify the different addiction/recovery types the client displays in each of the six recovery dimensions. The usefulness of viewing addiction and recovery from a typology perspective is illustrated in the following two examples. First, in the discussion of states, we see that among addicts there are typically three different types of coping styles (satiation, arousal, or fantasy) that correlate with their drug of choice (depressants, stimulants, or hallucinogens).

Milkman and Sunderwirth (2010) state, "After studying the life histories of drug abusers, we have seen that drugs of choice are harmonious with an individual's usual means of coping with stress" (p. 19). Applying this simple typology to a client's drug of choice informs the therapist regarding a number of important factors. It enables the therapist to identify the client's primary mode of stress reduction by correlating it to their drug of choice. When in recovery, the client will continue to use a preferred coping style and will be attracted to activities that produce a similar effect to their drug of choice. For example, an amphetamine user will likely be attracted to high-risk, physically demanding activities that are stimulating. Secondly, another useful typology is the bioself-psychological typology of addiction of Ulman and Paul (2006), which is a synthesis of the self-psychological and biological-psychiatric versions of bipolarity. Kohut (cited in

Ulman and Paul, 2006), whose concept of the bipolar self represents the foundation for the model of Ulman and Paul, states that:

> The self should be conceptualized as a lifelong arc linking two polar sets of experiences: on one side, a pole of ambitions related to the original grandiosity as it was affirmed by the mirroring self-object, more often the mother; on the other side, a pole of idealizations, the person's realized goals, which, particularly in the boy though not always, are laid down from the original relationship to the self-object that is represented by the father and his greatness (p. 30).

In the bioself-psychological typology, addiction is understood as a psychological end-result of developmental arrest in the bipolarity of the formation of the self. Biological psychiatrists, in their conception of bipolar spectrum disorder, devote considerable attention to depression and mania as they manifest in this disorder. These mood disorders correlate with disorders of the bipolar self as understood by Kohut (cited in Ulman & Paul, 2006, pp. 395-396):

> In general, a disturbance in the pole of grandiosity may find expression in either an empty, depleted depression or, in contrast, in over-expansive and over-exuberant mania or hypomania; whereas a disturbance in the pole of omnipotence may appear in either depressive disillusionment and disappointment in the idealized or, in contrast, in manic (or hypomanic) delusions of superhuman physical and/or mental powers. We maintain that an individual may be subject to

specific outcomes resulting from a disturbance in either or both of these poles of the self.

Owing to the specific accompanying mood disorder of each of the possible disturbances of the poles of the self, individuals will be attracted to certain psychoactive substances, which can be understood as an unconscious attempt at rectifying a specific deficit in self and coping style (Wieder & Kaplan, 1969).Using the masculine and feminine typology as articulated in Integral Theory, we can see from the two examples provided above how the psychopharmacological properties of certain classes of substances correlate with masculine and feminine typologies (i.e. depressants/feminine and stimulants/masculine), and how these poles of the self can also be classified within a masculine and feminine typology (pole of grandiosity/feminine and pole of idealizations/masculine). We can therefore see how certain "masculine or feminine drugs" acts as a "structural prosthesis" in an attempt to rectify dysfunctional masculine or feminine poles of the self and coping styles (Du Plessis, 2010).

There are many personality types that can be applied in the context of addiction and recovery. One example is that of feminine and masculine types. "When we speak of 'masculine' and 'feminine' we are not necessarily speaking of biological 'male' or 'female'. Rather we are referring to a spectrum of attitudes, behaviours, cognitive styles, and emotional energies" (Dupuy, 2007, p. 37). The psychoactive properties of drugs and even aspects of process addictions can have a masculine or feminine "voice". "Downers" such as tranquilizers, barbiturates and heroin can be understood as having a feminine

"voice," and moreover addictions such as co-dependency, love addiction, certain aspects of sex addiction, and certain aspects of gambling (particularly slot machines) have a similar voice. On the other hand, "uppers" such as cocaine, methamphetamine and process addictions such as certain high-risk aspects of sex addiction and gambling (especially gamblers who play tables) have a more masculine "voice". These masculine or feminine "voices" of specific addiction may correlate with certain addiction neuropathways. The "masculine addictions" activate the "arousal neuropathways" of the brain which are about pleasure and intensity. The more "feminine addictions" activate the "numbing neuropathways" of the brain which produce a calming, relaxing and soothing effect (Du Plessis, 2010, 2012a).

Furthermore the author has observed a correlation between the "object-relations" that addicts have with their parents and their drug(s) of choice (Kernberg, 1975; Kohurt, 1977). The reason for this may be that the addict's "object-relations" can have pathological masculine and/or feminine aspects and consequently alter brain chemistry, resulting in the individual being more prone to certain "masculine or feminine addictions", in order to try to rectify the neurochemical abnormalities the dysfunctional "object-relations" has caused. This may explain my observation that many heroin addicts have distant or absent fathers, while being enmeshed with their mothers; whereas many cocaine addicts tend to have distant or absent mothers and domineering fathers. Therefore, from one perspective addiction might be seen as a dysfunctional attempt to rectify the addict's pathological masculine and feminine "object-relations". Consequently

the relationship addicts in early recovery have with their counsellors or therapists are crucial in healing these dysfunctional "object-relations". Left untreated, the addict will seek to rectify imbalances in dysfunctional ways. The author observed that when addicts cross-addict they tend to stay within the masculine or feminine "addiction types" (Du Plessis, 2010, 2012a).

Understanding the "voice" of the addiction can help in choosing an appropriate therapeutic treatment plan. Furthermore many addictions and addiction systems only survive in the dialectic between the masculine and feminine "voices", i.e. the alcoholic and the co-dependent enabler, the "dance" of the love addict and the love avoidant (Whitfield, 1991; Schaeffer, 1997). It is important for the treatment professional to know which "voice" has become pathological and to bring that "voice" back into healthy balance.

From Conceptual Chaos toward Conceptual Integration

The preceding discussion of the five elements of the AQAL model provided a parsimonious framework for major observations of addiction, and gives considerable evidence to support the criterion of *empirical validity*. There are very few empirical observations relating to an individual's addiction that cannot be accommodated within the AQAL framework. Moreover, these five elements of the AQAL model have been instrumental in developing integrally informed treatment protocols, because of their consistency with empirical observation (Du Plessis, 2010; 2012a; Dupuy & Gorman,

2010). Although this application and analysis of the five elements of Integral Theory in relation to addiction and recovery is insightful and has assisted in treatment design, it is inadequate to provide a comprehensive schema of addiction or a comprehensive metatheory. Furthermore, many of the previous publications on integrally informed approaches to addiction fall prey to the same problems that Hill (2010) points out in his critique of the BPS model (Du Plessis, 2010; Dupuy & Gorman, 2010; Dupuy & Morelli, 2007; Shealy, 2009).

However, the foundation for true conceptual integration can be laid only by means of a sophisticated application of Integral Theory's meta-paradigmatic ability and its post-metaphysical stance. The first step is to analyse certain features of Integral Theory: Integral Enactment Theory, Integral Pluralism and the notion of "third order ontology", and to evaluate these against the criteria of *conceptual integration*, *ontological span, ontological depth, empirical validity and internal consistency.*

Integral Enactment Theory

Integral Enactment Theory highlights the phenomenon of addiction as a multiple and dynamic object arising along a continuum of ontological complexity. Integral Enactment Theory adeptly points out how etiological models "co-arise" in relation to methodology (methodological pluralism) and enacts a particular reality of addiction (ontological pluralism), while being mediated by the world view of the subject applying the method (epistemological pluralism).

Esbjörn-Hargens (2010) explains that at the core of Integral Enactment Theory is the triadic notion of Integral Pluralism. He identifies three pluralisms that should be explicit within Integral Theory, namely epistemological, methodological, and ontological. Esbjörn-Hargens and Zimmerman (2009) developed a framework for this triadic structure where "epistemology is connected to ontology via methodologies. So, if we are going to have epistemological pluralism (the Who) and methodological pluralism (the How), then we ought logically (or integrally) to have ontological pluralism (the What)" (p. 146). Esbjörn-Hargens call this triadic arrangement Integral Pluralism.

Integral Pluralism is composed of Integral Epistemological Pluralism (IEP), Integral Methodological Pluralism (IMP), and Integral Ontological Pluralism (IOP) (Esbjörn-Hargens & Zimmerman, 2009; Esbjörn-Hargens, 2010).

Before exploring the three facets of Integral Pluralism, there will be a brief focus on the relevance of the concept of "enactment", an essential feature of Integral Theory's post-metaphysical position (Wilber, 2003a, 2003b, 2006; Esbjörn-Hargens & Zimmerman, 2009; Esbjörn-Hargens, 2010).

Enactment. The idea of enactment is vital in understanding why different theories of addiction do not have to be in contradiction of each other, as they are often interpreted, but can rather be understood as "true but partial". Enactment is the bringing forth of certain aspects of reality (ontology) when using a certain lens (methodology) to view it (Esbjörn-Hargens, 2010).

In short, reality is not to be discovered as a "pre-given" truth, but rather we co-create or "co-enact" reality as we use various paradigms to explore it (using paradigm in the Kuhnian sense – which includes the social injunctions associated with a certain worldview). For example, when attempting to understand addiction using objective empirical research methods we enact a different ontological reality than when using a phenomenological approach. By avoiding what Wilber refers to as the "myth of the given" we understand addiction as a multiple object with no existing "pre-given" reality to be discovered (Wilber, 2003a, 2003b, 2006). Yet it must be noted we are not referring here to the conception of immaterialism. Integral Pluralism and its conception of enactment can be seen as an option "between" subjective idealism or immaterialism (Berkley) and positivism or materialism. Wilber (in Esbjörn-Hargens, 2010) says:

> This is why I use the word sub-sist. There is a reality or a What that subsists and has intrinsic features but it doesn't ex-ist without a Who and a How. So that is where Integral Pluralism in general comes into being: it is bringing forth a reality but it is not creating the reality à la subjective idealism" (p. 169).

Different research methods in addictionology enact addiction in unique ways, and consequently bring forth different etiological models. Virtually all etiological models (typically based on a positivist foundation, including intrapsychic models founded on psychoanalytic metapsychology) treat addiction as a single object "out there" to be discovered or uncovered, and therefore, eventually run into trouble attempting to explain a feature of addiction outside of its enacted reality.

For example, physiological models and their accompanying research (naturalistic scientific) methodologies, enact the biological reality of addiction, and are inherently incapable of showing any truth of addiction outside the realm of biology, i.e. societal, existential, and so forth. In acknowledging the multiplicity of addiction's ontological existence, the "incompatibility" of the various etiological models disappears, because we can see that each enacts a different reality of addiction – each bringing forth valuable insights in its specific ontological domain. What one considers real depends in part on the means and apparatus one uses, so objects are therefore "enacted" (Murray, 2010).

In discussing the status of the ontology of climate change Esbjörn-Hargens (2010) raises some stimulating points, that is relevant to this study. In explaining the "inevitability of ontological pluralism" of climate change, he points out a relationship between the various methods that are used to "see" or enact this complex phenomenon, i.e. the relationship of (1) the common professions that encounter the phenomenon (the Who), (2) the associated methodology of each discipline (the How), and (3) the consequent view of climate change (the What). Exactly the same assertion can be made for the "enactment" of addiction models.

Applying the above-mentioned triadic relationship to the phenomenon of addiction highlights some fascinating, but seldom acknowledged, issues. When the various professions explore etiological models and apply their respective clinical methodologies, they may not refer to the same ontic phenomenon. We often acknowledge that various researchers and clinicians explore or treat different aspects of addiction, but often this is based on the assumption of a common ontic reality of addiction, and when

"puzzled" together we assume it forms a comprehensive picture of addiction (this is the underlying ontological and epistemological assumption of the BPS model and other compound models).

Is the above-mentioned statement a correct ontological assumption (What) to build theories (Why) on? Is the neurobiologist seeing the same addiction as the existential therapist? Is the psychoanalyst talking about the same addiction as the 12 step counsellor? Is the biochemist measuring the same addiction as the social scientist? Yes and no. Yes, in the sense that that they all attempt to view the socially defined and agreed-upon phenomena called addiction; and no, in the sense that they are "bringing-forth-into-the-world" and enacting different realities of the phenomenon of addiction, ranging in ontological complexity (first, second and third orders of ontology) – which can "overlap" ontologically, but are not the same ontic phenomenon.

In short: there are essential structures of addiction that share the "various enactments" of it, but how it "exists-in-the-world" (in a Heideggerian sense) varies, depending on the unique permutation of its integral enactment triad of "Who–How–What". Esbjörn-Hargens (2010) says: "In fact, there is not a clear, single, independently existing object, nor are there multiple different objects. There is something in-between: a multiple object ... This multiple object [addiction] is actually a complex set of phenomena that cannot easily be reduced to a single independent object" (p. 148).

