

## **Creativity and Consciousness**

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**ABSTRACT.** I propose that creativity is a natural phenomenon, part of the very structure and function of consciousness. Following Rudolph Steiner's advice that we need not be slaves to the doctrines of physical science, this proposal is presented as a "finding" based on a method of empirical observation called scientific introspection. The method involves, in part, a meditative practice of radical withdrawal of attention from self and world, until the basic epistemological dualism between subjectivity and objectivity is broken. The result is a period of nothingness described as a *Black Hole* of non-experience. Following that period, consciousness and self-consciousness resume, often with profound, integrative experiences of holism and unity. Through examination of the dissolution and reformation of epistemological dualism before and after the Black Hole of non-experience, one finds that the fundamental transaction between subjectivity and objectivity involves a spontaneous act of creativity. An analogous act possibly drives the causal efficacy of the *Black Hole* in producing subsequent integrative experiences. Synthesizing these findings and inferences, the outlines of conventional creative experience can be discerned, and can be understood as expression of the basic structure and function of consciousness. Implications for socialization and education are discussed.

*Keywords:* creativity, consciousness, meditation, empiricism

**ZUSAMMENFASSUNG.** Ich behaupte, dass Kreativität ein natürliches Phänomen und unmittelbar mit Struktur und Funktion des Bewusstseins verbunden ist. In Anlehnung an Rudolf Steiners Hinweis, dass wir nicht den Lehren der Naturwissenschaft verfallen müssen, wird dieser Vorschlag als eine „Erkenntnis“ auf Grundlage einer Methode empirischer Beobachtung vorgetragen, die man als wissenschaftliche Selbstbeobachtung bezeichnet. Dazu gehört u. a. eine meditative Übung des radikalen Aufmerksamkeitsentzugs gegenüber dem Ich und der Welt, bis der grundlegende epistemologische Dualismus zwischen Subjektivität und Objektivität gebrochen ist. Das Ergebnis ist ein Zeitraum des Nichts, „der als schwarzes Loch der Nicht-Erfahrung“ bezeichnet wird. Anschließend kehren Bewusstsein und Selbstbewusstsein zurück, und zwar oft mit tiefgründigen integrativen Holismus- und Ganzheitserlebnissen. Eine genauere Untersuchung der Auflösung und Neubildung des epistemologischen Dualismus vor bzw. nach dem schwarzen Loch der Nicht-Erfahrung zeigt, dass an dem grundlegenden Vorgang zwischen Subjektivität und Objektivität ein spontaner Akt der Kreativität beteiligt ist. Eine entsprechende Handlung treibt möglicherweise die kausale Wirkungskraft des schwarzen Lochs durch das Hervorbringen anschließender integrativer Erlebnisse an. Im Zusammenfassen dieser Erkenntnisse und Folgerungen lassen sich die Umrisse konventioneller kreativer Erlebnisse ausmachen und als Ausdruck der Grundstruktur und -funktion des Bewusstseins verstehen. Es werden die Auswirkungen für Sozialisation und Erziehung behandelt.

*Schlüsselwörter:* Kreativität, Bewusstsein, Meditation, Empirismus

### **Introduction**

I propose that creativity is a natural phenomenon, part of the very structure and function of consciousness. Although "creativity" is a modern term, coined only in the 19<sup>th</sup> century, and human, as opposed to divine,

creativity is an idea that arose in the Renaissance, I appropriate the term to describe a sub-personal function of consciousness that gives rise to what we recognize as everyday creativity. After describing that fundamental creativity, I consider some practical implications for socialization and education.

My description of fundamental creativity is presented as an observational finding, not a speculation. It could almost be called an empirical result, except empiricism requires the consensus of a reference community about an observation. At this time, I have only the observation, which any interested person can confirm or disconfirm. It is necessary then to present my observational method, so others may participate in discussion of the finding.

## Methodological Considerations

Any discussion of the structure and function of consciousness must involve introspection, because we have no other access to the mind. Science is limited to observation of physical objects and events. The brain can be scientifically observed because it is biological tissue. Behavior can be observed because bodies are physical objects.

