Redefining Creativity toAdvance our Understanding of Behavior Change and Agency

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Redefining Creativity to Advance our Understanding of Behavior Change and Agency

A Project in Creative Studies
by
Philip F. Brunner

Submitted in partial fulfillment of the requirements for the
Master of Science Degree in Creativity

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Abstract

Redefining Creativity to Advance our Understanding of Behavior Change and Agency

Change is hard, and shifting one’s behavior, even with the support of a counselor, can be challenging. While it has not been common for the field of counseling and therapeutic behavior change to draw on it, creativity studies have much to offer counselors and practitioners as well as individuals who just want to realize change in their lives. The potential contributions of creativity studies to lasting and meaningful behavior change are enhanced especially if we take up a definition of creativity that draws on traditional definitions and theories but that also integrates insights from fields like neuroscience and complex dynamical systems, so that our notions of creativity are as updated as possible. The purpose of this project and paper, therefore, is to first re-define creativity (in a way that synthesizes, distills and updates) and then to demonstrate applications in the domain of creative behavior change in particular.

Key Words: creativity, neuroplasticity, entropy, agency, therapy, change, adaptation

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Table of Contents

Abstract 3

Section I: The Road to Redefining Creativity: Evolution of an Idea 5

Section II: What is Creativity Really? Definitions and Implications 9
   Existing Definitions 9
   A Redefinition and Its Sources. 10
   Advantages of this Redefinition 12

Section III: Applications of the Redefinition in Counseling and Therapeutic 15
   Forming New Associations with Existing Triggers 16
   Reconceptualizing Pain Responses 17
   Memory Palaces as Prompts and Reminders for Behavior Change 17
   Summary 18

Section IV: Conclusion 19

References 22

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Section I
The Road to Redefining Creativity: Evolution of an Idea

What led me to redefine creativity? In a nutshell, my desire to promote therapeutic reform and a more person-directed model of creative behavior change. The purpose of this paper is to present a redefinition of creativity and to then apply this to the specific field of counseling and therapeutic behavior change. This redefinition has emerged from my eclectic experiences as a student in the creative studies program, my unsatiated curiosity, my professional work as a mental health provider and additional broad readings into physics, neuroscience and other complementary bodies of knowledge. At the nexus of and emerging from these experiences, I became determined to understand creativity more constitutionally. I had the specific goals of synthesizing themes in existing creativity scholarship, integrating relevant insights from other disciplines I was reading and distilling overlapping elements and principles into a more coherent frame that could promote easier utilization, adoptability and translatability of a definition of creativity. Alongside constructs traditionally related to creativity studies, the redefinition I offer integrates concepts from evolutionary mechanics, complex dynamical systems, chaos theory, neuroplasticity and also draws on natural laws including thermodynamics and entropy which support my thesis, which is that a redefinition of creativity can support a clearer approach to creative behavior change in the practical therapeutic setting.

The hope in taking this approach was to understand more fully the physics and bio-neurological aspects of creativity and how these can be applied to counseling for behavior change, in an overall more simplified approach than is currently common among therapists and counselors. Health care providers generally have a strong dependence on therapeutic interventions as a guide they strictly adhere to. For example, a counselor may rely heavily on
cognitive behavior therapy (CBT) and implement its principles and procedures in rigid fashion. Consequently, this approach loses efficacy when the model doesn’t resonate with a client, their learning style, strengths, disposition, personality and motivation. This is why a more effective provider will use an amalgam of tools, including motivational interviewing (Miller & Rollnick, 2013), which is one of the more person-centered approaches to counseling, to reach the client where they are at and to use tools that will work for them. Unfortunately, many providers still depend heavily on utilizing the tools they are most familiar with, so strictly that they still fall short in getting their clients to maximize their potential in many areas of their life. I believe providers need to supplement with a more flexible, creative approach to fostering personal empowerment among those they seek to help and supporting behavioral change in clients that promotes sustainable change and self-directed adaptation so they can thrive. At the same time, such an approach can be simplified by a clarified view and redefinition of creativity.