The notion of enactment makes a strong case for accepting that Integral Theory can accommodate the criterion of *ontological span,* because it sufficiently explains why different theories and its accompanied methodologies enact different aspects of the same

ontic phenomenon. This will be explored further in the section on Integral Ontological Pluralism. All these elements relate to each other in a logically consistent way. None of the sub-elements contradict the larger scope of Integral Enactment and Integral Theory. The notion of enactment lays the groundwork for *conceptual integration*, which will be discussed in more depth in the section on Integral Methodological Pluralism.

It must be noted that all the elements of Integral Enactment are relevant to each of the evaluative criteria of the study, but certain elements are more relevant for certain criteria.

Integral Methodological Pluralism. Integral Methodological Pluralism (IMP) is derived from the eight zone extensions of the original AQAL model (Wilber, 2003a, 2003b, 2006). These eight primordial perspectives (8PP) derive from an inside view (i.e. a first-person perspective) and an outside view (i.e. a third-person perspective) of the four quadrants.

Each of the 8PP is only accessible through a particular method of inquiry or methodological family, and represents at least one of the eight most important methods for accessing reproducible knowledge (Esbjörn-Hargens, 2006; 2010). Furthermore, each of these methodologies discloses an aspect of reality unique to its particular injunction that other methods cannot. As such, IMP represents one of the most pragmatic and all-encompassing theoretical formulations of any integral or meta-theoretical approach to accessing reproducible knowledge (Esbjörn-Hargens, 2006, 2010).

Wilber (2003b) states that "any sort of Integral Methodological Pluralism allows the creation of a multi-purpose toolkit for approaching today's complex problems – individually, socially, and globally – with more comprehensive solutions that have a chance of actually making a difference" (p. 14).

IMP has two essential features: paradigmatic and meta-paradigmatic. The paradigmatic aspect refers to the recognition, compilation and implementation of all the existing methodologies in a comprehensive and inclusive manner. The meta-paradigmatic aspect refers to its capacity to weave together and relate paradigms to each other from a meta-perspective (Wilber, 2003b, 2006). Wilber (2003b) describes the meta-paradigmatic aspect of IMP as "a practice that can enact, bring forth, and illuminate the integral interrelationships between various holons originally thought discreet or non-existent" (p. 13). IMP can therefore be understood as the 8PP and its correlated methodologies with a meta-framework which provides meta-linking between these disparate perspectives and paradigms (Martin, 2008).

The eight methodological families identified by Wilber (2003a, 2003b, 2006) are zone 1: phenomenology (the insides of individual interiors); zone 2: structuralism (the outsides of individual interiors); zone 3: hermeneutics (the insides of collective interiors); zone 4: cultural anthropology or ethnomethodology (the outsides of collective interiors); zone 5: autopoiesis theory (the insides of individual exteriors); zone 6: empiricism (the outsides of individual exteriors); zone 7: social autopoiesis theory (the insides of collective exteriors); and zone 8: systems theory (the outsides of collective exteriors)

(Esbjörn-Hargens, 2006, 2010). Wilber (2003a) uses each of the names of these methodological families as an umbrella term which includes many divergent and commonly used methodologies.

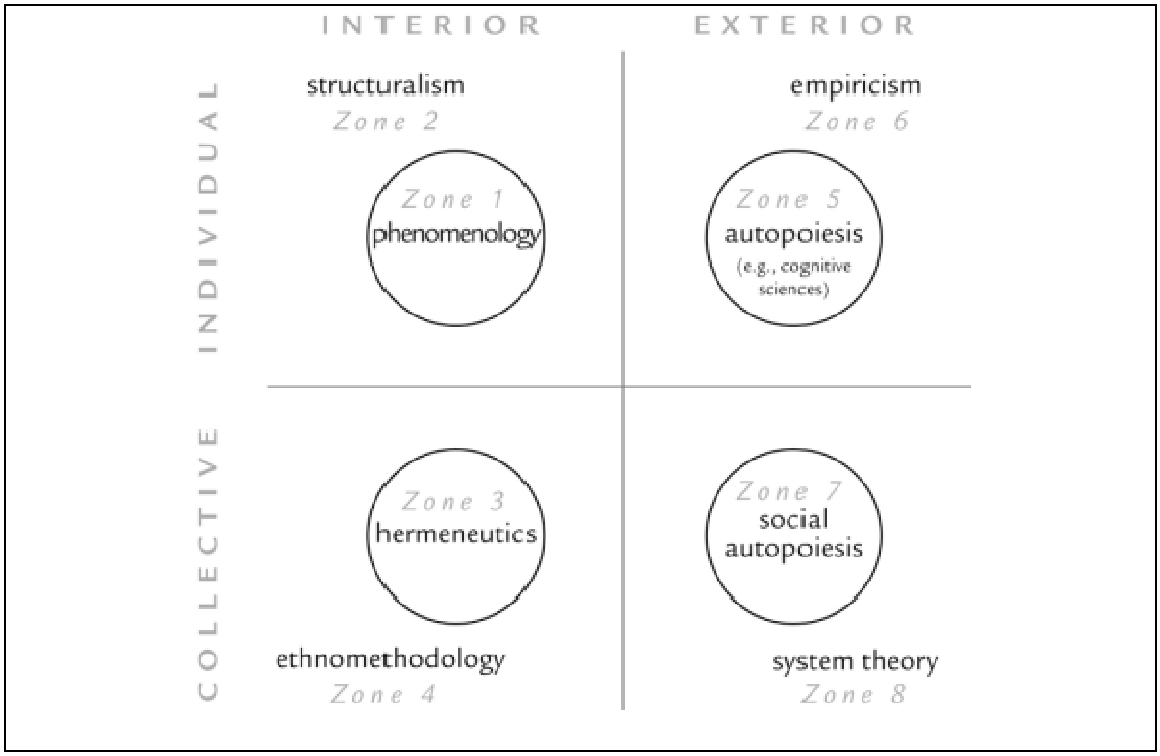

Figure 2: Eight methodological families of IMP

By using IMP, one "generates a meta-practice of honoring, including, and integrating the fundamental paradigms and methodologies of the major forms of human inquiry (traditional, modern, and postmodern)" (Wilber, 2003b, p. 16). By applying Integral Theory in the context of addiction models, it can provide us with a "meta-theoretical framework that simultaneously honours the important contributions of a broad

spectrum of epistemological outlooks while also acknowledging the parochial limitations and misconceptions of these perspectives" (Marquis, 2008, p. 24).

An Integral taxonomy of etiological models of addiction. In Figure 3, an integrative taxonomy of etiological models of addiction is provided, using the eight zones and methodological families of IMP, into which etiological models can be grouped. By viewing addiction through the quadrants and its 8PP, we can see that all these perspectives with their respective methodological families need to be acknowledged, and as many as possible should be included in order to gain a truly comprehensive view. This avoids what Wilber (2006) calls "quadrant absolutism," where all realities of a phenomenon are reduced to the perspective of one quadrant (e.g. reducing the multiple determinants of addictive behaviour to merely impaired neurophysiology).

Zone 1 Phenomenology	Zone 2 Structuralism	Zone 3 Hermeneutics	Zone 4 Ethnomethodology
Conditioning/Reinforcement Behavioural models Compulsion and Excessive Behaviour models Spiritual/Altered State of Consciousness models Personality/Intrapsychic models Coping/Social learning models Biopsychosocial model	Transtheoretical model Personality/Intrapsychic models	Coping/Social Learning models Biopsychosocial model	Social/Environment models Coping/Social Learning models Biopsychosocial model Spiritual/Altered State of Consciousness models
Zone 5 **Autopoiesis theory**	**Zone 6** **Empiricism**	**Zone 7** **Social autopoiesis theory**	**Zone 8** **Systems theory**
Conditioning/Reinforcement Behavioural models Coping/Social Learning models Biopsychosocial model	Genetic/Physiological models Conditioning/Reinforcement Behavioural models Compulsion and Excessive Behaviour models Biopsychosocial model	Social/Environment models	Social/Environment models Biopsychosocial model

Figure 3: Taxonomy of the various etiological models of addiction within the eight major methodological families of IMP

Figure 3 illustrates how IMP applied to models of addiction can possibly account for the different existing models, without reducing one model to another. By applying IMP to explanatory addiction models, it is highlighted how each of the single-factor models understands addiction from a specific zone(s) because it applies a specific methodological approach, whereas the more integrative models view addiction across several of these zones. It can provides a "meta-epistemological-ontological contextual" framework to view addiction from a multi-perspectival position from any of its possible developmental stages in self, culture and nature. Figure 3 highlights how each of the aforementioned models brings valuable insight from a specific paradigmatic point of view, and enacts certain features of addiction by virtue of applying particular

methodologies. It allows us to honour all the existing theories of addiction, with their respective methodologies, by acknowledging that they all have something valuable to offer through enacting certain aspects of the complex and dynamic process of addiction, and at the same time highlighting their respective inadequacies. A Integral taxonomy of etiological models, as shown in Figure 3 – by providing an epistemological and methodological framework – sufficiently justifies the inclusion of the criterion of *ontological span* within Integral Theory's metaparadigmatic capabilities.

From an IMP perspective, none of these models or perspectives has epistemological priority because they co-arise and "tetra-mesh" simultaneously. Each of these explanatory models has certain advantages in describing certain features and etiological determinants of addiction, but also its limitations. Therefore, these models are all valid from the perspectives they use to understand and study addiction, but are also always partial in their approach to the whole. This implies that a model is not correct or incorrect but rather that it is more suited to explaining addiction from a certain perspective, and more limited from other perspectives. For instance, the genetic/physiological models are better at explaining the biological determinants and function of addiction than the personality/intrapsychic models, whereas the personality/intrapsychic models are better at explaining the phenomenological determinants and experience of addicted individuals than the genetic/physiological models. Yet both illuminate important and interlinked aspects of the same phenomenon.

Only by using a meta-paradigmatic practice can we create a metatheory that encapsulates, relates, and integrates the existing theories into a comprehensive conceptual framework of addiction. Through the application of IMP, we can begin to develop a framework conceptual integration in which (1) all the evidence-based models are accounted for, (2) an explanation is given regarding which aspect of addiction they enact, and (3) meta-paradigmatic integration of these diverse perspectives and their paradigmatic injunctions is provided. There seems to be considerable evidence for the criterion of *conceptual integration* when applying IMP within the context of Integral Pluralism, as it provides a conceptual scaffolding within which to logically situate the various etiological models (with their respective methodologies and underlying epistemologies).

It must be noted that IMP has to be placed within the larger context of Integral Pluralism. If this is not done, multiple perspectives (epistemological pluralism) are overemphasised without recognising that there are actually multiple objects (ontological pluralism) correlated with those perspectives and their respective methodologies (Esbjörn-Hargens, 2010; Du Plessis, 2013).

Integral Epistemological Pluralism. Integral Epistemological Pluralism (IEP) refers to the multiplicity of perspectives or worldviews in how we can "know" a phenomenon. Each of the methodologies of IMP has a correlated epistemology. In other words, each method of studying addiction has its own belief regarding how we can

"know" addiction. It must be noted that IMP has to be placed within the larger context of Integral Pluralism. If not, multiple perspectives are overemphasised (epistemological pluralism), without recognising that there are actually multiple objects (ontological pluralism) correlated with those perspectives and their respective methodologies (Esbjörn-Hargens, 2010; Du Plessis, 2013). "All too often we talk as if the multiple perspectives (e.g. worldviews represented by the altitudes) are all looking at the same object: epistemological pluralism … If they all use the same method, then they might indeed enact a single object, but if they use very different methods, then the probability increases that they will enact a multiple object" (Esbjörn-Hargens, 2010, p. 155).

In short, not placing epistemological and methodological pluralism within the larger framework of Integral Pluralism tends to reinforce the "myth of the given" by implying a single "pre-given independent object" (Esbjörn-Hargens, 2010).Wilber (in Esbjörn-Hargens, 2010) warns against the "myth of the given", by saying that, "there is no given world, not only because intersubjectivity is a constitutive part of objective and subjective realities, but also because even specifying intersubjectivity is not nearly enough to get over that myth in all its dimensions: you need to specify the Kosmic locations of both the perceiver and the perceived in order to be engaged in anything except metaphysics" (p. 150).

Murray (2012, p. 35) points out that "Integral Pluralism says that what is perceived to exist depends on the methodology used to inquire and the developmentally-determined capacity of the observer/inquirer to perceive [epistemological pluralism]" (p. 35). Wilber's (2006) stages of development are an example of epistemological pluralism

within Integral Enactment Theory. From a moral developmental perspective, an easy way to understand stages is to describe their progression from egocentric (pre-conventional) through ethnocentric (conventional) to world-centric (post-conventional). This is an example of how IEP accounts for a developmental understanding of addiction as well as recovery, and can account for the many empirical observations (*empirical validity*) relating to addiction and the process of change described in developmental models such as the TTM, and as indicated in Figure 1and the discussion of "stages of development" in the literature review (DiClemente, 2003).