Non-material objects, such as thoughts, ideas, images, judgments, and memories, are not amenable to scientific observation. Nor can mental phenomena be inferred from scientific observation. We could analyze a stone, or a brain, down to the last subatomic particle, and we would find nothing to suggest the existence of consciousness. We are aware of mental experience only because we mentally experience it.

Understanding the nature and content of consciousness therefore requires introspection. It is difficult to say exactly what introspection is, or how it works, but there is no denying that we have the capacity for it, and it is fortunate that we do. We would be utterly blind to ourselves without it.

Despite the critical importance of introspection for examining the mind, scientific psychology rejects it, leaving the discipline in the awkward position of having no adequate methodology to study its chosen topic. Some reasons for that paradox are historical.

As modern science developed in the late nineteenth century, psychology, as an intellectual discipline, had to make a choice: go with scientific empiricism or remain a premodern, unscientific mixture of speculative philosophy and religion. Unanimously, psychologists chose science, with the consequence, not fully appreciated at first, that observations would be restricted only to what could be publicly observed through the senses. That restriction disallowed introspection, which does not use sense receptors (there are no inner eyeballs), and is not public (each person has access to only one mind). By restricting psychology to empirical observation, the discipline survived as a modern, intellectual field of inquiry, but one without a suitable methodology.

Most psychologists know there was a school of introspective psychology that flourished in Germany and America from the last years of the nineteenth century to the early twentieth. Wundt and Titchener believed they were doing “scientific introspection” by reporting mental experiences in response to sensory stimulation. They put enormous effort into the technical control of the sensory stimulation, and glossed over the other part, how they were able to introspect on their mental experience. Eventually, the method was exposed as inadequate. Scientific psychology had to become truly mindless to survive, and once that realization became widespread, introspective studies of the mind were eclipsed by behaviorism, which did not even pretend to address the mind.

The emergence of cognitive psychology in the 1960s seemed to offer a compromise. Scientists would observe a person’s behavior and infer the presence and characteristics of unseen mental events. For example, if I ask you to memorize a list of words and recite them back, I can count how many and what kind of errors you make. From that empirical information I can infer something about human memory, for example, its capacity and decay rate.

That approach relies on the same finesse the early introspectionists used. Although the observations of verbal performance constitute a collection of scientific facts, subsequent inferences about the mind amount to unverifiable, lightly constrained conjecture. Inference is used widely in science, of course. From spectroscopic

observations of starlight, we can infer the composition of distant stars. Unlike the physical sciences however, in cognitive science there are few constraints on the conclusions that might be drawn from the observations. Psychology has no underlying science of spectroscopy, itself resting on an atomic theory derived from empirical observation. We observe a sample of verbal behavior, then what? It's a scientific dead-end.

We don't know how words get their meaning, or exactly how reading comprehension works, or even what it means to "memorize" something. We don't understand what "paying attention" is or what a person is doing when they report what they remember. We don't know why people forget or remember anything. There is no chain of scientific reasoning to support inferences about the mind from the observed facts. So we cheat. We use introspection and empathy to imagine that we have "observed" human memory. But introspection is scientifically illegitimate, and empathy is largely undefined.

If people disagree on what the proper inference is, there is no way to resolve the dispute in cognitive psychology because no mental events have ever been scientifically observed, and there is no causal chain from the observed facts down to more fundamental facts that could support an inference. The inferences we are asked to make about mental processes are unwarranted.

Thus, modern cognitive psychology has not changed much from the failed introspectionist efforts of the 19<sup>th</sup> century, and for the same reasons, still lacks a genuine scientific method that allows study of the human mind. Some students of this problem urge an immediate return to behaviorism (e.g., Uttal, 2004), but that is no answer, because behavior is merely a sequence of uninterpretable muscle spasms unless you presuppose that you understand its purpose, and for that, you must use introspection, along with many other unscientific assumptions about intentionality, empathy, homology, and intersubjectivity. What psychology needs is a legitimate, scientific introspection that does not have to be smuggled in through the back door.

Can there be a scientific introspection? History might suggest not. Closer consideration however, reveals reasons why it could be possible.

