Application of Cognitive Revolution Theories in Coaching Practice

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Abstract

The cognitive revolution of the 1950s led to the application of scientific methods to the field of psychology resulting in a shift in how psychologists understand and apply psychological practices. This move towards a more scientifically minded psychological practice, combined with technological advances in neuroscience gave rise to various subfields, including reality therapy and behavioral economics. Like Plato's timeless allegory of the cave, these subfields seek to reveal how the brain understands and interprets reality. The implications of this understanding, combined with Glasser's practice of reality therapy, Ariely's work in the field of behavioral economics, and Kahneman's understanding of neurological processing in decision making can all be applied to the field of coaching to help better clients understand how and why they make the decisions that they do and why the brain's natural way of functioning can create dissonance between expectations and reality leading to feelings of unhappiness. Understanding that the brain's natural tendency to simulate the future is a flawed process can be the first step in helping a client overcome the dissonance created by unrealistic expectations. This knowledge can help move a client towards deeper reflection and ultimately more productive and positive decision making.

Keywords: Coaching, Cognitive Revolution Theories, Reality Therapy, Behavioral Economics, Cognitive Choice, Thinking Fast and Slow, Stumbling on Happiness.

Application of Post Cognitive Revolution Theories in Coaching Practice

The 1950s heralded a significant change in the field of psychology. Behaviorism once thought of as the only genuinely scientific branch of the psychological field (because it focuses on the interpretation of observable and measurable phenomenon) was being challenged by a revolutionary idea that the internal mental states of people could also be observable and measurable. In *Acts of Meaning*, Bruner states, "...an all-out effort to establish meaning as the central concept of psychology [...]. Its aim was to discover and to describe formally the meanings that human beings created out of their encounters with the world, and then to propose hypotheses about what meaning-making processes were implicated." (Bruner, 1990) .

Hallmarks of the Cognitive Revolution

Five essential ideas were born out of the Cognitive Revolution. (1) The mental world is grounded in the physical world through the concepts of information, computation, and feedback. (2) The mind cannot be a blank slate. (3) The infinite range of human behaviors manifest from a finite set of programs in the mind (4) Although human cultures appear highly varied, they are superficial and are explained with a universal set of mental mechanisms (5) The mind is a system of interdependent parts resulting in the emergent property of thought and human experience. (Pinker, 2003) . These understandings have shaped the various subfields of psychology yielded from the cognitive revolution including the work of William Glasser on reality therapy and the behavior economic principles developed by Dan Ariely. These two subfields can be applied to the practice of coaching to help clients understand and proactively change their understanding of how they make the decisions that ultimately lead them to a positive or negative experience.

Glasser on Reality Therapy

Developed in the decade following the cognitive revolution, Glasser's reality therapy model seeks to focus on realism, responsibility, and right and wrong. (Glasser, 2010) . This approach is useful as a tool in coaching because reality therapy is grounded in the idea that human suffering is a "socially universal condition" (Glasser, 2010) rather than the manifestation of a mental disorder. By focusing, in coaching or therapy, on here and now actions to help the client choose and create a more desirable future for themselves, this method supports clients in understanding their true desires and helps them to assess how the choices they are making are either leading them towards or away from those desires. If a desirable life results from the summation of choices made, then understanding how the brain makes choices is crucial in guiding a client towards making decisions that better resonate with their values and wants for their coveted reality.

The neurological theory of reality is a summation of electrochemical impulses. Photons enter the eye through a small hole called the pupil and interact with specialized cells in the retina called photoreceptors. As these cells are triggered, they initiate an electrochemical cascade of neurotransmitters that transmit this signal through the optic nerve to the occipital lobe of the brain where other neurons translate it into sight. What is fascinating is that visual processing is a two-fold process. The neuroanatomy of photoreceptors and neurons must be in good working order to carry a signal to the brain, and then the occipital lobe must have the experience, framework, and context, to create meaning from these signals. Generally, summarized blindness can be the result of either a disruption in the first pathway, i.e., the photoreceptors and neurons are damaged or dysfunctional, or damage to the occipital lobe can result in processing blindness

where the brain is unable to process the information and understand it even though the anatomy is intact and fully functional, therefore, vision is the combination of what is being seen by the eye and how the brain is processing that information.

