



**AT THE INTERSECTION OF PERSONALITY AND ADDICTION: FUTURE  
DIRECTIONS FOR PERSONALITY THEORY AND RESEARCH IN THE ERA OF  
GENOMIC MEDICINE**

\*Elizabeth Dale Gilley, MAP, PMC-Addictions

Founder and Research Review Analyst, The Elle Foundation, West Palm Beach, FL 33401 Philosophy of Psychology of Addiction, Doctoral Student, NorthCentral University, San Diego, CA July 2021.

\*Corresponding Author: Elizabeth Dale Gilley

Founder and Research Review Analyst, The Elle Foundation, West Palm Beach, FL 33401 Philosophy of Psychology of Addiction, Doctoral Student, NorthCentral University, San Diego, CA July 2021.

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**ABSTRACT**

In the new era of genomic medicine, the interactive effects of genetic and epigenetic influence upon the development of substance use disorder (SUD), behavioral process addiction (BPA) comorbid mental health disorder (CMHD), as well as upon the development of personality, need to be considered in the design of personalized addiction recovery treatment plans. Twenty-first century holistic addiction treatment planning will consider the individual patient-client's genome in treatment planning of both neurological and psychological issues. The science of personality psychology will be utilized in the development and personalization of short term, mid-range and long term substance use disorder and addiction recovery plans, which take into consideration personality type, temperament and trait analysis, to predict potential areas of increased risk to sustained abstinence and cessation of self-medication re-instatement of drug use, and those personality strengths which could potentially increase resilience, adaptation and facilitate wellbeing.

**KEYWORDS:** addiction, substance use disorder, reconceptualizing addiction, reward deficiency syndrome and personality.

**INTRODUCTION**

**Who am I? Who are you? How are we similar? How are we different?**

Questions regarding identity and the puzzle of personality are as old as mankind. Early Homo sapiens realized certain individuals were better at tool making, some excelled in the hunt, while others were proficient in scouting medicinal herbs. Looking up at the night sky, our ancestors recognized patterns or constellations of stars, which were believed to influence personality. In ancient Greece, philosophers pondered the essence of the soul, spirit, mind and/or psyche of man. Personality would eventually be defined as the patterns, qualities and characteristics of an individual.

Psychology's earliest pioneers, Sigmund Freud (1856-1939) and Carl Jung (1875-1961) had unique ideas about personality and consciousness. Sigmund Freud presented personality concept of the ego, id and superego; developmental stages of personality; influence of the subconscious, and psychoanalysis (Freud, 1917, 1915, 1910; Kahn, 2002). Carl Jung contributed popular archetypes which were the foundation for development of the Myers Briggs Type Indicator (MBTI) (Briggs, 1987; Myers, 2011, 1998). Jung planted psychological seeds for Abraham Maslow's (1908-1970) and Carl

Roger's (1902-1987) humanist expansion of the psychology of wellbeing (Aanstoos, 2000; Bugental, 1964). Maslow's presented hierarchy of needs and self-actualization theory (Maslow, 1972, 1969, 1964, 1962, 1958, 1954). Carl Roger's contributed person-centered theory, and the idea of positive regard, lifting the patients to client status, equally important in determining successful therapeutic outcome (Cartwright 1991; Rogers 1961, 1951; Suhd, 1995).

Early in psychology's history, John Watson (1878-1958), and Ivan Pavlov (1849-1936) explored behavioral conditioning, laying foundation for B.F. Skinner's (1904-1990) expansion of theory, in his contribution of operant conditioning and reinforcement patterns, which emphasized the importance of environment influence upon behavior (Pavlov, 1927; Phelps, 2015; Pierce, 2008; Skinner 1990, 1966, 1957, 1953, 1938; Watkins 1924). Albert Bandura (b. 1925) helped to bridge the transitional gap between behavioral and cognitive schools of psychology, and contributed social learning theory in personality development, which today is known as Social Cognitive Theory (Bandura 2015, 1997, 1986, 1977, 1969, 1962). Cognitive psychologists George Kelly (1905-1967), Walter Mischel (1930-2018), Albert Ellis (1913-2007), and Aaron Beck (b. 1921) also

contributed essential, significant aspects of personality theory, particularly as they relate to substance use disorder (SUD) and addiction recovery.