Just as in empirical science, introspection examines sense experiences and their consequent products. John Locke, founding father of empiricism, allowed that higher-order empirical knowledge is produced by organizing sensory experience into patterns and drawing inferences. Introspection can be construed as the mental processing that produces such higher-order knowledge. The difficulty, as the early introspectionist school discovered, is that it is not always apparent how to trace a higher-order mental object back to raw sensory experience, so factual matters may become confused with opinions. That is a procedural problem to be engineered. It is clear however, that introspection can, in principle, operate in an empirical context and should not be arbitrarily banished.

More to the point, scientific observation itself depends on introspection. Sensory experience must be reported, or at least conceptualized. If you do not conceptualize your experience, you are just daydreaming. How does one conceptualize experience? One mentally interrogates it. To mentally interrogate mental experience is the definition of introspection.

Red is a mental experience. Cold is a mental experience. Pain is a mental experience. Introspection is the only way to identify and conceptualize a sensory experience. We must say then, that empirical science intimately entails introspection, so there is no metaphysical contradiction between them.

At the present time, introspection is not well-defined. Its components and procedures need much articulation, but the same is true for ordinary perceptual observation. Since the time of the ancients, through the empirical philosophers, and for most people even today, a person is a passive recorder of sensory data, a wax tablet that receives impressions, a computer that registers inputs, a camera that records snapshots. There is ample research to show that this view is incorrect. Instead, perception is an active, intentional, and constructive process (e.g., Gibson, 1966, 1979; Noë, 2004), as is introspection. To find practical compatibility between perceptual and introspective empiricism, both processes must be analyzed carefully.

Perceptual observation is successful because humans have the same sensory biology, and for comparably socialized individuals, similar ways of interpreting sensory data. A group of people can stand around a

yellow tulip, point, and agree, “Yes, it is yellow.” We agree on simple observations with such a high degree of reliability, it forms the basis of empiricism.

Consensus is not unanimity, and today’s scientific disagreements often turn on exotic theories and arcane statistics, but everybody knows that when disputes cannot be resolved in argumentation, we go back to the laboratory, gather around, and point at some litmus strips and say, “Blue or pink?” We want to believe that empirical facts depend on observation alone, but actually they depend on observation and consensus, for if the latter is not forthcoming, there is no fact, only a collection of opinions.

With that understanding, one can see further how scientific empiricism could be extended, via introspection, to the immaterial world of psychological phenomena. Observations of mental events can be made by individuals following control methodologies that minimize bias, then the individuals discuss their observations using standardized language that minimizes confusion, and arrive at a consensus about what was observed. That establishes an empirical fact. A methodology of this type could be used to develop introspective exploration of consciousness. I have described such a methodology in my book, *Scientific Introspection* (Adams, 2012).

Introspection is not only compatible with empiricism, it is essential for properly understanding that doctrine. Even so, there are many objections to introducing introspection into the fold of empirical science, such as the apparent privacy of introspection. It is too much to address those objections in this short space, but I have done so elsewhere (Adams, 2012).

This brief methodological examination of the role of introspection in scientific psychology brings forth these points: 1. It is necessary to use introspection in scientific psychology; 2. Despite the historical stigma attached to introspection, it is not metaphysically incompatible with scientific empiricism; 3. Introspection can be defined and procedurally engineered to overcome standard objections to it as an empirical, scientific tool.

Such methodological and epistemological considerations allow me to agree with Rudolph Steiner’s advice that we need not be slaves to the doctrines of physical science. By closely examining introspection, we can find a way to empirically explore the nature of consciousness. Steiner emphasized that the spiritual world can be understood objectively (empirically, I would say). I interpret “spiritual” to mean intuitive and conceptual, but not extra-human or supernatural. There is nothing in my formulation of empiricism that questions a commitment to naturalism.

So now the application. I used the proposed method of scientific introspection to explore the nature of my own consciousness, and presuming equivalent sub-personal structures and functions for people with comparable socialization, I offer several findings for replication and discussion, leading to consensus (or not). The findings presented here are: 1. The presence of a black hole of non-experience at the center of consciousness, 2. The inherent instability of subjectivity, and 3. The central role of creativity in the constitution of consciousness.

## **Finding 1: The Black Hole of Non-Experience**

The observational method of scientific introspection involves two movements of consciousness. The first is a willful, practiced, self-control, producing a journey inward, away from the thoughts and images of ordinary experience. The second is a relaxed, passive period as consciousness moves back to ordinary awareness. I call these two movements “Folds,” the Inward Fold diminishing ordinary consciousness to a zero point, followed by a reversal of direction and an Outward Fold expanding back to ordinary awareness. The unavoidable spatial language of the description is metaphorical.