As I worked toward a re-definition of creativity and a working model of creative behavior change (CBC) related to it, I engaged in clinical field work and offered positive feedback to my own clients. Through this practical testing and development of ideas, I made progress on certain issues my clients struggled with, like inoperative meaning making, entangled self-worth, identity reform, trigger manipulation, attention management, diminished consistency, and relapse. Yet, I was still unsettled about several clinical issues people struggled with, especially their sense of agency and ability to enact it. People who were substance dependent, for instance, felt as though their upbringing and early childhood environments determined their situation later in life, which provoked a sense of hopelessness and inevitability and led to the belief that making any real significant change was difficult or impossible. They felt disempowered by the belief that their lives were determined by conditions out of their control. They adopted this perspective because
they couldn’t conceive of having free will when they subjugated themselves to impulses, and emotional or egoic cues. As I collaborated with patients on disidentifying with feelings and beliefs that weren’t in alignment with their goals, values, convictions, rationale or logic, I also wanted to answer that question of agency or self-determination emphatically. Not just for them, but for myself. I believed in agency, but I couldn’t demonstrate it for them in such a way that they could then enact it or put it into the context of their own lives. This is how things evolved beyond simply developing a concept of creative behavior change. Beyond merely applying existing definitions and theories of creativity to the field of counseling and behavior change, I needed a fundamental redefinition of creativity, one that would take questions of agency into account. Such a pursuit broadened the scope of my project.

Not only did I want to answer that question related to agency, but I had others as well that seemed to fit into a puzzle that I have been trying to work out since experiencing some dissatisfaction with the standing definitions of creativity when I read these early on in the creativity studies program. Approaches to defining creativity have been rooted in dissonance, polarity and tangential approaches to making sense and use of creativity. Even though definitions abounded, I felt there was something missing that could unify several theories and separate cognitive creativity from systemic creativity. Such a re-definition would be useful to me as a practitioner, my clients and my professional field, but I also hoped it would make future research into this field of study more efficacious. In true creative fashion, amongst what appeared to me to be divergent definitions and theories of creativity, I sought to converge concepts and ideas in a clarifying way. In order to accomplish this, I diverged even a bit more, drawing on insights from disciplines outside of traditional creativity studies. In the end, this thought, reading and writing, has led me to converge on a new definition of creativity described in what follows and
exemplified in concrete detail through application to the domain of counseling and creative behavior change.
Section II

What is Creativity Really?: Definitions and Implications

In order to present a re-definition of creativity, this section first reviews a sample of existing definitions of creativity. It then presents a redefinition and explains its sources in terms of principles and fields I drew on to generate the new definition. The section closes by discussing advantages of the redefinition and how it solves some of the challenges of existing definitions. Broadly speaking the redefinition serves to synthesize and update concepts of creativity.

Existing definitions

Creativity has been traditionally defined as a solution or product that is novel and useful (Runco & Jaeger, 2012). Runco and Jaeger (2012) call this the “standard definition” and characterize it as “bipartite,” requiring “originality and effectiveness” (p. 93). Early on Barron (1955) writes of “uncommonness” and adaptation to reality; Guilford (1950) emphasizes novel ideas as well as “acceptability,” implying that creative products or solutions need to be interpreted and deemed that way by others. Listing several other definitions, Runco and Jaeger (2012) write,

Bruner (1962), for example, in one of the true classics in the field, described how creativity requires “effective surprise” (p. 18). Cropley (1967) pointed to the need for creative things to be “worthwhile” (p. 67) and reflect some “compelling” property (p. 21). Jackson and Messick (1965, p. 313) felt that products must be “appropriate” and Kneller (1965, p. 7) stated that products must be “relevant.” Cattell and Butcher (1968) and Heinelt (1974) used the terms pseudocreativity and quasicreativity to describe products that were not worthwhile or effective. (p. 93)

All of these definitions emphasize the two common elements of the standard definition of creativity; yet they all also raise the serious question of who decides what is creative and the degree of value or usefulness it needs to have. They set up two main criteria but do not always
adequately address or convincingly justify how those criteria can be conceived of in theories of creativity. There are several other variables that strain the field of creativity, such as who is creative and why? Stein (1953) wrote of “internal and external frames of reference” for determining usefulness and emphasized that creativity inherently involved “social judgment”. He also clarified the novelty dimension of creativity, writing that creativity “arises from a reintegration of already existing materials or knowledge, but when it is completed it contains elements that are new” (p. 311).