Kelly created personal construct theory (Kelly, 1969, 1967, 1963, 1955). Mischel contributed awareness and research support that personality is adaptive, fluid, changeable, and that the situation has influence upon behavioral outcome (Mischel, 2009, 2004, 1995, 1989, 1973, 1968). Albert Ellis created Rational Emotive Behavior Therapy (REBT) which helps the patient deal with emotions which seem out of their control (Ellis, 2011, 2009, 2005, 2001, 1994a, b, 1985, 1977, 1962, 1961). Beck, who is regarded as the father of cognitive behavioral therapy (CBT) designed the Beck Depression Inventory (BDI) (Alford 1998; Beck, 2019, 2003, 1993, 1979, 1975, 1972, 1967; Clark, 1999), which gauges depression for mental health treatment.

Raymond Cattell (1905-1998) reviewed George Allport's (1897-1967) contributions to personality psychology (Allport, 1955, 1937, 1927), analyzed general characteristics, and using factor analysis established 16 personality factors (Cattell, 1995, 1983, 1982, 1978, 1977, 1973, 1943) some of which would eventually be scored along domains in the Five-Factor Model (FFM) (Cattell, 1995, McCrae, 2008). Hans Eysenck's (1916-1997) personality profiler, research on extraversion, and neuroticism (Eysenck 1947, 1967) also contributed to Costa and McCrae's development of the Five-Factor Model (1992). Both Cattell (Revelle, 2009) and Eysenck were early founders of personality psychology, who operationalized traits, designed measurement tools (1969), in their contributions to the genetics of personality traits, differences in personality, and intelligence testing (Boyle, 2016; Corr, 2016).

Psychology's superstars mentioned above, and many individuals who are not mentioned, have contributed to the development of theoretical personality perspective and the empirical validation, which now provides the practitioner with a vast wealth of psychometric tests. More than 500 psychometric tests, measurement instruments and/or tools have been found to have degrees of reliability and validity support, in the evidence base, giving both the practitioner and client, confidence in personality assessment science. The collaborative efforts of academia, research teams, grant writers, editors, sponsors and support staff make advancement possible.

Temperament can be predicted to some degree, in some cases prenatally, through genetic evaluation. For the majority, who do not have the financial resources for genetic testing, temperament is discernible in the first few years of life (McCrae, 2000, 1999; Mischel, 1989). Personality types have been expanded from A or B to now include C, and D. Personality trait assessment has progressed professionally, from bifactor, either or analysis, as in the MBTI (Arias, 2018; Capraro, 2002; McCrae, 1989; Pittenger, 2005; Salter, 1997) to the Five-

Factor Model (FFM), which measures general traits along a continuum of dimensions. (Briggs, 1987; Digman, 1996; Gibby, 2008; John, 1999; McCauley, 2000; McCrae, 1989, 1987; Myers, 2011, Strus, 2014; Trull 2013). Currently, any number of personality traits and/or sub-traits can be evaluated, depending upon the degree of desired profile accuracy (Alison, 2011; Boon, 1997; Exline 2003; Pinizzotto, 1990, 1984), ranging from the detail of National Security Administration (NSA) level profiling to that of personnel selection.

While the science of personality is still evolving, efforts are being made to further integrate the structure and process point of view of personality. William Fleeson, of Wake Forest University, suggests that traits should be viewed as density distributions of behavioral states (Fleeson, 2007, 2004, 2001), along the individual's journey from childhood to old age, and over a variety of situations. For the addiction recovery and/or mental health disorder therapist, the state of the art of personality psychology psychometric science (Benjamin, 2014; Carver, 1996; Caspi, 2005; Cushman, 1995), affords many means of evaluation of problematic behavior and potential personality disorder (Ferrando, 2018).