The neurological pathway that results in vision is so efficient in healthy individuals that it alters reality. At the back of the eye, in a structure called the retina, there is a patch that lacks photoreceptors. This patch is where the optic nerve connects to the eye to carry the light impulse to the brain for processing and is commonly referred to as the blind spot. Every person has this blind spot, but many are unaware of it because they have never experienced a blank in their field of vision. Why? The brain is so efficient during processing that it constructs a piece of virtual reality by filling in the gaps using information from past experiences and contextual clues to provide what feels like a seamless, and accurate representation of the world; this means that experience plays a crucial role in how the brain fabricates reality.

Reality and the Ancients

The understanding of reality has intrigued humanity since its earliest days. The philosopher Plato used the allegory of the cave as a thought exercise to explain the need to examine one's life. The allegory also serves as a metaphor for examining how experience shapes and limits perceived reality. In the allegory, humans chained to the walls of the cave are only able to look forward at shadows projected in front of them. One of these captives escapes and experiences the world outside the cave. Plato theorizes that if this captive were to return to the cave to share his experiences, the other captives would think them insane. The brain uses past experiences to augment reality making it appear seamless when it is not. (Thagard, 2018) A reality based on limited experience can make positive, actionable responses difficult for clients.

The brain is wired in such a way that it would prefer that any action be taken over remaining stagnated.

Cognitive Choice

In *Stumbling on Happiness* author Dan Gilbert analyzes the need for the brain to take action over inaction. He presents the following paradoxical question:

You are introduced to someone you find attractive and then given the following two options:

(1) Marry them. In which case, the person will become a pyromaniac down the road and light your house on fire.

(2) Not marry them. In this case, they will become a billionaire (Gilbert, 2007).

When asked which option people will regret more, the majority of individuals choose option two. At first, this sounds like a ridiculous choice because not being married to a billionaire seems like a better option than having your house burned down, but the brain is anticipating future simulations based on what it already knows and what it has a context for. Everyone has experienced loss in some form or another. When the brain encounters these scenarios, it recognizes the loss in option one and can see the positives in overcoming it because it has experienced overcoming hardship in the past. With option two, most people do not have a context for what it is like to be married to a billionaire, so the brain struggles to simulate an actual and positive outcome. Without context, without comparison, the brain cannot formulate an accurate prediction of the future, creating an irrational dissonance, which leads to feelings of regret. (Gilbert, 2007)

Behavioral Economics Theory

Irrational decision making is reflected in the field of behavioral economics and the work of Dan Ariely. The focus of Ariely's work is heavily finance centered, but the concepts that drive people to make seemingly irrational decisions can be applied to the field of coaching and the work of Gilbert. In *Predictably Irrational* Ariely explains the brain's need to function within a framework of comparisons. Just like Gilbert's regret scenarios, Ariely emphasizes the brain's need to make comparisons in order to take action. Ariely uses the example of a lawnmower. When a brain encounters a store with only one model for sale, it struggles to determine the lawn mowers value. Is $3,000.00 a good or bad price? If one left the store without making a decision, Gilbert might hypothesize that she would experience regret since her brain lacked a context for the value of a lawnmower making her unable to foresee a positive outcome and take action in making a purchase. If she is shopping in a store with two models of lawnmowers, the one previously mentioned and one with slightly better features, but nearly double the price, the decision to purchase the $3,000.00 lawnmower becomes clear. She can take action, and the feelings of regret are not experienced. Human brains are hardwired to compare things, and the brain will make comparisons most easily and as lazily possible. (Ariely, 2010).

The Naturally Lazy Brain

The work of Daniel Kahneman analyzes the brain's tendency towards laziness. In his book *Thinking Fast and Slow*, he introduces the two systems of the brain: the impulsive and automatic system one and the conscious, aware, and considerate system two. As clients come to understand how and why they make decisions the decisions they do, it is significant to know how

these two systems of the brain do and do not work together and what the impact this conflict could be in decision making and a client's ability to take action. (Kahneman, 2015)

Kahneman presents the following mathematics problem in his book:

> "A baseball bat and a ball cost $1.10. The bat costs $1.00 more than the ball. How much does the ball cost?"

System one approaches this problem as simple and straightforward because it things it can handle it. The system one answer to this problem is that the ball costs $0.10, but system one actually cannot handle this problem, it is too complicated, and in its impulsivity, it jumps to what looks like the most straightforward conclusion; but, system one is wrong. When system two is employed to tackle this problem, the brain realizes that the wording of this question matters if the ball costs $0.10 and the bat costs a dollar more than that the bat costs $1.10 bringing the checkout total to $1.20 ($1.10 + $0.10). In order to get a checkout total of $1.10, the ball must cost $0.05 ($0.05 + $1.05 = $1.10); this is math problem better suited to the particular and conscious system two. (Kahneman, 2015)