As Runco and Jaeger (2012) point out in closing their article, while there is indeed a standard definition in the field of creativity studies, it is not a given that only two components are adequate for defining it and cite Simonton (2012) who proposes surprise as a third criteria. What I argue is that novelty and effectiveness, key in the standard definition, can be re-examined and re-conceptualized if we bring to bear new intellectual lenses on the construct of creativity. I turn to those now.

A Redefinition and Its Sources

Building on the field’s existing and ample range of options for defining creativity, I offer the following redefinition:

*Creativity is the mutability and adaptability function of the brain that can be exploited by the executive faculties of the mind.*

This is a substantial departure from the standard definition of creativity, strongly emphasizing cognitive over social dimensions of creativity and re-imagining novelty. I arrived at this definition inspired by Descartes Methods and reasoning from first principles, which requires grounding our thinking in the most fundamental of elements and then building out from this foundational base. In defining creativity, this means starting with the primary rules and laws that
govern systems in nature and biology. From this point, current understandings from research on neuroplasticity, complex dynamical systems and modern physics help to build up the definition.

While the focus in creativity research has caused some confusion over what creativity is by trying to unify several competing constructs that depend on top-down processing, other understandings of the brain can help to clarify. The brain's inherent disposition is to adapt new information into an already existing schema with a disposition to mutate it to maintain mental equilibrium (neuroplasticity (Cramer, 2012) and environment). The virtual environment (the mind) is constantly being shaped by novel information (Shannon Entropy) and places a stress on the brain to adapt. The brain's neurological response is to reduce, modify or eliminate demand to maintain balance (conservation of energy in biology). This happens in several ways including maladaptive behaviors and strategies which reduce optimal functioning and the space to thrive. The schema is reinforced enough to guide this process and mutate new information in order to assimilate, reinforcing already existing modes. This is where consistent reeducation and divergence is needed. Behavior change requires persistent deviation from the norm until the desired outcome is habituated. In order to promote growth and force directed adaptation we need progressive demand from new stimulus. Change is sustained when there is continuous dynamic reform. How we get there is flexible. We can execute creativity in the way we process and obtain results.

Following the basic understanding of neural processing we can take some solace knowing that it’s not a specific intervention or modality that requires strict adherence for efficacy, but any strict adherence will produce results. Many people do not comply with their care plan because they are resistant; but, because the intervention used or therapist style doesn’t resonate well with them, their learning style or strengths. They lose interest or practice inconsistently.
Creative thinking utilizes or makes use of several cognitive attributes or (modes of thinking) in a succinct way to fully exploit this biological functioning. When there are barriers to making full use of these attributes (i.e., ambiguity-intolerance, openness, risk taking), then utilization diminishes. Maslow (1943) suggested that through the distraction of unmet needs, a person's creative capacity shrinks. He suggested that life satisfaction leaves room for the mind to take full advantage of its neurobiological resources. In order for a person to fully exploit brain functioning, the mind needs to have an effective or appropriate schema. When distracted by imbalance, deficiencies, or maladaptive patterns we move further away from utilizing brain function optimally. As a result, when our needs are unmet, we can expect creative capacities to be reduced.

The focus of current research has been to try and unify top-down processing which has apparent competing modalities of creative efficacy when in reality, creativity has just been underutilized by specific cognitive arrangements that either excel at creativity or do not. It’s analogous to having equipment at your disposal to build a trailer to haul heavy equipment but you never learned how to use them, so you just put a greater load on your truck which ruins the paint and crushes the top. It works but sub-optimally and with consequences that will extend even further into life, making it less likely to learn how to use the equipment.