The improved Minnesota Multiphasic Personality Inventory (MMPI-2 RF) (Buchanan, 1994; Friedman, 2015; Graham, 2012; Tellegen, 2011, 2008, 2003) remains a widely utilized instrument to identify a range of potential problematic behavior. The gold standard of professional psychiatric assessment diagnosis is determined by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Health Disorders, 5th Ed. (DSM-5) (APA, 2013), which uses its own personality trait model, found on page 773 (Beckman 2020; Boyce 2013; Caspi, 2005; Kreuger, 2014; McCrae 1989, 1987; Messick, 1995; Samuel, 2010; Trull, 2013).

Contributions in personality theory, advancements in psychometric testing, and progressive research, have propelled personality psychology into the 21<sup>st</sup> century, where it may potentially realign, and collaborate with interactive fields of psychiatric genetics, neurology, biology, and utilize the exponential advances in medical technology, to truly make the author's vision for personalized genomic addiction medicine possible. State of the art addiction recovery treatment plans (Fried, 2019; Gilley, 2020, 2019, 2018 a, b, c, d, 2017, 2016, 2013) include consideration of personality psychology in recovery treatment plan design.

## DISCUSSION

Personality psychology is important because it is the juncture where all other psychological sciences converge. Graduate level textbooks, organize personality psychology into 6 domains: 1) the dispositional domain, including theory, measurement and trait analysis over the lifespan and various situations; 2) the biological domain,

including the genetics of personality, physiological approaches and evolutionary perspectives; 3) the intrapsychic domain, including psychoanalytic approaches and discussion of motives; 4) the cognitive-experiential domain, including the phenomena of what it feels like to have various perspectives of perception; 5) the social/cultural domain, which includes the variables of sex, gender, social and cultural influence; and 6) the adjustment domain, which includes the human response to life beyond our control (Larsen, 2008).

The adjustment domain considers the affect/effect of stress, individual coping responses and psychopathology of personality disorders (Gibby, 2008; McCrae, 2000). A discussion of all domains is impractical in the scope of this research review, which will focus on the biological domain, in particularly, the genetics of personality and addiction, reconceptualized as Reward Deficiency Syndrome (Gilley, 2020, 2018a).

In this era of genomic medicine, deoxyribonucleic acid (DNA) is a popular focus. Geneticists understand that genes alone do not control outcome. Environmental influence is *epi*-genetic, meaning it tops or rules over genetic expression, quite literally. The body's higher intelligence, consciousness, can rewrite the genetic code, in approximately 2000 variations, through ribonucleic acid (RNA) transcription (Lipton, 2017, 2009, 2006). The myelin sheath which covers the chromosomes of DNA, can act like a creative sleeve, restructuring genetic blueprint design for building neural receptor sites.

As an increasing wave of pulsing electro-magnetic frequency, washes over ions in the neural cell body, action potential is ignited, prompting responsive movement, of protein strands, of amino acids, setting off a chain reaction of neurotransmission (Gilley, 2018a). This is literal example, of physics giving birth to chemistry, in the creation of messenger molecules (Schoeller, 2018). Genes alone, do not determine outcome. Rather, it is the interaction of genes and epigenetic pressures which are causal influence (Meaney, 2010). Study of interactive genetic/epigenetic influence is the engine driving the focus of this research review, to the intersection of addiction and personality.

Dopamine dysregulation in the Brain's Reward Cascade (BRC) creates an underlying addiction syndrome, called Reward Deficiency Syndrome (RDS). Polymorphic gene variances can predispose individuals to thrill seeking, impulsivity disorder (Moses, 2019), a paucity of dopamine receptors, increased metabolism of dopamine in the brain reward cascade (BRC), increased serotonin reuptake, increased sensitivity to drugs such opioids, cocaine, alcohol and nicotine, etc. (Gilley, 2019, 2018a, b, c, d).

The human brain is always in a process of change, known as neural plasticity (Nelson, 1999), throughout the person's developmental lifespan (Cleeremans, 2011).