A Matter of Evolution

Why would the brain function like this? The answer lies in the brain’s evolutionary history. System one is a wiring pattern left over from the grassland creatures from which humanity evolved. Impulsivity and rapid decision making is crucial to the survival of an organism in the wild. As humans evolved, developed cultural norms and language, and molded the environment to fit their needs, the newer regions of the cerebral cortex wired themselves into system two, which excels at self-control and sustained focus. The technological advances of the past two hundred years have changed humanity's environment faster than evolution can keep up,

so all humans retain both sets of neurological wiring. System one is reflective of first reactions and impressions but lacks the focus and attention needed to determine if initial judgments are accurate. When system one is unsure, it kicks the problem back to system two, but at the cost of energy expenditure. The brain uses more energy than any other organ in the body and processing information through system two is a more energy consuming process than information processing through system one, so when given the option the brain will always err on the side of energy conservation regardless of whether or not that leads one to make the right decision. (Kahneman, 2015).

What Kahneman calls The Law of Least Effort has implications in the field of coaching. The brain's natural impulse to default to system one to conserve energy may explain why a client repeatedly makes impulsive or poor decisions. System one will not relent to system two unless it feels that the energy-sucking intelligence of system two is necessary; the brain conserves energy by limiting one's intelligence and decision making power. In short, the brain is lazy. In coaching, helping a client understand that this naturally occurring process may lead to impulsive and repeated poor decision making may be the key to developing strategies with the client to raise awareness and work towards implementing habits that override these naturally occurring processes. (Kahneman, 2015)

The Asynchronicity of the Brain

The human brain is an exquisite piece of machinery with an evolutionary history dating back 850 million years to the first ancient ancestors who were able to transmit electrochemical signals through tissues. (Robson). The brain's original wiring allowed human ancestors to survive and reproduce successfully in a competitive and unpredictable wilderness. With the

evolutionary development of a sizeable cerebral cortex, language, and culture, the human brain developed a second wiring system enabling self-control, sustained focus, and complex decision making; cognitive skills that are crucial to survival in today's corporate-run wilderness. These systems have not co-existed long enough to work synchronously, and the brain's inability to seamlessly move from one to the other results in reduced or impulsive decision making. The brain is also hardwired to create realities where none exist, a need that subsists due to limited physiology, but that can have broad-reaching consequences for one's measure of happiness. Gilbert expands on this idea in his work and, like Kahneman, his theory is founded on the brain's need for comparison. Gilbert claims that feelings of unhappiness arise from the dissonance between expectations set by the brain and reality.

Selective Perception Breeds Selective Recollection

The way one sees the world and the way one experiences the world differs due to the brain's incredible ability to fill in the missing information. The brain continually takes in so much information that in order for memories to be stored, they are compressed. A computer processor is a commonly used analogy to describe cognitive functioning because computers also compress large files when storing them. Large computer flies, like memories, lose some of their quality when they go through the compression process. In order for the brain to store a lifetime of memories, it distills each one down to Cliff's Notes version of the event. Gilbert states, "The fact that we often judge the pleasure of an experience by its ending can cause us to make some curious choices." (Gilbert, 2007). Gilbert is saying that in the storage and distillation process, the memory of a great night may be reduced to the miserable last half hour where a friend throws up

on a pair of new shoes because in the distillation process the brain exaggerates the lousy part of the experience leaving one to remember the whole night as a bad memory.

In contrast, when one thinks of something pleasurable, system one (once again overlooking system two) tends to let the imagination take one's expectations to the most pleasurable extreme, disregarding millions of other possible scenarios and setting up a situation where anything less than the imagined scenario leads to disappointment. (Gilbert, 2007) Ariely describes this phenomenon in behavioral economics as the endowment effect or the idea that what place a higher value on things once we own them. The first principle of the endowment effect states that people love what they own, simply because of the memories and fantasies they have about it (Ariely, 2010). The value that is placed on memories, which Gilbert claims are faulty and full of the brain generated augmented reality, explains system one's eternal optimism approach to setting extreme expectations about future experiences, but the constant unfulfillment of these high expectations can lead to feelings of discontent, hopelessness, and unhappiness. (Gilbert, 2007)

A Conflict of Desire

A quick Google Search yields the following case study from Chris Wesley: "Geoff is intelligent and a competent professional, but in social situations, he considers himself something of a disaster, and his life is a much smaller one than he would prefer because of it. He is struggling with two sides of himself. One wants to be outgoing and fun-loving; the other fears rejection. Unfortunately, this latter half seems to be in charge. So one half of Geoff keeps putting himself in promising situations then his other half keeps sabotaging them. Geoff is very frustrated and out of ideas." (Wesley, n.d.)