Advantages of this Redefinition

The redefinition I propose, pulling together insights from existing scholarship and adding in insights from fields that can productively enhance and update our notions of creativity, has particular advantages and addresses some challenges of previous definitions and theories of creativity.
The redefinition, first, solves the problem of separating cognitive skills from the physics of functionality, by bringing theory and practice, top-down and bottom-up approaches together more integrally. Furthermore, it solves the problem of socially-dependent concepts in research and understandings of creativity by offering a more fundamental idea of creativity, eliminating the need to depend on social, cultural and rater conditions. It therefore eliminates dependence on external conditions and addresses the problem of rater dependency. If we look at creativity-functioning, then we can separate it from the cultural and economic criteria that affects creativity-thinking. Creativity-functioning is relative, contextual and information dependent. A person can be highly creative-functioning but fall short of its greater implications culturally if a creative product pre-exists outside of their awareness. This should not diminish our view of the person's creative potential or their actual creativity. It just means the person doesn’t benefit the same way if the product hasn’t been on the market. There are still of course benefits to the person and perhaps others. Many people have invented products that have pre-existed in the minds of others years before they were brought to market. They had the resources others may not have had and have been awarded the credit for the invention and reaped the rewards. This by no means takes away from the creative capacity and actual creativity of those that came before.

The proposed redefinition also addresses debate over whether creativity is domain-specific or domain-general. In the proposed redefinition, creativity is not limited by the domain but information. Creativity is measured by entropy not expertise or skills. Creativity is limited by the ability to mutate and adapt information to satisfy demand. The context in which a person can be creative depends entirely on how well they can exploit the creative functioning of the brain. We see this with other cognitive skills such as well. The mind can take full advantage of the brain's ability to adapt to any demand including virtual demands (i.e., anxiety). These demands
force maladaptive responses if the skills are not available to direct the adaptation advantageously. The mind works in unison with the brain to accomplish specific tasks that enhance the organisms survivability and optimization. Creativity-functioning is not only a survival mechanism but can also improve the quality of life by way of creativity-thinking.
Section III

Applications of the Redefinition in Counseling and Therapeutic Behavior Change

As a counselor, I utilize the constructs of neuroplasticity, brief solution focused therapy and creativity. This permits flexibility in developing strategies to elicit change while empowering the client to pursue other challenges, thrive and move closer to becoming their idealized self. Many therapists utilize several therapeutic modalities creatively as a way to meet their clients where they are at but fail to implement creativity more dynamically. Traditional change paradigms follow specific processes and linear progress that needs to allocate a significant amount of time which is a problem for many people who don’t follow through long enough to reap the benefits of behavioral change. This led to the advent of brief intervention theories. They were built on how long a client commits to therapy on average and by what session does change usually occur. The research supports that many people do not require dozens of sessions to get a therapeutic benefit and begin to produce measurable results (Lethem, 2002). Brief solution focused therapy particularly estimates about 5 sessions on average lead to solution and change. I take this a step further in my own professional practice, by weaving creativity into strategies as the sessions unfold. I adapt multiple strategies into a useful frame that make use of the client’s environment, strengths, learning style, and motivation.

I find that with the basic understanding of how the brain mutates and adapts, we need to build our foundation on what scientists have discovered about neural adaptation which is for change to occur, there needs to be a consistent and persistent practice of the desired outcome until habituation emerges. How we get there, however, is malleable and likely person-specific.

I have developed several creative strategies to deal with recurring problems people face commonly. In the remainder of this section, I give three examples that illustrate creative
strategies in action in the field of counseling and that importantly also exemplify the redefinition of creativity I have proposed above.