In conclusion, the discussion suggests that when IEP is placed within the triadic relationship of Integral Pluralism it sufficiently validates that Integral Theory satisfies the criteria of *conceptual integration* and *ontological span*. In striving for conceptual integration IEP highlights the underlying worldview or each model's injunction/methodology, which gives rise to a specific ontological understanding of addiction (*ontological span*).

Integral Ontological Pluralism. Philosophers have for long pointed out that all concepts have ontological roots or make assumptions about the nature of reality (Bishop, 2007; Polkinghorn, 2004; Slife, 2005). Addiction theories and definitions (like all scientific conceptions), and addiction treatments likewise begin with certain philosophical assumptions that determine the nature of the concept and how it may be applied (Slife, 2005; Richardson, 2002; Bohman, 1993). As pointed out before in addictionology, these ontological assumptions often go unnoticed and consequently

unchallenged by researchers and clinicians when they begin to explore and treat the disorder (Shaffer, 1986; Hill, 2010).

Most addiction models, including the compound models, are not based on a pluralistic ontological foundation. This may be one of the pivotal reasons that conceptual integration has not yet been achieved in the addiction sciences. Ontological pluralism underscores that addiction is not a single "pre-given" entity, but rather a multiplicity of third-person realities. Moreover, the miscellany of the ontological realities of addiction has a special 'enactive' relationship with etiological theories and their respective methodologies. Without acknowledging the ontological multiplicity of a complex phenomenon like addiction, conceptual integration cannot be achieved.

Esbjörn-Hargens (2010) says that "theory is not merely interpretive but constitutive: theoretical pluralism lends itself to ontological pluralism" (p.498). Esbjörn-Hargens (2010) describes these relationships as Integral Enactment. Integral Enactment Theory adeptly points out how etiological models "co-arise", in relation to methodology (methodological pluralism) and enact a particular reality of addiction (ontological pluralism), while being mediated by the worldview of the subject (epistemological pluralism) applying the method. The relational scheme of Integral Enactment can be valuable in providing meta-insight into the nature and genesis of etiological models of addiction.

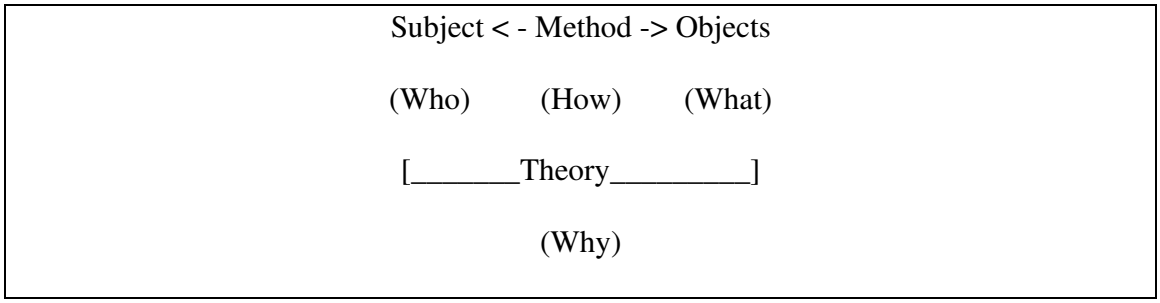

Figure 4: Integral enactment

Figure 4 shows the relationships involved in Integral Enactment. In short, etiological theories (Why) are part of an Integral enactment of Epistemology (Who), Methodology (How) and Ontology (What). Each etiological model discussed so far partakes in this "algorithm". Therefore, to understand why and how a model arrives at its ontological truth claims all three of these elements need to be considered. Consideration of the elements will highlight what aspects of addiction the model can explain and what aspects it cannot. This capacity is crucial for any philosophical foundation attempting conceptual integration.

In conclusion, the notion of addiction as a "multiple ontological object" may be one of the "missing links" in addiction science's failure to provide functional conceptual integration in the field. Integral Ontological Pluralism (IOP) can explain (and resolve) several of the conceptual difficulties encountered when attempting to integrate explanatory models within a field as complex as addictions studies, but not limited to the following:

- It can account for conflicting empirical observations, by incorporating an ontological pluralistic understanding of addiction.
- It can highlight the "ontological domain" of research methodologies and their accompanied epistemologies. This can lead to various models not being understood as contradictory but merely pointing out to different features of addiction on a continuum as a "multiple object".
- Within the context of Integral Pluralism (necessary since otherwise we run the risk of idealism or extreme relativism) a conceptual framework can be developed to provide scaffolding and taxonomy for a truly integrated and functional meta-model of addiction.

The discussions regarding IOP (including IMP and IEP) offer sufficient evidence to justify the inclusion of the criteria of *ontological span* in Integral Theory.

Addiction as a Third-order Complexity

An essential feature of Esbjörn-Hargens' (2010) work on climate change is the notion of ontological complexity. The idea of ontological complexity is a fairly new addition within the canon of Integral Theory. It has great potential for integration (together with ontological pluralism) in the field of addiction studies. Esbjörn-Hargens describes the three orders of complexity as follows: "the first order is characterized by phenomena that we can more or less 'see' with our own senses. The second order is the result of using various extensions of our senses (instruments, computer programs, charts)

to see the phenomena … The third order cannot be seen with our senses nor indirectly by our instruments, but only by indications" (p. 159).

Addiction can thus be understood as a "probability continuum" of ontological complexity, co-arising and enacted through different methodologies and worldviews. For example, a first order ontology could be the experience of being high on the drug. It is available to our senses. A second order ontology could be the pharmacological effect of a drug on neurotransmitter levels or unconscious psychological drives as risk factors to substance abuse. This we can understand only through measurement and calculations, and through a metapsychological perspective. Both these approaches can grasp only partial aspects of human existence.

At the highest level of abstraction lies the notion of an individual's addiction-in-the-world, which is a staggeringly complex phenomenon beyond our senses or instruments. So addiction "is two steps removed from our direct experience (the first order) and our perception of it relies on many abstract indicators (the second order), which are epistemologically distant and ontologically complex" (Esbjörn-Hargens, 2010, p. 159).

When understanding addiction as a third order ontology, we begin to understand why certain models of addictions, especially the single-factor models, give rise to such partial and reductionist explanations. They are good at explaining certain "archaic features" of addiction in the realm of its enacted first or second order ontology, but methodologically and epistemologically, they are incapable of enacting addiction on a third order ontology. Technically, a third order ontology is actually the level of

ontological complexity where the notion of addiction exists (a first or second order ontology cannot articulate a complex phenomenon like addiction, and can only enact "archaic-addiction" probabilities). Heather (in West, 2005) points out certain features of the ontological complexity of addiction, and the problem faced when etiological models do not include a perspective of ontological complexity:

> [A]ddiction . . . is best defined by repeated failures to refrain from drug use despite prior resolutions to do so. This definition is consistent with views of addiction that see decision-making, ambivalence and conflict as central features of the addict's behaviour and experience. On this basis, a three-level framework of required explanation is (needed) consisting of (1) the level of neuroadaptation, [1st order ontology] (2) the level of desire for drugs [2nd order ontology] and (3) the level of 'akrasia' or failures of resolve [3rd order ontology] . . . explanatory concepts used at the 'lower' levels in this framework can never be held to be sufficient as explanations at higher levels, i.e. the postulation of additional determinants is always required at Levels 2 and 3. In particular, it is a failure to address problems at the highest level in the framework that marks the inadequacy of most existing theories of addiction (p. 2).

Most of the models discussed have as their foundation a natural scientific worldview and positivistic methodology that are typically adequate for exploring phenomena existing on the first and second order of ontological complexity. However, such models are hopelessly inadequate in explaining complex phenomena such as

addiction (or any human behaviour) which "exist" on the third order of ontological complexity. For example, reward deficiency syndrome (Blum, 1995) can only be understood as one of many possible physiological risks that interact with other aspects of being human, without having to reduce human behaviour and motivation to neurotransmitter levels. Simply put, even though an addict has low neurotransmitter levels, at the molecular realm of brain physiology concepts such as addiction are meaningless. To talk at molecular level about addiction is like saying that an amoeba, which only primarily exists in a primitive level of ontological complexity, has abandonment issues originating from poor object relations.

Boss (1983) points out that the natural scientific method has its limitations in explaining the human realm, as it originated from and is only sovereign in the non-human realm (natural sciences). Boss's approach of *Daseinsanalysis*, based on Heidegger's (1962/1927) ontology, can be edifying. An in-depth study of *Daseinsanalysis* / ontological complexity / ontological multiplicity can be useful for Integral Theory, as it provides a more integral view of human psychology than most other models. Heidegger provides a method and grounding through which to explore the ontological structure of being human, which he called *Dasein* (translated as "there-being"). Boss's (1983) method could be described as an ontic "articulation of Heidegger's" ontology.[6] However an in-depth analysis of Boss's approach is beyond the scope of the present study.

[6] Using Heidegger's ontological model can prove to be useful in exploring the nature or ontological foundation of addiction. The reason is that Heidegger's notion of *Dasein* is unique to humans, and in the context of our discussion, clearly points to a third order ontology – beyond observation or measurement.

In our current context we could say that by using Heidegger's method in exploring psychology and psychiatry, Boss echoes the dangers of explaining higher-order complex phenomenon (which includes any aspect of human-being-in-the-world) by using methodology (i.e. empirical observation) and epistemology (i.e. positivistic) dominant in lower orders of complexity. He believes that in Freud's metapsychology (and most other theory of human existence) there is inevitably an abstraction and tapering from our lived engagement in-the-world (human-being-in-the-world reduced to first and second order ontology).

In summary: the phenomenon of addiction is a third order ontology, which can only be co-enacted ("brought-forth-in-the-world") when juxtaposed with associated "methodological variety" and "epistemological depth" (Esbjörn-Hargens, 2010). The notion of epistemological distance highlights that some facts of addiction "speak louder" than others and some elements of addiction facts are only enacted within certain worldviews. Methodological variety refers to the fact that "the more epistemological distance and ontological complexity increase, the more methodological variety will increase. Thus, the more multiple an object becomes (the What), the more methods and disciplines you will need to study and make sense of it (the How), and the more perspectives there will be on what is or is not the nature of that object (the Who)" (Esbjörn-Hargens, 2010, p. 162).

Furthermore, Heidegger's scepticism and analysis of technology presaged "tech-addiction" and internet addiction, and points out how technology can negatively influence our capacity for being-in-the-world.

IOP provides "ontological span" and a pluralistic element, by clarifying the "multiple object" nature of addiction, whereas ontological complexity provides "ontological depth" by pointing out the various degrees of complexity each of these "multiple objects" can inhabit. Therefore, the ontological status of addiction, mediated by methodological variety and epistemological depth, can be situated and visually represented as a graph with an (x) axis of ontological depth (1^{st}, 2^{nd}, 3^{rd} order ontology) and a (y) axis as ontological span (relating to ontic enactment of addiction of a specific or combination of methodology within an IMP taxonomy).

Perhaps another way to visually represent this is to use a 'fractal' approach where each ontic enactment of addiction within a IMP-based taxonomy of etiological models is represented by a three-axis graph of (x) epistemological depth, (y) methodological variety, and (z) ontological complexity. It must be noted that this notion is highly speculative at this stage.

The notion of ontological complexity in conjunction with IOP adequately justifies the inclusion of the criterion of *ontological depth* within Integral Theory. It is the notion of ontological complexity that may enable an integrally informed metatheory of addiction to avoid the many conceptual pitfalls encountered by the BPS model.

In short, trying to reduce any human's being-in-the-world to a first or second order ontology, as natural scientific methods do, is fundamentally flawed. Addiction is caused by, affects and manifests in all areas of our being-in-the-world, and only paradigms (or rather meta-paradigms) that function on this level of ontological

complexity may suffice, if we are ever to understand, and successfully treat this colossal nemesis.

In summery, the value of an Integral Pluralism framework is that it provides a more accurate concept of how addiction is enacted - this “right view” lends itself to “right action”. The Integral Pluralism framework allows us to be more efficient in dealing with the various realities of addiction. This is because the Integral Enactment Theory provides a more precise view of how addiction comes into being. “It will take many years to flesh out the details of this approach, but Integral Theory already offers us a substantial platform from which to begin enacting Integral Pluralism and developing an Integral Enactment Theory (Esbjörn-Hargens, 2010, p. 165).

Critique of Integral Theory

The analysis of Integral Theory was concluded with an exploration of some of the critiques or concerns linked to it, particularly as a metatheory, and how it relates to the endeavour for a foundation of an integrated metatheory of addiction. What followed was a succinct discussion, as it is beyond the scope of this research to provide an in-depth critique.

One critique that has been levelled against the Integral Model (and other metatheories) is that there are few assessment measures in place for metatheory building. Science and the scientific method are chiefly linked with the empirical testing of theory

rather than with their initial construction. Comparatively little programmatic research goes into theory building. Edwards (2013) is of the opinion that while there has been much progress in meta-data-analysis the other meta-level branches of study the move towards a "system of meta-studies" is only at a nascent stage of development.