The subconscious mind is programmed early in life in alpha and theta wavelength frequencies. Neural repetitive loops may be glitches created by the brain's response to transient ischemic attack's (TIA), reduction and/or disruption of oxygen flow.

Patterns of repetitious stimulus-response, become engrained as neural networks, predisposing future cue induced behavioral response. They can be primed, activated beneath the level of conscious awareness (Gilley, 2017). Psychological patterns of reinstatement of substance use and/or addictive behavioral process, confound genetic predisposition, with epigenetic insult. Ongoing patterns of relapse begin within the physiological realm, initiating on molecular and cellular levels, as demonstrated below (Gilley, 2018a, b, c, d).

Addiction recovery and personality research psychologists benefit from review of neuro-logical study of Behavioral Activation Systems (BAS) and Behavioral Inhibition Systems (BIS), which clearly demonstrates the interactive influence of both genetics and epigenetics, on addiction recovery (Gilley, 2020). Three-dimensional brain mapping of the BAS and BIH reveal genetic influence for increased impulsivity and epigenetic increased sensitivity to stress, in real time (Berkman, 2009; Karimpour-Vazifekhorani, 2020; Morie, 2014a,b).

The body's response to dopamine flood doses is to lower the dopamine hedonic set point, reducing the normal level of dopamine in the neural channel (Gilley, 2017, 2018 a). Research participants include control group, SUD and BPA population. Results demonstrate genetic predisposition for impulsivity and hypodopaminergic epigenetic insult confounds abstinence challenge and predisposes habitation of reinstatement (Gilley, 2019).

Neurological imbalances, from genetic and epigenetic insult, influence personality. Genetic Addiction Risk Score (GARS) tests for ten common variances which are believed to be associated with Reward Deficiency Syndrome, as it manifests in substance use disorders (SUD) and behavioral process addictions, can determine areas of possible current and/or future developmental concern. (BPA) (Blum, 2017, 2014, 2015, 2011). The new exciting field of psychiatric genetics will become essential to addiction recovery treatment planning, to assist in providing pharmaceutical intervention, for problems along serotonin, dopaminergic, and endorphinergic channels (Blum, 2021, 2020).

While state of the art genomic addiction neuroscience has progressed to see visual 3D brain connectivity in real time, demonstrating effect of polymorphic gene variance of reward seeking, impulsivity and reduced stress coping response, the science of the genetics of personality psychology is also progressing. Meta-analysis of twin, shared environment and adoption, non-shared environment studies (De Moor, 2010; Jang, 1996;

Krueger, 2006, Sanchez-Roige, 2018; Turkheimer, 2000) and candidate gene association studies (Casey, 2014; Derringer, 2010; Gottschalk, 2017; Leyton, 2017), have found socio-genomic influence (Cole, 2009; Roberts, 2008) and well as influence of epigenetic pressures on gene expression (Riemann 1997). A current peer reviewed research study finds variance in neurotransmission influences challenge of depression, anhedonia, and social engagement (Netter & Hemig, 2016).

Hereditary influences personality traits, ranging from eye color, temperament and neurological deficit (Jang, 1996). It is well known that heredity influences personality traits of openness, neuroticism, extraversion and attention. Environmental and/or epigenetic transcription also exert influence, measured in cases of severe trauma, and early adverse life experience (Burns, 2018; Cole, 2009; McGowan, 2008). Specifically, the Gabra2 gene is often recoded, altered by RNA transcription, in rape victims, and Post-Traumatic Stress Disorder (PTSD) patients (Burns, 2018; Gilley, 2013). Interactive influences of genetic and epigenetics not only affect brain development, but exert influence upon adaptation and well-being (Tobby, 1990). These are just a few examples demonstrating the power of genetic and epigenetic influence upon personality and personality disorder.

There are also biological and/or physiological influences upon personality, personality disorders (South, 2015), and addiction (Erickson, 2009; Buttner, 2017). Substance use of illicit drugs (Blum, 2021) has physiological influence upon personality, as the brain is highjacked artificially, in self-initiated neurological imbalance. Hyperdopaminergia, which is surfeit, or flood dose state of dopamine (Blum, 2021) is a common example. The experiential phenomena of detoxification and withdrawal also have biological influence on personality (Thompson, 2017).