For execution of the Inward Fold, I rely on classical meditative techniques described by Patanjali’s *Yoga Sutras* (e.g., Hartranf, 2003). There are a variety of meditative techniques that accomplish equivalent management of consciousness (e.g., Wagemann, 2011). In Patanjali’s technique, the ego, the subjective “I,” is radically withdrawn from all objects of attention, until the epistemological dualism between subject and object is broken. At that point, there is no possibility of knowledge, or of conscious awareness of any kind.

Experientially, the flame of awareness flickers out. What remains is not darkness, but absence. A period of non-experience ensues, similar to dreamless sleep, in which one has no awareness of self or world, presence or absence. One is, experientially, non-existent. I call that period the Black Hole of non-experience.

After a period of time (assessed in retrospect), the Black Hole terminates, and ordinary consciousness slowly and gradually recovers, beginning the Outward Fold. I have inferred that for myself, the duration of the Black Hole is no longer than about 20 minutes, sometimes only a second or two, with a mean duration of around 5 minutes.

I would like to emphasize the blackness of the Black Hole. As in most non-REM sleep, one has no conscious awareness of any kind, no sense of personal identity, no feeling of being located in time or place, no intuition of self-existence. The continuity of physical embodiment prevents complete disjunction between the Inward and Outward Folds, and also explains the remarkable fact that when the cycle is complete, we feel we are the same person we were before.

Others reporting on meditative experience describe the turning point of the journey as a deeply integrative experience, rather than a disjunctive nothingness, (Wagemann, 2011). A sense of oneness is more consistent with Steiner's emphasis on the ultimate unity of all experience. I suggest that the discrepancy is due to divergent observations, or imprecise language, or both. During the Outward Fold, deeply profound integrative experience is common, corresponding to what others have called Samadhi (Suzuki, 1969), peak-experience (Maslow, 1963), or cosmic consciousness (Bucke, 1901). Such moments of emotion and insight, I locate firmly in the Outward Fold, not at the apogee of the meditative journey. It is not surprising if observers fail to notice a brief period of non-experience, because there is nothing to notice: it is an *absence* of experience. Patanjali does not name a phenomenon like the Black Hole, but he does describe integrative phenomena of the Outward Fold, which he claims are direct consequences of the meditative experience overall. Though experienced in the Outward Fold, I attribute the source of the integrative phenomena to the Black Hole.

One may infer some characteristics of the Black Hole from observation of the crepuscular Inward and Outward Folds. On the Inward Fold, as attention gradually withdraws from the world, one retains enough self-awareness to notice and control that gradient (and, frustratingly for meditators, its occasional reversal). The process is not so different from self-observation while falling asleep. One observes a gradual and steady diminution of awareness of one's surroundings, perhaps passing through a stage of hypnagogic imagery, finally leading to nothingness, which one later interprets as having fallen asleep, or in the case of meditation, having introspectively disappeared into the Black Hole. The condition of the Black Hole is probably not sleep. Sleep and meditation produce distinctive brainwave activity, and also, a meditator usually sits in an upright posture that would be difficult to maintain in sleep.

The Outward Fold occasions the holistic, integrative, and insightful experiences reported by so many meditators. These experiences are the main reason many people meditate, and without them, there would be little point to the practice. I attribute these phenomena to causal efficacy of the Black Hole, for they do not occur if the Inward Fold is not carried to completion. For the practice of scientific introspection, the most significant of these effects is a heightened intuition, which allows one to examine anew, not only ideas and objects of interest, not only the nature of one's own motivation and subjective functioning, but especially, the epistemological subject-object relationship itself. I have described the nature of such insights and given examples, in Adams (2012). How the Black Hole generates such acute insights is unknown.

## **Finding 2: The Inherent Instability of Subjectivity**

The qualities of the Black Hole are not susceptible to direct observation, since observation depends on the epistemological dualism of subjectivity and objectivity, and that relationship is deliberately broken during the Inward Fold. However, the Inward Fold is a gradual, directed process, and it is possible to examine the fading of consciousness right up to the cusp of the Black Hole. Such examination reveals the relationship between subjectivity and objectivity. Another opportunity to examine that relationship occurs as consciousness gradually resumes on the Outward Fold.