What Edwards (2013) points out is that since the Integral Model is essentially a metatheory there are few measures in place to assess if Integral Theory is effective in building overarching metatheories, or even to asses if Integral Theory itself is "constructed" successfully. Therefore, a critique can certainly be made that there is little research to test the validity of Integral Theory's metatheory building capacity, as well as the soundness of its own meta-theoretical foundation.

The neglect of method

Edwards (2013) believes that "the neglect of method" is the most glaring problem that metatheoretical research faces. Ritzer (1991), Skinner (1985) and others have pointed out that metatheorising is a common preliminary research activity, yet has not been formalised. When researchers conduct a literature review they often engage in certain features of metheorising.

Edwards (2013) says: "Metatheorising is still largely done surreptitiously or seen as the poor cousin to the real scientific task of theory testing. One reason for this

devaluing of metatheoretical research has been the lack of formal research methods for carrying out meta-level research. (pp. 182-183).

Edwards (2013) points out that for metatheoretical research to be accepted as good science it must assume systematic methods, appropriate research designs and meticulous forms of analysis.

Idiosyncratic writing

Edwards (2008, 2008b, 2013) has in several articles written about the "weaknesses of the methodological approach" used by Wilber (2006), as well as many other metatheorists, because of the way in which they develop their overarching conceptual structures. He explains this by saying: "Wilber and many other metatheorists rely on traditional scholarship methods of essentially reading a broad, but idiosyncratic, selection of writings and research and then making of it what they will according to their own assumptions and predilections. This traditional approach is not adequate if metatheoretical research is to be taken seriously as a form of social science research" (p. 183).

Until the Integral Model develops a "rigorous and methodological research activity" it will, like many other metatheories, remain the idiosyncratic view of one visionary thinker, and will have great difficulty in entering mainstream academia and being taken seriously by higher education institutions.

Epistemic fallacies

Murray (2010, 2011, 2012) has made significant contributions in the field of Integral Theory by pointing out epistemic fallacies inherent in “ontological schemes” or models like Integral Theory. He has astutely pointed out that Integral Theory needs to be “packaged” with an "indeterminacy analysis" (which he correctly points out is the job of the knowledge-building community, and not of the originating theorist). The critique in this study of Integral Theory can be understood as an “indeterminacy analysis” of Integral Theory’s capacity to build an integrated metatheory of addiction, and what I call its “enactive capacity” - which is a model’s inherent capacity to enact its “observed” ontological reality faithfully. I place an emphasis here on degree, for as postmodern approaches have pointed out, it is unlikely that any ontological scheme can faithfully enact any ontological reality, without some conceptual distortion or colouring.

Murray (2012) highlights epistemic drives within Integral Theory: “Epistemic drives and various cognitive biases can lead to distorted or demi-real interpretations of reality. Concepts and ideas can be located along several spectra such as abstraction, ‘ladder of inference’, or emergent levels of reality. The further a concept is from concrete reality and observations (the further the epistemological distance), along any of these spectra, the more indeterminacy is involved and the greater the risk that there will be a mismatch in the structural properties of the idea vs. the structural properties of reality” (p. 36).

Previous sections has emphasised the value of ontological pluralism in relation to Integral Enactment Theory. Murray (2012) makes the critique that as with other aspects of Integral Theory, ontological pluralism lends itself to a positivist approach. Murray (2012) believes that theories like Wilber's (as well as the theories of other thinkers such as Bhaskar, Habermas and Lakoff) "were born in response to deconstructivist and poststructuralist approaches that, after rightly noting how knowledge is constructed and beliefs are strongly influenced by historical and sociocultural contingencies, went too far toward relativism and nihilism, completely dismissing the possibility of objective claims about reality" (p. 37). He believes that that they have overcompensated "in their attempts to counterbalance the postmodern trends" by moving too far from postmodern insights, avoiding and acknowledging "a deep consideration of the fallibility of knowledge and the indeterminacy of core concepts" (Ibid). This particular critique, that Integral Theory has gone too far in countering postmodern theories, is suggested by the sub-title of Gary Hampson's (2007) paper: "The [only] way out [of postmodernism] is through [it]".

Murray (2012) points out how Integral Theory could "take some of its own medicine" by saying that "Integral Pluralism uses the idea of Ontological Pluralism to describe the indeterminacy of some controversial objects, such as climate change. What I am suggesting here is that it is useful to apply the concepts of Ontological Pluralism and metaphorical pluralism to the core abstract categories that comprise the theory itself" (p. 37). Murray (2012) says that although "Wilber does employ various epistemic forms (as implied in 'tetra-enact') to indicate that the concepts and models he uses do not have a

simple categorical form", it must however be noted that "in the vast majority of his writing and dialogue, he uses the categories without such qualification" and "when he notes the non-simplicity of the constructs" it is "not the same as noting the indeterminacies and fallibilities of the constructs themselves" (p. 50). For instance the concepts of "The True, the Good, and the Beautiful," used by Wilber, often appear to be "given a foundational ontological status. But the True, the Good, and the Beautiful are metaphorical pluralisms that turn out to be difficult to pin down, and their meanings are contentious among philosophers" (Murray, 2012, p. 51).

In summary, Murray (2012) states that Integral Theory contains enormously valuable ideas worth propagating extensively, but "Integral Theory could be packaged with an 'indeterminacy analysis' and other self-critical and self-reflective ideas that would make it easier for intermediate and advanced learners and practitioners to avoid the pitfalls of simple categorizations" (p. 52). Murray's statement has relevance for this study, and points out that an "indeterminancy analysis" of the Integral Model will surely help to "avoid the pitfalls of simple categorisations" in attempting to develop a robust and functional integrated metatheory of addiction.

Conclusion

The previous discussion justified the inclusion of the five criteria *of empirical validity, conceptual integration, ontological span, ontological depth* and *internal*

consistency outlined in the research design chapter in Integral Theory's post-metaphysical paradigmatic and meta-paradigmatic capacity for an epistemological and ontological philosophical foundation to develop a functional integrated metatheory of addiction, which improves on existing attempts at conceptual meta-integration.

However, this does not mean that Integral Theory provides a perfect solution. As discussed so far in this study, Integral Theory's capacities provide a sufficient metatheory framework, relative to existing frameworks, to strongly warrant further exploration and development, and has the ability to bring significant insights to the field of addiction studies.

As indicated in the discussion of a critique of Integral Theory, there are several aspects that must be kept in mind when judging whether the evaluative criteria are adequately met by Integral Theory. These critiques point out that Integral Theory can still be further refined and researched, which will increase and authenticate its metatheory-building capacity.

Chapter 6 – Constitution of an Integral Metatheory of Addiction

Introduction

It was not the aim of this dissertation to develop an integrated metatheory of addiction, but merely to evaluate the suitability of Integral Theory as a metatheoretical foundation for the development of a comprehensive and integrated metatheory of addiction. However, an assessment of the suitability of Integral Theory would not be complete without identifying essential features of such an integrated metatheory of addiction.

Metatheory can simply be understood as referring to a type of super-theory built from overarching constructs that organise and subsume more local, discipline-specific theories and concepts (Stein, 2010). In short, whereas a theory within a discipline typically takes the world as data, metatheory typically takes other theories as data. Overton (2007) highlights the metatheory approach by saying that: "Scientific metatheories transcend (i.e. 'meta') theories and methods in the sense that they define the context in which theoretical and methodological concepts are constructed. Theories and methods refer directly to the empirical world, while metatheories refer to the theories and methods themselves" (p. 154). What follow are several definitions of metatheory taken from current literature:

- Abrams and Hogg (2004) describe a metatheory as being "like a good travel guide - it tells you where to go and where not to go, what is worthwhile and what is not, the best way to get to a destination, and where it is best to rest awhile. Metatheoretical conviction provides structure and direction, it informs the sorts of questions one asks and does not ask, and it furnishes a passion that makes the quest exciting and buffers one from disappointments along the way" (p. 98).

- Anchin (2008b) says that, "Unifying knowledge in any field of endeavour requires metatheory comprising a conceptual scaffolding that is sufficiently broad to encompass all of the specific knowledge domains distinctly pertinent to the field under consideration, that can serve as a coherent framework for systematically interrelating the essential knowledge elements within and among those domains, and that extends conceptual tendrils into other fields of study" (p. 235).

- Anchin (2008a) states further that, "Among vital purposes served by metatheory is its function as scaffolding for integrating more specific theories that conceptually and empirically map different aspects of the phenomena understudy" (p. 804).

- Bondas and Hall (2007) describe metatheory analysis as "an examination of theories to determine the link between the theoretical perspective that frames each

primary study and the methods, findings, and conclusions of the research" (p. 115).

- Dervin (1999) says that, "One major point here is that metatheory can be used in such a way that it releases research in always partial but still significant ways from implicit assumptions and draws these assumptions out into the light of day where they can be examined, interrogated and tested" (p. 748).

- Finfgeld (2003) says that, "[Metatheory is the analysis] and interpretation of theoretical, philosophical, and cognitive perspectives; sources and assumptions; and contexts across multiple qualitative studies" (p. 895).

- Paterson et al., (2001) describe metatheory as "a critical exploration of the theoretical frameworks or lenses that have provided direction to research and to researchers, as well as the theory that has arisen from research in a particular field of study. Metatheory involves the analysis of primary studies for the implications of their theoretical orientations" (p. 92).

Just as theorising results in the creation of theory, metatheorising results in a "metatheorem", which is a statement about theory in general or a statement about a specific theory. Broadly, the field of metatheory includes the study of the "sources and assumptions; and contexts" (Finfgeld, 2003, p. 895), the "study of theorists and communities of theorists" (Ritzer, 1988, p. 188), the process of theorising (Zhao, 2010), the analysis of the methods, findings, and conclusions of research (Bondas & Hall, 2007),

the value of such theories (Bonsu, 1998), their practical implications (Turner, 1990), and the recommendation that metatheorising ought to generate theories that are open to empirical testing (Sklair, 1988).

Integral Metatheory

Edwards (2013) points to the difference between metatheory studies that are localised in character and metatheory that is distinctly integrative, which he refers to as integral metatheory. Wallis (2010) describes integral metatheorising as integral in that it acknowledges the contributions and insights of a very wide range of theories, research programmes and cultural traditions. Integral metatheorising is characterised by its great scope, its openness to the diversity of scientific theory and socio-cultural knowledge from all parts of the world, and by its use of other overarching approaches as metatheoretical resources. Edwards (2013) explains:

> Research in any of these meta-studies activities becomes integrative [integral metatheory] when it: i) is consciously and explicitly performed within an appreciative context that can move across and within various disciplines, ii) adopts systematic research methods and principles, iii) uses, as conceptual resources, other integrative frameworks such as Wilber's AQAL, Bhaskars's meta-reality (Bhaskar, 2002b), Torbert's DAI (1999), Schumacher's system of knowledge (1977), Nicolescu's transdisciplinary studies or Galtung and

Inayatullah's (1997) macrohistory, and iii) is characterised by its inclusiveness and emancipatory aims (p. 185).

As indicated, this study is an exploration of Integral Theory's metatheory building capacity in developing an integrated metatheory of addiction. When specifically applying Integral Theory as its ontological and epistemological foundation such a metatheory is referred to as an Integral metatheory of addiction. In short, an integrated metatheory is a metatheory that attempts conceptual integration, whereas an Integral metatheory is a metatheory that attempts the same aim, but is specifically informed by Integral Theory.

Edwards (2012) points out that a metatheoretical framework like the Integral model has great value for scientific disciplines of all types, because it has a potent "adjudicative capacity" for "critical analysis".

One of the chief principles of Integral Theory is non-exclusion. This feature is of particular importance in the quests for an integral metatheory of addiction. This principle acknowledges that meaning-making is not sovereign to only one approach and methodology. Non-exclusion means that a metatheorist is indebted to the various paradigms of the many theories with which he or she works (Wilber 2003a, 2003b; Esbjörn-Hargens., 2010). This principle is actually common in metatheory building. Lewis and Kelemen (2002) say that: "Multiparadigm research seeks to cultivate diverse representations, detailing the images highlighted by varied lenses. Applying the conventions prescribed by alternative paradigms, researchers develop contrasting or multi-sided accounts that may depict the ambiguity and complexity of organizational

life" (p. 263). The principle of non-exclusion enables Integral Theory to be able to perform metaparadigmatic integration of ontologically complex (third order ontology) fields of study - but also able to indicate the limits of the various paradigms that it integrates into a meta-framework.

Integral Metatheory Enactment

Esbjörn-Hargens (2010) describes how Integral Enactment Theory adeptly points out how etiological models "co-arise", in relation to methodology (methodological pluralism) and enacts a particular reality of addiction (ontological pluralism), while being mediated by the worldview of the subject (epistemological pluralism) applying the method. It was pointed out earlier how the scheme of Integral Enactment (see Figure 3) is valuable for gaining insight into the nature and genesis of etiological models of addiction, as well as developmental models of recovery. Each etiological model discussed so far partakes in this "algorithm".