Anhedonia (Murray, 2021), dysphoria, and hypodopaminergia (Fried, 2019), a dopamine deficiency state (Leyton, 2014) are also common examples of artificially created, neurological imbalances, which are form of biological influence upon personality and personality disorder. Extended cocaine use creates mood swings, neurological fluctuations which can mimic (Newman, 2002), or induce bipolar disorder (Morie, 2014). Phenomena presents in the form of altered feeling, emotion, cognition, and perception.

Drugs change the brain, attitude, perspective, and behavior (Fleeson, 2001). Illicit street drugs and legal prescription drugs alter neurotransmission. The bottom line is that any psychoactive substance, alters brain chemistry, and the delicate balance of neurotransmission, influencing behavior, and over time, personality. Head trauma does too (Fowler, 2011; Guidotti, 2012) as do, environmental toxins. Even the food we eat, is often

contaminated by pesticides sprayed on crops. Heavy metals of the pollutants build up in the brain matter, inducing dementia, decreased functional capacity and loss of memory, as found in longitudinal study of addiction, Alzheimer's and Parkinson's diseases. Brain decline is one of the biggest influences upon personality, and quality of life, diminishing vitality and degrading the beauty of the human spirit.

Addiction is a brain disease (AMA, 2009). Science has debunked the myth that there is an addictive personality (Franques, 2000; Nakken, 1996). No evidence has been found supporting one personality type, more so, than another, to be predisposed to addiction. However, there is evidence that defective underlying self-concepts are correlational with problematic eating disorders (Watkins, 1998). Neuroticism, the opposite of emotional stability on the trait domain continuum, has correlation to problematic behavioral outcome (McCrae, 2000). Traits of openness, agreeableness and conscientiousness have been found to be correlational to increased wellbeing, resilience and successful relationships (Jang, 1996, Loehlin, 1998; Belcher, 2014; Bohart, 2013).

The evidence base shows that while traits are powerful indicators of general behavior, they fall far short of facilitating understanding the complexity of personality and/or the prediction of specific behavior (Diener, 1996; Friedman 2015, 2012). Personality is not only shaped by the brain, social and cultural influential factors must also be considered (Costa, 2001; Disabato, 2016). Intelligence tests must be culturally fair (Cattell, 1977). Ethnic orientations, social mores, religious conditioning, and cultural constructs must all be considered as influential in the study and analysis of personality.

Consideration of cultural influence has created many questions, found similarities, differences, specifics and generalities, in the search for answers. Certainly, there are universal ways in which people and personality are similar across cultures, just as there are ways in which people are different (Milfont, 2012). Researchers wanted to know "If genetic structure of human personality is universal?" Cross cultural study, of North America, Europe and Asia found for the most part, people are generally the same, with some small regional variances, as evolutionary psychology would predict in genetic expression (Yamagata, 2006).

What about happiness, and wellbeing? Does the variance of personality across different cultures effect the conceptualization of wellbeing? Yes, (Disabata, 2016). What about person-ality and money? Are the ideas of wealth and happiness the same around the world, in different cultures? Not exactly, finds Steel, as both wealth and happiness must be operationalized differently in some cultures (Steel, 2018). How about gender differences in personality traits around the world? While they are slight, gender is pretty stable (Costa, 2001), depending upon which domains are studied, and in what

situational context. Kusnierz's team found that there are differences in gender, as it relates to achievement, in the analysis of the traits conscientiousness, and openness (Kusnierz, 2020).

Cross cultural study finds that everyone needs positive self-regard (Heine, 1999), and recommends that traits be considered along a cultural domain for use in the psychiatric treatment of personality disorder (Terracciano, 2006). Religious practice has been found to be positively correlational to wellbeing (Khoynezhad, 2012).