Geoff's situation is reflective of many clients who seek coaching and exemplifies the principles born from the cognitive revolution. The first observation that is apparent in Geoff's story deals with expectations. Gilbert's work applies to this facet of Geoff's situation because he appears to be setting expectations for these "promising situations" that are not met in his reality. It is a situation that everyone has experienced when expectations are raised, and the follow through falls short. Compounding Geoff's frustration is that his hope falls party on himself and party on the reaction he wishes to elicit from others so when the reality is mismatched to his expectations Geoff internalizes his disappointment believing that it is a reflection of him trapping himself in a cycle of action and adverse reaction. As a coach, one could help Geoff see that his expectations are only one of the thousands of possible outcomes he will experience. The first step in ending Geoff's cycle of frustration would be to address his expectations. Are his expectations realistic and achievable? Are Geoff's expectations better viewed as long term goals? If so, what are the attainable short term goals that he can set to work towards this more encompassing goal? By coaching Geoff around the endowment effect in this way, he can experience small successes more frequently, alleviating his frustration by taking small steps to break the cycle in which he has become stuck.

Working with Geoff on attainable goal setting to alleviate the pressure of his expectations only works in conjunction with Kahneman's understanding of the brain's two systems. As an "intelligent and competent professional," Geoff may benefit from a coach that explains the dynamics at play between the brain's system one and system two. Since this is a lifelong struggle that Geoff has experienced, he has reinforced the neurological pathways that sabotage his social situations. For Geoff's brain, this enhanced pathway has become the path of least

resistance. By setting unattainable expectations, the moment a factor fails to meet Geoff's expectations, his system one takes charge to get him out of there and protect him from the rejection he most fears.

Coaching Geoff to understand that he is going to be fighting his neurological hardwiring may help to alleviate the frustration he experiences even if his smaller goals are not initially met. Change can be accomplished if Geoff is consistent in his efforts to work through the disappointment as he rewires his neural pathways. As a coach, explaining what is occurring in the brain, especially in terms of Kahneman's two systems, Geoff gains the capacity to understand that the frustrations he may feel are progressive. In turn, this understanding may allow Geoff to have compassion towards himself and his journey. This new insight and self-compassion may enable Geoff to tolerate his frustrations better and motivate him to keep working towards achieving his smaller goals. As these goals add up and the small achievements compound, Geoff should see change as his life becomes more in line with his desires.

Summary

To summarize the work of Gilbert, Ariely, and Kahneman:

(1) The brain operates using two systems of hardwiring. System one is the most primitive and operates as a reflex of gut instinct. With its quick response time, system one jumps to make decisions to conserve energy. (2) System one is always at odds with system two, a more recently developed schema that allows for self-control and sustains attention at the expense of energy usage and system two will only take over when it is permitted to by system one. (3) Both systems are operating in a neurological ecosystem that compresses memories for efficient storage at the cost of memory quality. When the memory is recalled as a scaffold for decision making,

the brain fills in the lost details using what it perceives as relevant information, regardless of what actually happened. (4) The brain is terrible at filling in the missing information. This process is necessary because of a fault in the physiological wiring of the eye. The blind spot created at the junction between the retina and the optic nerve leads to a permanent blind spot in the field of vision. When the impulse is sent from the eye to the brain, the brain uses memories and contextual clues to fill in what is missing. This process serves a need in visual processing, but for some reason has persisted in other areas of the brain dealing with information processing.

Understanding the brain's ability to manipulate both one's past and future can have far-reaching implications for the field of coaching. Kahneman's work explains how the brain's extemporaneous system one can jump to conclusions, preventing a more pragmatic and analytical approach to decision making, and how this system can generate lofty expectations which when not met can result in a slew of negative feelings and outlooks. When working with a client, uncovering and changing their core false beliefs can be a crucial exercise in overriding the impulsivity of system one and creating space for the conscious operation of system two. Ariely and Gilbert insist on the brain's need for comparison in order to make sound and informed decisions. By helping a client identify a list of core values that resonate with their life desires and personal belief system, they carry with them a moral measuring stick. Having an identified set of comparable values allows clients to examine situations through a "values lens," allowing them to quickly compare the options and make informed decisions that resonate with their desired future. By empowering a client to understand and then manipulate the normal functions of the human brain, clients are endowed with the ability to make informed decisions on a more

regular basis. The sum of these small decisions will lead them to the desired and fulfilling life they are striving to achieve.

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