The question needs to be asked whether or not it is possible to use the same formula or algorithm to outline the design (Integral Enactment) of an Integral metatheory of addiction. Figure 5 shows how the same triadic relationships involved in Integral Enactment can be useful when this "algorithm of Integral Enactment" is applied as a scheme in developing an integrated metatheory of addiction. I refer to this as "Integral metatheory enactment".

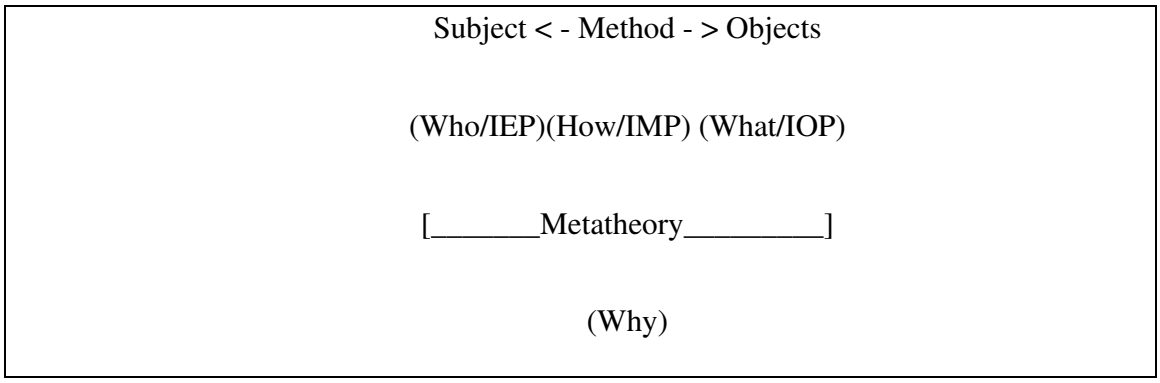

Figure 5: Integral metatheory enactment

In short: in an Integral metatheory of addiction (Why) the objects studied are theories of addiction (What), the method is metatheorising (How), juxtaposed with various worldviews, ego developmental stages, and stages of addiction/recovery (Who). This is obviously an oversimplified scheme, but useful as an orienting generalisation to guide further research and development of an Integral metatheory of addiction.

Conclusion

In short, a comprehensive Integral metatheory of addiction should have the following features:

- It must provide an integrative conceptual etiological taxonomy that correlates methodology, epistemology, and ontology, constituting an internally consistent framework.
- It should include developmental stages of addiction and account for observations of developmental-orientated etiological models.
- It should provide a framework for understanding addiction as a multiple object, and as a continuum of ontological complexity, and for understanding how various etiological models address addiction at various degrees/stages of ontological complexity (*ontological depth*) and adequately explain and incorporate ontological pluralism (*ontological span*).
- It must be consistent with empirical observations of addiction made by clinicians and researchers, and be consistent with the phenomenological experience of addicts. Moreover, it must be relevant for treatment protocol development. Flores (2010) echoes this sentiment: "It is important to have a comprehensive metatheory of addiction that not only integrates diverse mental health models with the disease concept, but also furnishes guidelines for clinical practice that are compatible with existing treatment strategies. Any proposed theory – no matter how comprehensive and intellectually satisfying it is - will not maintain credibility if its basic premises fly in the face of applied practical experience and the fundamental realities of successful clinical practice" (pp. 31-32).

Chapter 7 - Conclusion

> In the last resort a civilization depends on its general ideas; it is nothing but a spiritual structure of the dominant ideas expressing themselves in institutions and the subtle atmosphere of culture. If the soul of our civilization is to be saved we shall have to find new and fuller expression for the great saving unities – the unity of reality in all its range, the unity of life in all its forms, the unity of ideas throughout human civilization, and the unity of man's spirit with the mystery of the Cosmos in religious faith and aspiration.
>
> *– General Jan C. Smuts (1927, pp. v-vi)*

Introduction

The study explored whether or not Integral Theory could serve as a philosophical foundation for the development of a functional and robust integrated metatheory of addiction. A theoretical study explored this question. The literature review pointed out that the severity of addiction makes it one of most destructive phenomena in contemporary society. It was shown that the two foremost problems in the field of addiction science and addiction treatment are definitional confusion (Shaffer et al., 1997, 2004; Valliant, 1995; White, 1998) and the ineffectiveness of treatment (Shaffer, 2004;

Fields, 1998; White, 1998; Alexander, 2010; Mill, 2010). Many scholars agree that a paradigm shift is urgently needed for the field of addiction, because currently addiction theories are so abundant and diverse (Shaffer et al., 1997, 2004; Valliant, 1995; White, 1998, Hill, 2010), that the field of addictionology is in "conceptual chaos".

In an attempt to find integration for all these divergent conceptions of addiction there has been a movement in the last 20 years towards holistic or compound models, of which the best know is the biopsychosocial (BPS) model (Griffiths, 2005; Levant, 2004; Shuttleworth, 2002; Wallace, 1993; White, 2005 DiClemente, 2003).

The study highlighted that compound models, such as the BPS model, have not accomplished the much needed integration. Although the BPS model may be seen as approximating a comprehensive integrated approach, there are still considerable positivistic ontological and epistemological underpinnings and assumptions (abstractionist use of de-contextualism, reductionism and determinism), which hinder an authentic and comprehensive conceptual framework. The compound models do not provide a comprehensive meta-framework to integrate these diverse explanatory perspectives or to explain multiple "co-arising" determinants.

The suggestion was made that Integral Theory could possibly resolve many of the conceptual problems faced by existing models, as well as providing the necessary integration.

Research Methodology

Chapter 4 outlined the research paradigm and method employed, which was a theoretical analysis, in which existing literature and data were explored. The chapter began with a discussion of the epistemological and ontological underpinnings of the researcher, who was influenced by Integral Pluralism, part of Integral Theory's post-metaphysical epistemological perspective, which included, but was not limited to, positivist and constructionist epistemology. The notion of reflexivity was discussed and how the author's personal and epistemological reflexivity influenced the study.

The following section of Chapter 4 explored the research method, which was a form of conceptual or theoretical analysis known as metatheorising. A discussion about metatheory pointed out the difficulties faced when metatheorising. In this dissertation a literature review was used for data collection, since the data comprised theories of addiction.

The study indicated that addiction theories and definitions, like all scientific conceptions, begin with certain philosophical assumptions, which determine the nature of the concept and its trajectory (Richardson, 2002; Bohman, 1993). Consequently, addiction science, in its pursuit of etiological models, often shares a common ontological foundation with other scientific disciplines (How's), regardless of its "surface" theories (Why's). It was argued that the development of an alternative ontological foundation could possibly lead to a different understanding and treatment of addiction.

The study suggested Integral Theory as a possible conceptual philosophical framework and scaffolding for the construction of a comprehensive integrated metatheory of addiction.

To evaluate the hypothesis that Integral Theory can provide a meta-theoretical and meta-conceptual foundation for an integrated metatheory of addiction, the study suggested several criteria, which the author identified as some of the essential features of the "architectonic" of any metatheory that strive for this type of integration. They were defined as *conceptual integration, ontological span, ontological depth, internal consistency* and *empirical validity*.

An Integral Foundation of Addiction

The remainder of this study evaluated the rigour of Integral Theory when tested against the criteria of *conceptual integration, ontological span, ontological depth, internal consistency* and *empirical validity*, and when applied as an epistemological, ontological (as well as a methodological) conceptual foundation for the development of a comprehensive integrated metatheory of addiction.

An analysis was conducted by discussing the merit of each of the elements of Integral Enactment Theory, in their respective capacity in contributing towards this aim, as well as certain other foundational elements of Integral Theory's post-metaphysical or post-postmodern position.

Enactment

The idea of enactment was discussed and it was pointed out that it has an assimilating effect in the sense that it demonstrates how the multitude of theories and models of addiction do not have to be contradictory, as they are often interpreted to be, but can rather be understood as "true but partial". Since enactment is understood as the "bringing forth" of certain aspects of reality (ontology) when using a certain lens (methodology) to view it, it leads to a pluralistic understanding of complex phenomenon like addiction. Integral Enactment Theory adeptly points out how etiological models "co-arise", in relation to methodology (methodological pluralism) and enact a particular reality of addiction (ontological pluralism), while being mediated by the worldview of the subject (epistemological pluralism) applying the method. Therefore, when acknowledging the multiplicity of addiction's ontological existence, the "incompatibility" of the various etiological models disappears, because each enacts a different reality of addiction (ontological pluralism), and each brings forth valuable insights in its specific ontological domain.

The notion of enactment explains why different theories and their accompanied methodologies enact different aspects of the same ontic phenomenon. Therefore, it was suggested that Integral Theory could passably accommodate the criterion of *ontological span,* and could provide the groundwork for the criterion of *conceptual integration*.

Integral Methodological Pluralism

The study showed that applying IMP to etiological models of addiction provides a methodological taxonomy which can be used to provide conceptual scaffolding. IMP can powerfully point out that there is no need for epistemological priority to be taken by any specific model. This is a very important function, because as we have seen, within compound models there is still a "prioritising of factors", and many of the ontological relationships between the factors are actually very weak. In this meta-methodology the ontological relations between the various factors remain strong. Therefore, IMP overcomes many of the problems that compound models present in attempting a holistic integration of the various factors of addiction.

IMP can assist in the development of a framework for conceptual integration: (1) within which all the evidence-based models can be classified, (2) that explains which aspect of addiction they enact, and (3) which provides a meta-paradigmatic integration of these diverse perspectives and their paradigmatic injunctions. Therefore, there is sufficient evidence that the criterion of *conceptual integration* can be included when applying IMP within the context of Integral Pluralism.

Integral Epistemological Pluralism

It was pointed out that many etiological models engage in metaphysics, and therefore do not stand up to postmodern scrutiny. They tend to reinforce the "myth of the given" by implying a single "pre-given independent object" (Esbjörn-Hargens, 2010).

IEP points out that the developmentally-determined capacity and worldview of the observer/inquirer (Wilber, 2006; Esbjörn-Hargens, 2010; Esbjörn-Hargens & Zimmerman, 2009) will also determine what aspect of reality will be "enacted". This is a novel approach to the study of addiction for, as was pointed out previously, most addiction theories have positivist philosophical assumptions, which will by default separate the object of investigation form the subject investigating it. Therefore, when developing an integral metatheory of addiction IEP will prevent the ontological trappings of conventional metaphysics, which attempt to understand addiction as a single object.

IEP, within the context of the triadic relationship of Integral Enactment, contributes strongly to validate that Integral Theory satisfies the criteria of *conceptual integration* and *ontological span*, because it highlights the underlying worldview or each model's injunction/methodology, which gives rise to a specific ontological understanding (ontological pluralism) of addiction. Because of IEP sensitivity to developmental perspectives it can account for many empirical observations relating to addiction and the process of change, as pointed out in developmental-based models such as the TTM (DiClemente, 2003), and contributes to the empirical validity of Integral Theory within the context of the study.

Integral Ontological Pluralism

IOP is a novel concept for addiction models (Du Plessis, 2013). Most addiction models operate from the assumption that they are investigating a "pre-given single object", hence when the different models enact different aspects of addiction they

generally assume that their findings are at odds with each other, or that one model must be more correct than another and, therefore, one should have epistemological priority. This issue is present even in compound models, where neurophysiology (in the form of the disease mode) is often given epistemological priority over other factors. What is not considered in this worldview is that each model is determined by methodology which actually "brings-forth-in-to-the-world" a different ontological reality of the addiction. Hence IOP is a valuable concept, and will be exceptionally useful when building an integral metatheory of addiction.

In conclusion, the notion of addiction as a "multiple ontological object" is one of the "missing links" (together with the notion of ontological complexity) that helps to explain the failure of addiction scienceto provide functional conceptual integration in the field. IOP can explain (and resolve) several of the conceptual difficulties encountered when attempting to integrate (often seemingly contradictory) explanatory models within a field as complex as addictions studies. The discussion about IOP provides evidence that Integral Theory sufficiently accounts for the inclusion of the criteria of *ontological span*.

Addiction as a third-order complexity

In the study, highlighting the notion of the ontological complexity of addiction, addiction was defined as existing as a probability continuum of ontological complexity, co-arising and enacted through different methodologies and worldviews. The notion of ontological complexity can have possibly far-reaching implications for the field of addiction studies, and can transform our understanding of how different etiological

models relate to each other on a scale of complexity. The study pointed out that in understanding addiction as a third order ontology (with methodological variety and epistemological depth) we begin to understand why certain models of addictions, especially the single-factor models, give rise to such partial and reductionist explanations. Single-factor models excel in explaining certain "archaic features" of addiction in the realm of its enacted first or second order ontology, but methodologically and epistemologically, they are incapable of enacting addiction on a third order ontology, which is actually the level of ontological complexity where the notion of addiction exists. The thinking in this study delivers a profound critique of positivistic approaches to addiction, and undoubtedly points out the need for a methodology and epistemology that is capable of enacting addiction as a third order ontology.