Examining that epistemological relationship, one notices that subjectivity is the locus of activity, directing intentionality toward objectivity. Objectivity is not active, and does nothing. There are many definitions of intentionality, but keeping with Brentano (1874), in this context it is a motivational act, a gesture of interest toward some psychological object. Metaphorically, subjectivity represents a “self,” directing its attention toward that which is not-self, with the intent of consuming the alien other to itself. This activity is intrinsic to subjectivity, that is, not an effect of any other entity or process. Because subjectivity is always in tension between self and other, it is inherently unstable.

The instability of subjectivity is due to its “self-relating” quality. I take the term, “self-relating” from Hegel (1807). Subjectivity constitutionally includes a proto-self-awareness of its own existence that distinguishes it from objective existence. Objectivity is a “brute” existence, compared to subjectivity’s self-relating existence. Sartre (1947) expressed the idea by saying that subjectivity exists “for-itself” (*pour-soi*). Zahavi (2006) described subjectivity as internally fractured by a self-alienation that defines alterity or otherness. Subjectivity, he wrote, is not only self-relating, but self-alienated, containing a “radical alterity,” within itself (pp. 91-94). That is consistent with my observation.

Subjectivity is proto-aware of entities other than itself. Intentionality is a spontaneous gesture of interest toward that otherness. Intentionality from subjectivity to objectivity defines the first element of consciousness. If all goes well, the arrow of subjective intentionality is followed by accommodation of the objective target, in which its brute objective existence is transformed into self-relating subjective existence. That accommodation satisfies the intentional act and the completed cycle defines a quantum, the smallest granularity of consciousness.

At the moment of satisfaction, the intentional act is effectively cancelled, as subjectivity metaphorically digests its objective meal, enjoying the sense of unity and wholeness that comes from overcoming its alienation from objectivity. With the intentional object consumed, satisfaction is thus a moment of non-duality.

In non-duality, there is no possibility of conscious experience. Each moment of satisfaction is a moment of stillness, of no mental activity. Paradoxically, each mental cycle ends in its own annihilation, a condition congruent with the Black Hole of non-experience.

However, even when a specific intentional act of subjectivity is satisfied, subjectivity itself is still unstable. It is not teleologically satisfied in a larger sense. There is more objectivity to be had. Like a child who eats a cookie then screams for more, subjectivity is motivated by its own structural bifurcation to recognize alterity again, and to issue another intentional act, which I characterize as an act of fundamental creativity, because it is a shot-in-the-dark, directed toward an unknown, or hypothetical objective target. (This is whole-person language used to describe subpersonal and preconscious dynamics by analogy).

From the unipolar non-consciousness of non-duality, subjectivity’s follow-up intentional act is one of creativity, one that defines the next object. Though merely a hypothetical and imagined object, the intentional target is enough to re-establish epistemological dualism and restart the engine of consciousness for another cycle. The ongoing, continuous flow of ordinary consciousness thus depends on, and is driven by, innumerable micro-acts of fundamental creativity that keep the engine running. The so-called stream of consciousness is not a stream after all, but a sequence of discrete events in which consciousness rapidly flickers in and out of existence, perhaps analogous to the way in which binary data underlie the continuous experience of hearing digitally recorded music.

### **Finding 3: The Role of Creativity in Consciousness**

The Black Hole of non-experience commences when the Inward Fold leads to a complete loss of the subject-object relation necessary for consciousness. What then causes the re-establishment of that dualism? Or looking at it from another angle, once a meditator falls into the Black Hole, why does that state of non-experience not persist forever?

The Black Hole does not persist forever. In meditative practice, one simply realizes at some point that

self-awareness and world-awareness have begun to return. It is as if the Black Hole has “spit out” self-awareness, because its rebirth is not due to any act of will on the meditator’s part.

From analogy with the dynamics of epistemological dualism in ordinary consciousness, just described, it is a reasonable supposition that the Black Hole restarts awareness with an act of creativity. If true, we can distinguish two levels of fundamental creativity. One is the micro-creativity that restarts the cycle of consciousness after each moment of subjective satisfaction, and the other is an analogous macro-act of creativity that rescues consciousness from the maw of the Black Hole of non-experience during meditation.