What about personality change across the lifespan in various cultures? Current cross-cultural study supports previous findings that traits have both stability, and fluidity, as they change to a degree, across the lifespan (Chopik, 2017). The McCrae and Costa team of associates found expected increases in the traits of agreeable and conscientiousness, in the developmental track from adolescent, young, to middle adulthood. They found expected decreases in these same traits, in old age, when decline in both mental and physical health, begin to influence personality (McCrae, 2008, 2000, 1999, 1998).

Does culture influence which drugs people prefer? Yes, finds the Benschop team, not only does culture influence drug preference, but so do age, gender, and economic status (Benschop, 2020). Just how universal is the big five? Gurven sought to find out by going to the extreme of testing it amongst indigenous forager-farmer societies in the Bolivian Amazon, to show that there are pockets of regional, social differences that have evolved in human development of personality (Gurven, 2013). The take-away of cross-cultural study is that the Five-Factor Model, can reveal similarities and differences in personality across situation and context (Shoda, 2000).

Considering the widespread acceptability for and the dominance of trait theory in personality, the five factor model tests, as they vary in dimensions in different countries and cultures could easily be utilized to establish basic personality traits for target in counseling for addiction recovery (Trull, 2013). Utilizing personality trait analysis, in current addiction medicine, may assist in facilitating better understanding of the intersection of addiction and personality, and improve treatment outcome.

Currently clinical psychological addiction treatment science conflates cognitive theory (CBT) (Wenzel, 2012; Wright, 2003) with behavioral science's understanding of unconscious (Kastrup, 2017; Keehn, 1967) and conscious (Morris, 1998; Perlovsky, 2012) physiological cued stimulus-response (Flagel, 2015). Recall the BAS/BIS experiments found that increased impulsivity and increased sensitivity to stress had correlation with increased reinstatement of patterned drug use (Gilley, 2020). CBT includes enactive theory approach (Kirchoff,

2013; Ramirex-Vizcaya, 2019) for conscious determination of intentional response (Dijksterhuis, 2007; Ellis, 2005; Hudson, 2015; Wright, 2003).

The ideal short-term, addiction recovery treatment plans, days 1-30+, always assess life threatening, biological issues first, to stabilize the host. This often includes detoxification, to stop active poisoning of the brain, with toxic chemicals; monitoring withdrawal symptomology for safe transition; and initiating putative nutrient therapies, to begin healing the brain. In the future 21<sup>st</sup> century genomic medicine treatment plans, may include brain assessment via functional magnetic resonance imaging (fMRI), and single positron emission computed tomography (SPECT), for three-dimensional, real time brain imaging, to assess damage, oxygen flow, and cerebral activity (Gilley, 2020).

GARS testing, will hopefully become the new normal for informed pharmaceutical intervention to facilitate dopamine homeostasis (Ercan, 2017; Gilley, 2018d). The APA's DSM-5 personality trait model (APA, 2013, p. 773, Table 3) and patient self-report of symptoms (APA, 2013, p.735, Table 1) are used in personality trait analysis of pathology and personality disorder. Comorbid mental health disorder treatment planning is designed to work concurrently, rather than consecutively, with SUD, and BPA treatment plans.

A cohesive team of professionals from the fields of psychiatry, psychiatric genetics, neuro-psychology, psychology, addictionology, primary care physicians, nurses, and recovery coaches support are appropriate, to assist in delivery of 21<sup>st</sup> century state of the art RDS/addiction recovery treatment. This team will monitor neurological challenge in achieving dopamine homeostasis, while complying with pharmaceutical therapy and maintaining abstinence of drug use.

Graduation to phase two, the middle range of treatment care, will address indirect self-destructiveness (Tsirogotis, 2015); self-deception (Doody, 2017), in self-report of symptomology (Okun, 1984; Thomas, 1990); and "personality differentiation by cognitive ability" (Murray, 2016. P. 73). In this phase, the psychological education process RDS- Solution Focused Brief Intervention therapy (Gilley, 2019) will be utilized to help reconceptualize addiction.