IOP provides a '*ontological span'* and a pluralistic element, by pointing to the nature of addiction as a "multiple object", whereas ontological complexity provides "ontological depth" by pointing out the various degrees of complexity each of these "multiple objects" can inhabit.

The study also pointed out several critiques of Integral Theory that are necessary to consider in order to obtain a balanced view of the theory. It was shown that there are few assessment measures in place for metatheory building, and that there is a "neglect of method" in metatheoretical research. It was also shown that there are certain positivistic tendencies in the Integral model. It was further suggested that an "indeterminacy analysis" of the Integral model would perhaps help to "avoid the pitfalls of simple

categorisations", which will be particularly useful when attempting to develop a robust and functional integral metatheory of addiction.

These critiques are clearly valid, but they are not substantial enough to invalidate the use of Integral Theory in the development of an integral metatheory of addiction. Rather, they suggest that extensive research needs to be conducted in the field. They further point out some of Integral Theory's conceptual weaknesses, which researchers should be mindful of. Finally, they suggest the need for an "indeterminacy analysis" of an integral metatheory of addiction's "enactive capacity".

In conclusion, this study suggests that Integral Theory has great potential as a framework for studying addiction theories. Taken together, the results of this study suggest that Integral Theory is eminently suitable as a philosophical foundation for the development of a comprehensive integrated metatheory of addiction.

Constitution of an Integral Metatheory of Addiction

The study concluded with a brief discussion on metatheory and provided succinct suggestions for some essential features of an Integral metatheory of addiction. These were:

- It should provide an integrative conceptual etiological taxonomy that correlates methodology, epistemology, and ontology, and which as a framework is internally consistent.
- It should include the developmental stages of addiction and account for observations of developmental-orientated etiological models.
- It should provide a framework for understanding addiction as a multiple object on a continuum of ontological complexity, and the framework should allow for various etiological models to address addiction at various degrees/stages of ontological complexity (*ontological depth*) and adequately explain and incorporate ontological pluralism (*ontological span*).
- It should be consistent with empirical observations of addiction made by clinicians and researchers, and with the phenomenological experience of addicts themselves. Moreover, it must be relevant for treatment protocol development.

Significance of the Findings

- This work contributes to existing knowledge in the field of addictions studies by providing a potential outline for an Integral metatheory of addiction.
- This is the first in-depth study to explore the value of Integral Theory's foundational capabilities in the context of etiological models of addiction.

- The findings of the study enhance our understanding of the shortcomings of current integrative approaches to addiction, and point out which areas need to be addressed.
- This research study will serve as a basis for future studies in developing integrally informed approaches to addiction treatment and studies.
- The current findings add substantially to our understanding of the dynamics of etiological models of addiction, and contribute to a method for evaluating etiological models.

Limitations of the Current Study

A number of important limitations need to be described:

- The foremost limitation was that the study attempted to address a large and complex set of topics. Consequently in-depth exploration of each topic was beyond the scope of this study. As a result, some significant factors may have been overlooked.

- Furthermore, a limited number of criteria were used to evaluate the suitability of Integral Theory in terms of metatheoretical capacity. If more criteria were used, the study may have led to a different conclusion.

- Moreover, for the purposes of the research the truth claims of the various etiological models as well as Integral Theory were taken to be true, apart from the brief critique provided. If they were proven to be false it would profoundly change the outcome of the study.

Recommendations for Future Research

There are several potential future research projects that could follow on from this study:

- An "indeterminacy analysis" of the AQAL model.
- The development of "non-pathological" models of addiction.
- Research on the relationship between "stages of recovery" and ego developmental stages.
- The development of an integrally informed *daseinsanalysis* of addiction.
- A study of Martin Heidegger's critique of technology may assist to develop insight into the emerging phenomenon of technology addiction, as well as to provide insight into possible dangers of technology on our post-human selves. There may also be a correlation between mindfulness, Heidegger's concept of *dasein* and "authentic existence", and the danger of technology in inhibiting a full expression of these "states-of-being".

- The development of an Integral metatheory of addiction (my proposed PhD thesis).

- The development of more robust criteria for the evaluation of metatheory.

Conclusion

This study has provided sufficient evidence that Integral Theory has immense potential for genuine integration in the field of addiction studies, when applied as a philosophical foundation for the development of an integrated metatheory of addiction. This study has contributed to a philosophical understanding of addiction but perhaps, more importantly, the study could have significant value in the world, because our understanding of addiction has more than merely scientific and epistemological value – simply put, better understanding means better treatment design.

Only a truly integral approach may be able to adequately address the massive and mind-boggling, complex problem of addiction. As the great philosopher-statesman Jan Smuts (1927, p. vi) said: "If the soul of our civilization is to be saved we shall have to find new and fuller expression for the great saving unities …". This study has indicated that Integral Theory can be a "fuller expression" in the quest for a comprehensive understanding of addiction, and as a result - beyond the realm of theories and academia - can help save lives.

References

Abrams, D. & Hogg, M.A. (2004). Metatheory: Lessons from social identity research. *Personality and Social Psychology Review, 8*(2), 98-106.

Adesso, V.J. (1985). Cognitive factors in alcohol and drug abuse. In M. Galizio & S. A. Maisto (Eds.), *Determinates of substance abuse: Biological, psychological and environmental factors* (pp. 125-178). New York: Plenum Press.

Alcoholics Anonymous. (1976). *Alcoholics Anonymous.* New York, NY: Alcoholics Anonymous World Services.

Alcoholics Anonymous. (1952). *Twelve steps and twelve traditions*. New York, NY: Alcoholics Anonymous World Services.

Alcoholics Anonymous. (1987). *Twelve steps and twelve traditions*. New York, NY: AA World Services.

Alexander, B.K. (2008). *The globalisation of addiction: A study in poverty of the spirit.* Oxford: Oxford University Press.

Alexander, B. K. (2010). A change of venue for addiction. Retrieved, July, 11, from http://globalizationofaddiction.ca/articles-speeches/dislocation-theory-addiction/250-change-of-venue.html

Alexander, C., Robinson, P., & Rainforth, M. (1994). Treating and preventing alcohol, nicotine, and drug abuse through transcendental meditation: A review and statistical meta-analysis. *Alcoholism Treatment Quarterly, 11*(1/2), 13-87.

Alexander, C., Druker, S. & Langer, E. (1990). Introduction: Major issues in the exploration of adult growth. In C. Alexander & E. Langer (Eds.*). Higher stages of human development* (pp. 3-32). New York: Oxford University Press.

Almaas, A.H. (1996). *The void: Inner spaciousness and ego structure*. Berkeley, CA: Diamond Books.

Amodia, D.S., Cano, C. & Eliason, M.J. (2005). An integral approach to substance abuse. *Journal of Psychoactive Drugs, 37*, 363-371.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th Ed.). Washington, DC: American Psychiatric Association.

Anchin, J.C. (2008a). A commentary on Henriques' tree of knowledge system for integrating human knowledge. *Theory & Psychology, 18*(6), 801-816.

Anchin, J.C. (2008b). Pursuing a unifying paradigm for psychotherapy: Tasks, dialectical considerations, and biopsychosocial systems metatheory. *Journal of Psychotherapy Integration, 18*(3), 310-349.

Armstrong, D., & Armstrong, E. (1991). *The great American medicine show.* New York: Prentice Hall.

Assagioli, R. (1975). *Psychosynthesis*. Great Britain: Thurnstone Press.

Bacharach, S.B. (1989). Organizational theories: Some criteria for evaluation. *Academy of Management Review, 14*(4), 496.

Bandura, A. (1977). *Social learning theory.* Engelwood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1986) *Social foundations of thoughts and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Barrett. R.J. (1985). Behavioral approaches to individuals' differences in substance abuse. Drug-taking behavior. In M. Galizio & S.A. Maisto (Eds.), *Determinates of substance abuse: Biological, psychological and environmental factors* (pp. 125-178). New York: Plenum Press.

Batson, H. (1992). A multi-component model for substance abuse treatment. *Journal of Substance Abuse Treatment*, *9*, 177,181.

Begleiter, H. & Porjesz, B. (1999). What is inherited in the predisposition toward alcoholism? A proposed model. *Alcoholism: Clinical and Experimental Research, 23*, 1125-1135.

Bevins, R.A. & Bardo M.T. (Eds.) (2004). *Motivational factors in the etiology of drug abuse: Volume 50 of the Nebraska symposium on motivation*. Lincoln, NE: University of Nebraska Press.

Bishop, R.C. (2007). *The philosophy of the social sciences: An introduction*. London: Continuum International Publishing Group.

Blanckenberg, P.B. (1951). *The thoughts of General Smuts.* Cape Town: Juta.

Blomqvist. J., & Cameron, D. (2002). Moving away from addiction: Forces, processes and contexts. *Addiction Research and Theory 10*, 115-118.

Blum, K. (1995). Reward deficiency syndrome: Electro-physiological and biogenetic evidence. Paper presented at the annual meeting of the Society for the Study of Neuronal Regulation, Scottsdale, AZ, 15 April.

Blume W.A. (2004), Understanding and diagnosing substance use disorder. In *Handbook of addictive disorders: A practical guide to diagnosis and treatment,* (Ed) R. H. Coombs. New Jersey: John Wiley & Sons. pp. 63-93. \

Bohman, J. (1993). *New philosophy of social science: Problems of indeterminacy*. Cambridge, MA: MIT Press.

Bondas, T., & Hall, E.O.C. (2007). Challenges in approaching metasynthesis research qualitative health research. *Qualitative Health Research, 17*(1), 113-121.

Bonsu, S.K. (1998). The relationship between customer satisfaction and economic performance of the firm: A metatheoretical review. Paper presented at the American Marketing Association. Conference Proceedings, Chicago, August.

Boss, M. (1983). *The existential foundations of medicine and psychology.* New York:: Jason Aronson.

Bourne, E. & Fox, R. (1973). *Alcoholism: Progress in research & treatment*. New York: Academic Press.

Bowden, J., & Gravitz, H. (1998) *Genesis: Spirituality in recovery from childhood traumas*. Florida: Health Communications.

Brick, J., & Erickson, C. (1999*). Drugs, the brain and behavior: The pharmacology of abuse and dependence.* New York: Haworth Medical Press.

Brodie, J.F., & Redfield, M. (2002). *High anxieties: Cultural studies in addiction.* Berkeley, CA: University of California Press.

Brookfield, S. (1992). Developing criteria for formal theory building in adult education. *Adult Education Quarterly, 42*(2), 79-93.

Brown, S.A. (1993). Recovery patterns in adolescent substance abuse. In J.S. Baer, G.A. Marlatt, & R.J. McMahon (Eds.), *Addictive behaviors across the lifespan: Prevention, treatment and policy issues* (pp. 161-183). Newbury Park, CA: Sage.

Campbell, R.J. (1996). *Psychiatric dictionary* (7th Ed.). New York: Oxford Press.

Cappell, H., & Greeley, J. (1987). Alcohol and tension reduction: An update on research and theory. In H.T. Blane & K.E. Leonard (Eds.), *Psychological theories of drinking and alcoholism* (pp. 15-89). New York: Guilford Press.

Carnes, P. (2008). *Recovery start kit.* Carefree, AZ: Gentle Path Press.

Carroll, S. (1993). Spirituality and purpose in life in alcoholism recovery. *Journal of Studies on Alcohol, 54,* 297-301.

Chassin L., Patrick, C.J., Andrea, H.M. & Craig, C.R. (1996). The relations of parent alcoholism to adolescent substance use: A longitudinal follow-up study. *Journal of Abnormal Psychology, 105,* 70-80.

Cohen, S. (1969). *The drug dilemma.* New York: McGraw Hill.

Coleman, B.S. (1980). Incomplete mourning and addict/family transactions: A theory for understanding heroin abuse. In D.J. Lettieri, M. Sayers, H.W. Pearson, (Eds.), *Theories on drug abuse: Contemporary perspective*, (pp. 83-89). NIDA Research Monograph No. 30. Washington: Government Printing Office.

Connors, G.J. & Tarbox, A.R. (1985). Macroenvironmental factor determinants of substance use and abuse. In M. Galizio & S. A. Maisto (Eds.), *Determinants of substance abuse: Biological, psychological, and environmental factors* (pp. 283-314). New York: Plenum Press.

Cook-Reuter, S. (2004) Making the case for a developmental perspective, *Industrial and Commercial Training*, *36*(7), Emerald Group Publishing.

Coppelo, A. & Orford, J. (2002), Addiction and the family: Is it time for services to take notice of the evidence? *Addiction, 97*, 1361-1363.

Corey, G. (2005). *Theory and practice of counselling and psychotherapy.* (7th ed). Pacific Grove, CA: Brooks Cole.