**Forming New Associations with Existing Triggers**

In an approach I have come to call “Augmented Triggers,” I work with patients on taking advantage of the triggers that have traditionally led to maladaptive responses for them and to instead utilize them as prompts for implementing more desirable outcomes. This reduces the fear and judgment people usually associated with having triggers and reminds the patient to take advantage of them in an empowering way. For example, I was working with a patient named Melinda (pseudonym), who was struggling to respond positively to her daughter when discussing raising her granddaughter. I worked with Melinda on identifying language triggers. We collaborated on ways to use those triggers as reminders to take a breath and practice acceptance and a non-judgemental attitude towards her daughter so she could have space to communicate with her in a more appropriate way that would get her heard. She stated that she usually reacts in anger, triggered by specific language and words, and then her daughter usually responds with attacks, and in the end, they don’t resolve the problem. In developing augmented triggers, this was a good way to promote healthy interpersonal dynamism while Melinda was still learning how to communicate her underlying concerns in a way that took full responsibility for her feelings.

In this example, I worked on developing Melinda’s augmented triggers in a dialogic fashion. However, there are other alternatives. For instance, somatic therapy allows for re-associations through touch and tactile means (for example, using sand). Another promising avenue is to develop augmented triggers in immersive, simulated environments, such as virtual reality. Mindfulness and re-developed responses to triggers can productively be cultivated in
such ways. In the case of virtual reality, triggers can be experienced in ways that feel more real than in simulated dialogues with the therapist or counselor, and for some clients, could be more effective and meaningful.

**Reconceptualizing Pain Responses**

Another approach I have undertaken with patients that employs creativity strategies and takes advantage of the brain and mind’s creative capacities is in helping patients reconceptualize pain responses. Essentially, I work with patients to recognize and reorient their response to pain and discomfort - to frame pain in a way that indicates growth and adaptation to stress. A concrete example of this is when I worked with Donald to address behavioral and physical withdrawal symptoms from cannabinoids. We worked together on rewriting the meanings associated with those symptoms and adopted a more resilient narrative. Donald was encouraged to find hope in the discomfort he was experiencing, reframing it as the body’s indicator of growth and success. Donald’s homework was to write down all the positive things he would experience in his personal and familial life that would come from remaining abstinent while supporting his new lens. To illustrate this idea with my patients, I give the analogy of working out for the specific goal of building muscle, which comes from my own personal experience. If there is no pain, I know that I am making little or no progress toward my overarching goal of building muscle, so I have worked to re-conceptualize the pain response (generally a negative feeling and experience) as something quite positive.

**Memory Palace as Prompts and Reminders for Behavior Change**

A final example is my adapted use of a technique called memory palace, which functions as prompts and reminders for memorizing information to change behavior once patients develop
the ability to use them. Basically, this approach involves utilizing furniture in the house in a way that reminds the person what new behavior they want to practice and adopt. Each piece of furniture can signify or prompt anything from developing self-worth to communicating more effectively in an interpersonal relationship. An example of how I have used this in my practice is with several clients, most recently a client named Devon, who struggled with speaking in public. It was discovered through my process that underneath anxiety around public speaking and giving presentations at work, Devon needed to develop and strengthen areas of esteem and confidence. Once a care plan was met, Devon was encouraged to practice esteem building techniques daily as much as he could by the persistent reminder that would come out of attaching his thoughts to several pieces of furniture. As an example Devon would look at his couch and be reminded to “settle in” on the skills that made him an asset.

**Summary**

These three brief examples demonstrate how creativity principles can be applied in the counseling and creative behavior change context. They also draw heavily on a redefinition of creativity that recognizes the brain’s basic functioning identified in neuroplasticity, the way that individuals are complex systems located in numerous other complex systems, and crucially, the individual’s agency in and ability to create change and to be creative in the process. Overall, adopting this frame, draws on the best of creativity studies while adapting and enhancing a creativity approach to counseling. Creativity studies is problem- and solution-centered, like the approach to counseling I have adopted. My approach strives to draw on all of the resources available in and around my clients and to capitalize on the inherent mutability of our thinking and our behaviour. Taking this approach, like brief solution focused therapy in counseling, offers shorter trajectories to change while also reaping the benefits of a creative potential's view.
Section IV

Conclusion

The redefinition I have proposed above has farther reach than just the field of counseling and therapeutic behavior change. It can be useful in a broader range of domains precisely because it represents a new direction on two specific fronts.