Middle range treatment planning will include consideration of personality trait analysis (Resnick 2006), for assistance in identifying personality challenges and/or psychological proclivity for maladaptive coping response, and may prescribe personality trait adjustment therapy (Magidson, 2014) and skill development (Krenyzman, 2013; Seligman, 2005, 1999). Continuing care and wellbeing development treatment plan design will be personalized for the individual's unique personality, including consideration of socio-cultural influences.

Plan designers choose from the banquet of theoretical perspective: including integral (Wilbur, 2000, 1980); transpersonal (Friedman, 2015; Gilley, 2016; Scotton, 1996); existential (Carreno, 2019); humanistic (Rowan 2001; Serlin, 2011); spiritual; and energy psychologies. Frameworks of perspective guide individual counseling and group therapy, in facilitating understanding of mind-body connections, human nature, and the role of the individual determination in taking responsibility for outcome, self-actualization and mastery of potential (Kobau, 2011; Lambert 2015).

CBT (Scott, 1989) includes enactive theory approach (Kirchoff, 2013; Ramirex-Vizcaya, 2019) for conscious determination of intentional response (Dijksterhuis, 2007; Ellis, 2005; Hudson, 2015; Wright, 2003). Positive psychological application has been shown to facilitate, improved stress and drug cue coping response (Christopher, 2008; Compton, 2013; 1989; Friedman, 2012; Seligman, 2003, 2000). It also enhances the effect of integrative spiritual and wellbeing practices (Cohen, 2012; Friedman, 2014; Hoge, 2013; Seligman, 1998).

Long range action plans for continuing care success (Siang-Yang, 2006; Wong, 2011), will address skill in self-management of symptomology; reentry to society; employment (Greenberg, 1980; Judge, 2001; Neal, 2012; Scroggins, 2008); continuing education; social relationships and community connectivity; and well-being (Schoormans, 2014; Schueller, 2014), over the lifespan (Chapman, 2014; Cripps, 2020; Gilley, 2019, 2018d). State of the art, personalized, long term, 21<sup>st</sup> century genomic continuing care plans will monitor for RDS's neuro-logical deficiency symptomology, as it manifests along the developmental track to old age.

Research review analysis would not be complete without consideration for ethical challenge. Questions persist of how to help participates, how to keep them safe, even from themselves, if necessary (Dickson, 1985), and unrealistic expectation, when the primary focus of research study is to gather as much information as possible. Design for minimization of error, demands control of many variables, besides the dependent and independent variables. Issues of intentional and unintentional misrepresentation must be considered, potential self-deception by the participant, rater and interrater bias (McCrae, 1987), and even the observer effect upon findings. Privacy and data must be protected, in a world in which researchers are tempted by corporations to sell their information.

What morals if any, do we forgo, in keeping personality psychology small? Surely, its only value is not just for profit, for prediction of behavior, for business, target marketing and employee selection (De Armond, 2012). Surely its value is greater than its weaponization for national defense. Ethics demand that the science flourish for all, that we learn from the error of our ways (Tsikandilakis, 2019), that equal opportunity be

provided for healing, and that the expanse of personality psychology continue, to the furthest reaches of the greater vision for personalized medicine (Baumeister, 1996).

### Future Directions of Theory And Research

Unfortunately, the state of the art of personality science as it intersects with addiction, as it is today, in 2021, cannot drive the engine from adjustment to well-being alone, (Jayawickreme, 2012), over the lifespan (Chapman, 2014; Ferguson, 2010), without the assistance of unifying theory and collaboration with other interactive sciences (Kreugerm, 2018). Recommended area for future study is RDS analysis to facilitate phenotype ideation (Kreuger, 2018). RDS/addiction traits must also be operationalized and measurement tools devised.

Traditional psychiatry and psychology, as they interface with SUD and BPA treatment already take measure of depression, anxiety, anhedonia, impulsivity, sensation seeking, and a long list of other experiential phenomena, for analysis of level of personal functioning (Samuel, 2010). However, the old tests are not keeping up with the times. The exponential increase in the evidence base alone requires the continual creation of new tests and measurements just to keep up with the changes of enlarged perspective (Gunderson, 2010; Gilley, 2018d, 2019).