Dawson, D.A., Grant, B.F., Stinson F.S. & Chou, D.S. (2006). Estimating the effect of help seeking on achieving recovery from alcohol dependence. *Addiction, 101*, 824-834.

Dervin, B. (1999). On studying information seeking methodologically: The implications of connecting metatheory to method. *Information processing and management, 35*(6), 727-50.

DiClemente, C.C. (2003). *Addiction and change: How addictions develop and addicted people recover.* New York: Guilford Press.

DiClemente, C.C. & Prochaska, J.O. (1998). Toward a comprehensive, transtheoretical model of change: Stages of change and addictive behaviours. In W. R. Miller & N. Heather (Eds.), *Treating addictive behaviours* (2nd ed., pp. 3-24). New York: Plenum Press.

Donovan, D.M. & Marlatt, G.A. (Eds). (1998). *Assessment of addictive behaviours.* New York: Guilford Press.

Duffett, L. (2010). Outcomes-based evaluative research at an integrally informed substance abuse treatment centre using the Integrated Recovery model [unpublished thesis]. University of Cape Town: Department of Psychology.

Du Plessis, G.P. (2010). The integrated recovery model for addiction treatment and recovery. *Journal of Integral Theory and Practice, 5*(3), 68-87.

Du Plessis, G.P. (2012a). Integrated recovery therapy: Toward an integrally informed individual psychotherapy for addicted populations. *Journal of Integral Theory and Practice*, *7*(1), 124-148.

Du Plessis, G.P. (2012b). Toward an integral model of addiction: By means of integral methodological pluralism as a metatheoretical and integrative conceptual framework. *Journal of Integral Theory and Practice*, *7*(3), 1-24.

Du Plessis, G. P. (2013) The Import of Integral Pluralism in Striving Towards an Integral Metatheory of Addiction. Paper presented at *The third biennial Integral Theory Conference,* CA: San Fransisco, 20 July 2013

Dupuy, J. & Morelli, M. (2007). Toward an integral recovery model for drug and alcohol addiction. *Journal of Integral Theory and Practice, 2*(3), 26-42.

Dupuy, J. & Gorman, A. (2010). Integral Recovery: An AQAL approach to inpatient alchohol and drug treatment. *Journal of Integral Theory and Practice, 5*(3), 86-101.

Edwards, M.G. (2008a). Evaluating integral metatheory. Journal of Integral Theory and Practice, 3(4), 61-83.

Edwards, M.G. (2008b). Where's the method to our integral madness? An outline of anintegral meta-studies. Journal of Integral Theory and Practice, 3(2), 165-194.

Edwards, M.G. (2010). Organizational transformation for sustainability: An integral metatheory. New York: Routledge.

Engel, G.L. (1977). The need for a new medical model. *Science, 196*, 129-136.

Engel, G.L. (1980). The clinical applications of the biopsychosocial model. *American Journal of Psychiatry, 5*, 535-544.

Erickson, C.K. (1989). Reviews and comments on alcohol research relaxation therapy, and endorphins in alcoholics. *Alcoholism, 6*, 525-526.

Esbjörn-Hargens, S. (2006). Integral research: A multi-method approach to investigating phenomena. *Constructivism and the Human Sciences, 11*(1), 79-107.

Esbjörn-Hargens, S. (2009). An overview of integral theory: An all-inclusive framework for the 21st century (Resource Paper No. 1). Boulder, CO: Integral Institute.

Esbjörn-Hargens, S. & Zimmerman. M. E. (2009). *Integral ecology: Uniting multiple perspectives on the natural world.* New York: Integral Books.

Fields, R. (1998). *Drugs in perspective.* Boston: McGraw-Hill.

Finfgeld, D.L. (2003). Metasynthesis: The state of the art—so far. *Qualitative Health Research, 13*(7), 893-904.

Flores, P.J. (1997). *Group psychotherapy with addicted populations.* Binghamton, NY: The Haworth Press.

Flores, P.J. (2004). *Addiction as an attachment disorder*. Jason Aronson.

Forman, M. (2010) *A guide to integral psychotherapy: Complexity, integration and spirituality in practice.* New York: SUNY Press.

Gifford, E. & Humphreys, K. (2006). The psychological science of addiction. *Addiction and its Sciences, 102*, 352-361.

Glantz, M. & Pickens, R. (Eds.). (1992). *Vulnerability to drug abuse.* Washington, DC: American Psychological Association.

Gordis, E. (2000). From genes to geography: The cutting edge alcohol research. *Alcohol Alert*, *48*. Rockville MD: National Institute of Alcohol and Drug Abuse.

Graham, M.D., Young, R.A., Valach, L. & Wood, R.A. (2008). Addiction as a complex social action: An action theoretical perspective. *Addiction Research and Theory, 16*, 121-133.

Griffiths, M.D. (2005). A components model of addiction within a biopsychosocial framework. *Journal of Substance Use, 10*, 191-197.

Griffiths, M.D. & Larkin, M. (2004). Conceptualizing addiction: A case for a _complex systems account. *Addiction Research and Theory*, *12*, 99-102.

Grof S. (1980). *LSD psychotherapy.* Pomona, CA: Hunter House.

Grof S. (1992). *The holotropic mind.* San Francisco: Harper Collins.

Hampson, G.P. (2007). Integral re-views postmodernism: The way out is through. *Integral Review, 4*, 108-173.

Hawkins, J.D., Catalano, R.F. & Miller, J.Y. (1994). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance use prevention. *Psychological Bulletin, 112,* 64-105.

Heidegger, M. (1962/1927). *Being and Time*. Trans. John Macquarrie and Edward Robinson. New York: Harper.

Hesselbrock, M.N., Hesselbrock, V.M. & Epstein, E.E. (1999). Theories of etiology of alcohol and other drug disorders. In B. S. McCrady & E. E. Epstein (Eds.), *Addictions: A comprehensive guidebook* (pp. 50-74). New York: Oxford University Press.

Hill, W. B. (2010). An ontological analysis of mainstream addiction theories: Exploring relational alternatives. Retrieved April, 18, from http://search.proquest.com//docview/305185322.

Hinson, R.E. (1985). Individual differences in tolerance and relapse: A Pavlovian conditioning perspectives. In M. Galizio & S. A. Maisto (Eds.), *Determinates of substance abuse: Biological, psychological and environmental factors* (pp. 125-178). New York: Plenum Press.

Hoffman, R.S. & Goldfrank, L.R. (1990). The impact of drug abuse and addiction on society. *Emergency Medicine Clinics of North America*. *8*, 469-480.

Holford, P., Miller, D. & Braly, J. (2008). *How to quit without feeling s**t.* London, United Kingdom: Piatkus Books.

Ingersoll, R.E. & Zeitler, D.M. (2010) *Integral psychotherapy: Inside out/Outside in*. New York: SUNY Press.

James, W. (1961 / 1901). *The varieties of religious experience: A study in human nature.* New York: Colliers.

Jay, J. & Jay, D. (2000). *First love: A new approach to intervention for alcoholism and drug addiction*. Center City, MN: Hazelden.

Jessor, R. & Jessor, S.L. (1977). *Problem behavior and psychosocial development.* New York: Academic Press.

Jessor, R. & Jessor, S. (1980). A social-psychological framework for studying drug use. In U. S. Department of Health and Human Services, *Theories on drug abuse: Contemporary* perspectives (NIDA Research monograph No. 30, pp. 102-109; DHHS Publications No. ADM 80-967). Washington, DC: U.S. Government Printing Office.

Johnson D.B. (1980). *Toward a theory of drug subcultures*. Rockville: National Institute on Drug Abuse.

Jung, J. (2001). *Psychology of alcohol and other drugs: A research perspective*. Thousand Oaks. CA: Sage.

Kandel, D.B. & Davies, M. (1992). Progression to regular marijuana involvement: Phenomenology and risk factors for near daily use. In Glantz, M., & Pickens, R. (Eds.), *Vulnerability to drug abuse* (pp. 299-358). Washington, DC: American Psychological Association.

Kantzian, E.J. (1994). Alcoholics Anonymous—Cult or corrective? Paper presented at Fourth Annual Distinguished Lecture. Manhasset, NY: Cornell University.

Khantzian, E.J. (1999). *Treating addiction as a human process.* Northvale, NJ: Jason Aronson.

Khantzian, E.J., Halliday, K.S. & McAuliffe, W.E. (1990). *Addiction and the vulnerable self: Modified dynamic group therapy for substance abusers.* New York: Guilford Press.

Kinney, J. (2003). *Loosening the grip: A handbook of alcohol information*. (7th ed.) New York: McGraw-Hill.

Kohut, H. (1971). *The analysis of the self: A systematic approach to the psychoanalytic treatment of narcissistic personality disorders.* New York: International University Press.

Kohut, H. (1977). *The restoration of self.* New York: International University Press.

Kuhn, T. (1970). *The structure of scientific revolutions.* Chicago: University of Chicago Press.

Kurtz, E. (1982). Why AA works: The intellectual significance of Alcoholics Anonymous. *Quarterly Journal of Studies on Alcohol, 43*, 38-80.

Kurtz, E. & Ketcham, K. (2002). *The spirituality of imperfection: Storytelling and the search for meaning.* New York: Bantam Books.

Laudet, A.B., Morgen, K. & White, W.L. (2006). The role of social supports, spirituality, religiousness, life meaning and affiliation with 12-Step fellowship in quality of life satisfaction among individuals in recovery from alcohol and drug problems. *Alcoholism Treatment Quarterly, 24*(1-2), 33-73.

Levant, R.F. (2004). 21st Century psychology: Toward a biopsychosocial model. *The Family Psychologist,* Summer*,* 29-30.

Levin, J.D. (1995). Psychodynamic treatment of alcohol abuse. In *Dynamic therapies for psychiatric disorders (Axis 1).* Barber, J.P. & Crits-Christoph, P. (Eds.) New York: Basic Books.

Lewis, M.W., & Kelemen, M.L. (2002). Multiparadigm inquiry: Exploring organizational pluralism and paradox. *Human Relations*, *55*(2), 251-275.

Marlatt, G.A. & Gordon, J.R. (1985). *Relapse prevention: Maintenance strategies in treatment of addictive behaviors.* New York: Guilford Press.

Marlatt. G.A. (2002). Buddhist philosophy and the treatment of addictive behavior. *Journal of Cognitive and Behavioral Practice, 9*(1), 47.

Martin, J.A. (2008). Integral research as a practical mixed-methods framework: Clarifying the role of integral methodological pluralism. *Journal of Integral Theory and Practice, 3*(2), 155-164.

Marquis, A. (2008). *The integral intake: A comprehensive idiographic assessment in integral psychotherapy.* New York: Taylor & Francis.

Marquis, A. (2009). An integral taxonomy of therapeutic interventions. *Journal of Integral Theory and Practice, 4*(2), 13-42.

Maslow, A. (1968). *Toward a psychology of being*. New York: Van Nostrand.

Maxmen, J.S. & Ward, N.G. (1995). *Essential psychotherapy and its treatment.* New York: W.W. Norton.

McPeak, J.D., Kennedy, B.P. & Gordon, S.M. (1991). Altered states of consciousness therapy: A missing component in alcohol and drug rehabilitation treatment. *Journal of Substance Abuse Treatment, 8*, 75-82.

Meehl, P. (1992). Cliometric metatheory: The actuarial approach to empirical, history-based philosophy of science. *Psychological Reports*, *71*(2), 339.

Heidegger, M. (1962/1927). Being and Time. Trans. John Macquarrie and Edward Robinson. New York: Harper.

Meissner, W.W. (1980). Addiction and paranoid process: Psychoanalytic perspectives. *International Journal of Psychoanalytic Psychotherapy, 8,* 273-310.

Menninger, K. A. (1938). *Man against himself.* New York: Harcourt, Brace.

Merikangas, K.R., Rounsaville, B.J. & Prusoff, B.A. (1992). Familial factors in vulnerability to drug abuse. In M. Glantz, & R. Pickens (Eds.). *Vulnerability to drug abuse.* Washington, DC: American Psychological Association.

Milkman, H.B. & Sunderworth, S.G. (2010). *Craving for ecstasy and natural highs: A positive approach to mood alteration*. CA: Sage.

Milkman, H.B. & Frosch, W. (1973) On the preferential abuse of heroin and amphetamines. *Journal of Nervous and Mental disease. 156*(4), 242-248.

Miller R.W. (1997). Spiritual aspects of addiction treatment and research. *Mind/Body Medicine, 2* (1), 37-43.

Miller, R.W. (1998). Researching the spiritual dimensions of alcohol and other drug problems. *Addiction, 93*(7), 979-990.

Miller, W.R. (2006). Motivational factors in addictive behaviors. In W.R. Miller & K. M. Carroll (Eds.), *Rethinking substance abuse: What the science shows, and what we should do about it* (pp. 134-152). New York: Guilford Press.

Miller, W.R. & Carroll, K.M. (2006). Drawing the scene together: Ten principles, ten recommendations. In W.R. Miller & K.M. Carroll (Eds.), *Rethinking substance*

abuse: What the science shows, and what we should do about it (pp. 293-312). New York: Guilford Press.