First, this definition connects creativity and entropy. It also re-imagines creativity and agency. Creativity is knowledge dependent. Nothing in a system can be exchanged if there are no resources to be moved. In shannon entropy, for the receiver, the higher the entropy the lower the knowledge. However in order to process the new information you need a baseline of understanding. The more you know or can predict the lower the entropy. In order to produce new information you need information to mutate into a novel form others don't know. Entropy is relative to the amount of information you have.

With entropy being the measure of novel information (chaos), it also allows us to some degree to measure a value for indeterminism. Novel information or high entropy is relative to the observer. For example, if there are three observers watching a machine that was made to drop balls randomly through obstacles where the balls land on a particular number ranging from 1-12, the lay observer or observer 1 wouldn’t be able to predict the numbers generated by the machine so entropy would be high. A second observer who has some insight into probability may come closer to identifying the likelihood of where the numbers would land based on certain conditions, reducing the entropy to some degree, and a third observer who built the machine and knows exactly where the balls will land based on conditions he has pre-set eliminates him from gathering any new or novel information from the machine leaving him with low to no entropy.
So with any novel information, including creativity, the state of entropy is relative to the amount the person knows.

There is strong overlap with entropy and agency as well. Something I call therapeutic determinism states that when there's a decision to be made and ambivalence is reduced by the amount of knowledge a patient has in relationship to the problem, behavior is more predictable. It’s when the scale has been tipped so far in the direction of change that compliance is nearly inevitable. Behavior is determined when options have become extinct. Knowledge creates awareness, insight and continuity of facts that converge. The convergence is definitive.

This is why Motivational Interviewing works so well. It is when a person has moved towards a knowing that it begins to determine and predict outcome. Knowledge in this case minimizes uncertainty and increases a determined set of behaviors. The more we know about something the more likely we are to behave accordingly.

Take gambling for example. If we have $200 to bet at the roulette table and our odds for picking any particular color and winning was only about 30 percent in our favor, what we decide to bet is hard to predict. But if we had 100 percent chances of winning on a particular bet, the predicted amount would increase with the same odds of winning. This knowing would determine a person's course of action with almost absolute precision. I only say almost because there are outliers due to the extremes in human behavior that reject logic and expectations. There are of course alternate ways of thinking that would increase ambivalence and this would reduce a person's sense of knowing with any kind of certainty. This would increase entropy.

This is also an argument for free will to exist within a deterministic system. We can’t argue that chaos theory demonstrates that the lack of predictability is not evidence for randomness but high levels of entropy. Entropy is only high when there is a lack of predictable
knowledge. It only reveals its predictability in aggregate. The higher the entropy the higher the chaos, which increases uncertainty. Certainty diminishes choices and novel information (entropy). The more predictable a solution is, the more its novelty (entropy) is reduced. Entropy and chaos only exist within the virtual environment (mind) of those who lack the knowledge to predict outcomes. It appears ignorance is more than bliss, it’s agency and creativity.

To summarize more succinctly, Creativity is twofold, its parts are made up of the mutability and adaptability function of the brain while also being exploited by the executive faculties of the mind by way of thinking strategies, schemas and assets. Creative functioning can be measured entropically. We also know that entropy is relative to how much information is new or useful to the observer. Agency is also relative to how much information is new to the observer. The more they know about a choice (low entropy) the more determined and predictable behavior becomes diminishing the need for creativity and agency. I.e., If you ‘know’ how to solve a problem, you solve it, you don’t continue working on a solution. Creativity can also be embedded in therapeutic settings in an almost infinite number of ways in how to address behavior change, leaving therapeutic interventions open to become much more flexible in addressing mental health problems and deficits.
References