The future of personality science as it intersects with addiction recovery, will hopefully expand upon the trait dimensions, which are conceptualized at present (Hampson, 2018), in the 21<sup>st</sup> century, to possibly include enlarged perspective of the role of anhedonia, dysphoria and anticipatory dopamine reward stimulus (Linnet, 2017). Consideration of altered dopamine transmission will most certainly be recognized as a new trait domain, ranging from surfeit, hyperdopaminergia, along the continuum of dopamine homeostasis, to the deficit state of hypodopaminergia (Leyton, 2017).

Hyperdopaminergia is the feel good state from a dopamine flood dose. Whereas hypodopaminergia, is the feel bad, state of not having antiquate dopamine release, which fuels the engine of drug reinstatement. (Linnet, 2020). Addictive personality trait analysis, in the future may also consider imbalance of other neurotransmitters such as endorphins, in the development of new testing criteria, as these are indicative of personality, under siege, of neurological chemical imbalance (Buttner, 2017; Kreuger, 2018).

### SUMMARY AND CONCLUSION

Daring to envision personalized medicine, for all, in the treatment of addiction encourages consideration of more questions. *What are we missing?* Is our perspective so small that we may fail to see the obvious? Why is the old scientific argument, still just debating influence of heredity and environment,

omitting consideration of the influence of consciousness? What about the communicative nature of the individual's conscious connection to the whole? What about the power of collective consciousness to effect change? Surely personality is grander than temperament and trait. How can any discussion that excludes the influence of consciousness be relevant (Lipton, 2005, 2009)?

Omission of the role of intention, determinism and etherical nature of the psyche, temptingly titillates, discussion of the paranormal. What about intuitive man's increasing extra sensory perceptions? What about psychic sensitivities that allow individuals to see energetically, know intuitively and communicate telepathically (Zingrone, 2009, 2002)? Failure to scientifically consider extra sensory, perceptive aspects of personhood, condemns the study of personality to smallness, omitting consideration of the evolution of our intuitive nature.

Psychology's continuing search for answers, hints that potential benefit may stem from the advancement of spiritual and energy psychologies. As the quest for healing continues, issues regarding the question "what is the real relationship between the brain and the mind?" persist. Some theorists conceive of the brain and the mind as separate, believing if you heal the organ of the brain, mental wellness will follow. Other theorists believe there is no separation between mind and brain, that humans have one body, one mind. Misconceptions of man hold the boundaries of the status quo. Desire to know the true nature of man's complexity, and our place, in the totality of universal being, pull at the seams restricting our conceptual awareness. The quest for enlarged perspective points to the inclusion of higher sensory awareness in the human equation.

Contributions from many sciences are pushing the boundaries of the old argument between nature and nurture, heredity versus environment to shake up the old guard's smallness of focus. Is 21<sup>st</sup> century science, tempting Newtonian reductionist theorists to look up from their electron microscopes, and outside the narrowness of their focus? Does the transverse panoramic view of personality tempt theorists to consider the role of humanity, along its evolutionary path? Can science look through a new lens, framed in consideration of quantum entanglement (Perlovsky, 2016), across dimensions, to recognize undeniable interactive influence of the whole?

If so, there is hope for restorative wellbeing. Perhaps, in a perfect world, in the utopia of proper perspective, psychological attunement is possible. No longer linear in nature, but instantaneous in realignment with energy flow. Perhaps, separatism, and stagnation of old emotional blockages, will disappear, become moot, archaic. If man's desire is relieve from suffering, he

must stop investing in his old story, and write a new one. For the retelling, only serves to keep one invested in the prison of the past.

If a better future is to be manifested, it must be accessed in the here and now, in this moment's creative power. Words have power. Thoughts determine perspective. Perspective dictates behavior. If we are to remove the shackles of our mind, we must silence the mental chatter, and connect with the flow of energy that is source. This is the enlightenment we seek. Spontaneous healing can happen when we realign with source. **How did we forget?**

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