Miller, W.R. & Rollnick, S. (2002). *Motivational interviewing: Preparing people to change.* New York: Guilford Press.

Moos H.R. (2003). Addictive disorders in context: Principles and puzzles of effective treatment and recovery. *Psychology of Addictive Behaviors, 17*, 3-12.

Murray, T. (2010). Exploring epistemic wisdom: Ethical and practical implications of integral theory and methodological pluralism for collaboration and knowledge-building. Chapter in S. Esbjörn-Hargens (Ed.) *Integral Theory in action: Applied, theoretical, and constructive perspectives on the AQAL model*. Albany: Suny Press.

Murray, T. (2011). Toward post-metaphysical enactments: On epistemic drives, negative capability, and indeterminacy analysis. *Integral Review, (7)*2, 92-125.

Murray, T. (2012). Embodied realism and Integral ontologies: Towards self-critical theories. Retrieved, August, 12, from http://www.perspegrity.com/papers/Murray_Metaphorical_Realisms.pdf.

Myers, B. & Parry, C. (2004). Access to substance abuse treatment services for black South Africans: Findings from audits of specialist treatment facilities in Cape Town and Gauteng. *South Africa Psychiatry Review, 8,* 15-19.

Nakken, C.M. (1998). *Understanding the addictive process: Development of an addictive personality.* Center City, MN: Hazelden.

NIDA (National Institute on Drug Abuse). (2008). NIDA infoFacts: Understanding drug abuse and addiction. Retrieved July 14, 2009, from http://www.drugabuse.gov/infofacts/understand.html.

O'Brien, M.E. (1997). A serious problem comes out of the closet. *Post Graduate Medicine*, *102*, 198-206.

Orford J. (2000). *Excessive appetites: A psychological view of addiction* (2nd ed.). Chichester: Willey.

Overton, W.F. (2007). A coherent metatheory for dynamic systems: Relational organicism-contextualism. *Human Development, 50*, 154-159.

Parry, C.D.H., Pluddermann, A. & Myers, B.J. (2005). Heroin treatment demand in South Africa: Trends from two large metropolitan sites (January 1997-December 2003). *Drug and Alcohol Review, 24,* 419-423.

Paterson, B., Thorne, S., Canam, C. & Jillings, C. (2001). *Meta-study of qualitative health research: A practical guide to meta-analysis and meta-synthesis.* London: Sage.

Piaget, J. (1977). *The essential Piaget.* H.E. Gruber & J.J. Voneche (Eds.). New York: Basic Books.

Pilgrim, D. (2002). The biopsychosocial model in Anglo-American psychiatry: Past, present, and future. *Journal of Mental Health, 11,* 585-594.

Polkinghorne, D. E. (2004). *Practice and the human sciences.* Albany, NY: SUNY Press.

Prentiss, C. (2005). *The alcoholism and addiction cure.* Malibu, CA: Power Press.

Proschaska, J.O., & DiClemente, C.C. (1992). Stages of change in the modification of problem behaviors. In: M. Hersen, R.M. Eisler & P.M. Miller (Eds.), *Progress in behavior modification, 28* (pp. 184-214). Sycamore, IL: Sycamore Press.

Ray, O., & Ksir, C. (2004). *Drugs, society, and human behavior*. New York: McGraw-Hill.

Reber, J.S. & Osbeck, L. (2005). Social psychology: Key issues, assumptions and implications. In B. D. Slife, J. S. Reber, & F. C. Richardson (Eds.), *Critical thinking about psychology: Hidden assumptions and plausible alternatives* (pp. 63-79). Washington, DC: APA Books.

Richardson, F.C. (2002). Current dilemmas, hermeneutics, and power. *Journal of Theoretical and Philosophical Psychology. 22*, 114-132.

Richardson, F.C. (2005). Psychotherapy and modern dilemmas. In B.D. Slife, F.C. Richardson & J.S. Reber (Eds.), *Critical thinking about psychology: Hidden assumptions and plausible alternatives.* Washington, D.C.: American Psychological Association.

Ribes-Inesta, E. (2003). Concepts and theories: Relation to scientific categories. In K.A. Lattel & P.N. Chase (Eds.), *Behavior theory and philosophy*, (pp.147-166). New York: Kluwer Academic/Plenum.

Rioux, D. (1996). Shamanic healing techniques: toward holistic addiction counseling. *Alcoholism Treatment Quarterly, 14*(1), 59-69.

Ritzer, G. (1988). Sociological metatheory: A defense of a subfield by a delineation of its parameters. *Sociological Theory, 6*(2), 187-200.

Ritzer, G. (1991). Reflections on the rise of metatheorizing in sociology. *Sociological Perspectives, 34*(3), 237-248.

Ritzer, G. (1992). *Metatheorizing*. Newbury Park, CA: Sage.

Ritzer, G. (2001). *Explorations in social theory: From metatheorizing to rationalisation.* London: Sage.

Roberts, A.J. & Koob, G.J. (1997). The neurobiology of addition: An overview. *Alcohol and Health Research World, 21*(2), 101-143.

Ronell, A. (1993). *Crack wars: Literature, addiction, mania*. Nebraska: University of Nebraska Press.

Schuckit, M.A. (1980). A theory of alcohol and drug abuse: A genetic approach. In D.J. Lettieri, M. Sayers & H.W. Persons (Eds.), *Theories on drug abuse: Selected contemporary perspectives* (NIDA Research Monograph No. 30, pp. 297-302; DHS Publication No. ADM 80-976). Rockville, MD: National Institute of Drug Abuse.

Schuckit, M.A., Goodwin, D.W. & Winokur, G.A. (1972). A long-term study of sons of alcoholics. *Alcohol Health and Research World, 19,* 172-175.

Siegel, R. (1984). The natural history of hallucinogens. In: B. Jacobs (Ed.), *Hallucinogens: Neurochemical, behavioral and clinical perspectives.* New York, NY: Raven Press.

Skinner, Q. (1985). *The return of grand theory in the human sciences*. Cambridge: Cambridge University Press.

Sremac, S. (2010). Addiction, narrative and spirituality: Theoretical-mythological approaches and overview. Retrieved 10 July 2010 from: http://www.cirelstud.org/sites/default/files/sremac_rit_14.pdf

Shaffer, H.J. (1986). Conceptual crisis and the addictions: A philosophy of science perspective. *Journal of Substance Abuse Treatment, 3*, 285-296.

Shaffer, H.J. (1995). A clinical update on the addictions. Paper presented at workshop, The Addictions, March, Harvard Medical School, Boston.

Shaffer, H.J. (1997).The most important unresolved issue in the addictions: conceptual chaos. *Substance Use and Misuse*, *32*, 1573-1580.

Shaffer, H.J., LaPlante, D.A., LaBrie, R.A., Kidman, R. C., Donato, A. N. & Stanton, M.V. (2004). Toward a syndrome model of addiction: Multiple expressions, common etiology. *Harvard Review of Psychiatry, 12,* 367-364.

Shaffer, H.J. (2007). What is addiction? A perspective. Cambridge: MA. Harvard Medical School-Division on Addictions. Retrieved December 25, 2007, from http://www.divisiononaddictions.org/html/whatisaddiction.htm.

Shealy, S. (2009). Toward an integrally informed approach to alcohol and drug treatment: Bridging the science and spirit gap. *Journal of Integral Theory and Practice, 4*(3), 109-126.

Sklair, L. (1988). Transcending the impasse: Metatheory, theory, and empirical research in the sociology of development and underdevelopment. *World Development, 16*(6), 697-709.

Shiffman, S. & Wills, T.A. (Eds.) (1985). *Coping and substance abuse.* New York: Academic Press

Shuttleworth, A. (2002). Turning towards a bio-psycho-social way of thinking. *European Journal of Psychotherapy, 5,* 205-223.

Sher, K.J. (1993). Children of alcoholics and the intergenerational transmission of alcoholism: A biopsychosocial perspective. In J.S. Baer, G.A. Marlatt, & R.J. McMahon (Eds.), *Addictive behaviors across the lifespan: Prevention, treatment and policy issues* (pp. 3-33). Newbury Park, CA: Sage.

Slife, B.D. (2005). Taking practice seriously: Toward a relational ontology. *Journal of Theoretical and Philosophical Psychology, 24*, 157-178.

Slife, B.D. & Hopkins, R. (2005). Alternative assumptions for neuroscience: Formulating a true monism. In B.D. Slife, J.S. Reber, & F.C. Richardson (Eds.), *Critical thinking about psychology: Hidden assumptions and plausible alternatives (pp. 121-147). Washington, DC: APA Books.*

Slife, B.D. & Richardson, F.C. (2008). *Problematic ontological underpinnings of positive psychology: A strong relational alternative*. Brigham Young University, Provo, UT. University of Texas, Austin, TX.

Smith E.D., & Seymour, B.R. (2004). The nature of addiction. In: R.H. Coombs (Ed.), *Handbook of addictive disorders: A practical guide to diagnosis and treatment*. New Jersey: John Wiley & Sons, pp. 3-30.

Smuts, J.C. (1927). *Holism and evolution.* London: MacMillan.

Solomon, L.J. & Corbit, J. (1974). An opponent-process theory of motivation: Temporal dynamics of affects. *Psychological Review, 81,* 119-145.

Turner, J. H. (1990). The misuse and use of metatheory. *Sociological Forum, 5*(1), 37-53.

Ulman, R.B. & Paul, H. (2006) *The self psychology of addiction and its treatment: Narcissus in wonderland.* New York: Routledge.

Vaillant, G.E. (1995). *The natural history of alcoholism revisited.* Cambridge, MA: Harvard University Press.

Volkow, N.D., Fowler, J.S. & Wang, G.J. (2002). Role of dopamine in drug reinforcement and addiction in humans: results from imaging studies. *Behavioral pharmacology*, *13*, 355-366.

Volkow, N.D., Fowler, J.S., Wang, G., Swanson, J.M. & Telang, F. (2007). Dopamine in drug abuse and addiction: Results of imaging studies and treatment implications. *Archives of Neurology, 64*(11), 1575-1579.

Wagner, D.G. & Berger, J. (1985). Do sociological theories grow? *American Journal of Sociology*, *90*(4), 697-728.

Wallace, J. (1985). Predicting the onset of compulsive drinking in alcoholics: A biopsychosocial model. *Alcohol, 2*, 589-595.

Wallace, J. (1993). Modern disease models of alcoholism and other chemical dependencies: The new biopsychosocial models. *Drugs and Society, 8*, 69-87.

Wallis, S.E. (2010). Toward a science of metatheory. *Integral Review*, *6* (3), 73-115.

Walters, J.P. (2007). *Directors drug control strategy*. Policy statement, October 2. Washington, DC: Office of National Drug Control Policy.

Weil, A. (1972). *The natural mind.* Boston, MA: Houghton Mifflin.

West, R. (2005). *Theory of addiction*. Malden, M: Blackwell.

White, W. (1996). *Pathways: From the culture of addiction to the culture of recovery*. Center City, MN: Hazelden.

White, W. (1998). *Slaying the dragon.* Bloomington, IL: Chestnut Health Systems.

Whitfield, C.L. (1991). *Co-dependence, healing the human condition.* Deerfield Beach, FL: Health Communications.

Wilber, K. (1995). *Sex, ecology and spirituality: The spirit of evolution.* Boston, MA: Shambhala.

Wilber, K. (2000). *Integral psychology: Consciousness, spirit, psychology, therapy*. Boston, MA: Shambhala.

Wilber, K. (2003a). Excerpt A: An integral age at the leading edge. 5 pts. Ken Wilber Online. Retrieved January 10, 2009, from http://wilber.shambhala.com/html/books/kosmos/excerptA/part1.cfm.

Wilber, K. (2003b). Excerpt B: The many ways we touch: Three principles helpful for any integrative approach. Retrieved January 10, 2009 , from http://wilber.shambhala.com/html/books/kosmos/excerptD/excerptD.pdf.

Wilber, K. (2006). *Integral spirituality: A startling new role for religion in the modern and postmodern world.* Boston, MA: Integral Books.

Wills, T.A. & Shiffman, S. (1985). *Coping and substance use: A conceptual framework*. Orlando: Academic Press.

Winkelman, M. (2001). Alternative and traditional medicine approaches for substance abuse programs: a shamanic perspective. *International Journal of Drug Policy, 12*, 337-351.

Wurmser, L. (1995). Compulsiveness and conflict: The distinction between description and explanation in the treatment of addictive behavior. In S. Dowling (Ed.), *The psychology and treatment of addictive behavior* (pp. 43-64). Madison, CT: International Universities Press.

Zhao, S. (2010). *Metatheory.* Retrieved January, 18, 2010, from http://sageereference.com/socialtheory/Article_n193.htm.

Zoja, L. (1989). *Drugs, addiction and initiation: The modern search for ritual*. Boston, MA: Sigo.