Combining these two types of fundamental creativity, we can discern the outlines of ordinary personal creativity, which usually begins with a great deal of preparation, study, exploration, focus, and effort. The penultimate creative moment is one in which the urge to act further is inhibited. One withdraws attention from the situation. Following that period, sometimes called the “incubation” period, if we’re lucky, we say “Aha!” and see some situation in a new, unexpected way. That insight is driven by the subpersonal creative dynamics inherent to consciousness, as described.

My conclusion is that every act of consciousness, every perception, memory, comparison, judgment, conclusion, and insight, is borne of one or more acts of fundamental creativity, when, after a moment of non-dual stillness, self-relating subjectivity creatively exercises intentionality toward a hypothetical object, setting the next cycle of consciousness in motion. The next cycle is disjunctive from the previous, not strictly bound by it, not a direct causal consequence of the prior experience, and it therefore has a high degree of freedom that could admit a change in vector.

In the ordinary stream of everyday consciousness, an experienced change in the vector of consciousness might be slight, simply “the next thought.” In the more carefully controlled mentation of traditional creative work, such as in the arts and sciences, the change in direction after a moment of stillness can be very noticeable, even a breathtaking “eureka moment.” After the extremely intense control of consciousness in yoga meditation, the change in direction after emerging from the Black Hole can be a long-lasting cascade of astonishing, life-changing moments. All these changes depend on fundamental creativity, an intrinsic function of self-relating subjectivity that defines the nature of consciousness. Creativity is thus inherent in every mental act, large or small, and is required to sustain conscious existence. Creativity is thus the answer to stasis, stillness, oneness, unity, and death.

## Implications for Socialization and Education

As described, creativity is at the core of consciousness. There can be no such thing as a conscious but non-creative person. Variation in manifestation of conventional creativity is accounted for by degree of expression of the underlying phenomena.

Why would educators want to increase conventional creativity for its own sake, for example, by exposure to arts resources and practice in using them? Why put a high value on manifest creativity, if, as proposed, it is simply a function of basic consciousness? That’s like valorizing circulating blood or regular breathing.

One answer is that conventional creative activity is a proxy for direct management of consciousness, a difficult endeavor. If humans can be defined as conscious and self-conscious beings, there is existential pleasure to be had in exercising and managing (celebrating) one’s true nature, often and well. But how could that be done, practically?

Intentionality is a kind of motivation, an interest or desire, directed at something other than oneself. Its essential goal is not acquisitive, though lack of understanding often mistakenly suggests that. Rather, the goal is to recognize, then come to accommodate, or know, that which is not oneself, whether the alterity is a thing, a situation, an idea, or another person. Intentionality is ultimately an epistemological motivation, to know the other and to make what is alien, familiar.

To satisfy an intentional act, the targeted other is absorbed (in whole or in part; usually in part) into

oneself. Accommodation of the other requires a reconfiguration, reconceptualization, or expansion, of the subjective self, and that in turn requires temporary suspension of further intentional activity. The subjective self must be still, at least for a moment, to absorb the other.

Learning to manage consciousness at the macro, personal level then involves 1. learning to distinguish self from not-self; 2. motivation to know the other (e.g., curiosity); 3. generation of exploratory intentional activity toward the other, alternating with 4. suppression of intentional activity (stillness) to allow accommodation of the other, and followed by 5. a creative renewal of the whole cycle.

I have elided much complexity between analysis of the subcomponents of atomic consciousness, and the holistic processes of creativity commonly understood. However, if the analogy is persuasive, it explains how creativity is inherent to the nature of consciousness, and why it is worthwhile to learn to manage consciousness by exercising creativity at the whole-person, and interpersonal levels.

Without ongoing and vigorous attempts to manage consciousness, a person is like a particle detector in some great scientific experiment, waiting to be struck by an experience and then recording it, but without knowing why. By contrast, a fully functioning person vigorously chews up the scenery of objectivity, actively, creatively looking to expand the scope of self by incorporating more of the world into it. Such persons actualize their nature as conscious beings.



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