

CONSIDERING CONSCIOUSNESS AS ARTICULATED CO-EXTENSION

By John Barclay-Morton



(Revised as of January 8th, 2022, from material originally submitted July 17, 2010 to *The Truth and Reconciliation Commission of Canada*).

In this paper, a new approach toward conceptualizing consciousness is explored and developed. Earlier approaches, which impose a hierarchy of implicit value upon the various manifestations of consciousness, are rejected. Instead of dividing aspects of consciousness into “levels” and “layers”, aspects of consciousness are considered to be co-extensive with each other, and to articulate in producing the manifest characteristics of consciousness. In this way, non-conscious processes, consciousness as awareness, and consciousness-of-self can be integrated and considered together in analytic contexts. A practical example of this interpretive methodology is then considered, in the context of image analysis.

Becoming Conscious of Consciousness

We all take for granted that we are conscious. It is the nature of our being in this world, although, we may not notice it initially: that we are aware of our experiences, and that we collectively consider each of us to be who we are, as, the individual experience of our lives. We each bear witness to our own being, beyond any practice or artifice.

None of us need be any manner of specialist in this, for consciousness is immediately and absolutely ours by right of an immersive immanence: in being conscious, each of us is our own consciousness; and this, in a way which seems impervious to any arguments against the autonomy of our own self-awareness.

That we describe ourselves with such certainty suggests this is something at the heart of how we see being human. Being conscious of ourselves is something so transparently basic to our existence that we almost never think about it at all: being conscious is something we all gratuitously take for granted, as being continuously given to us in each and every moment we experience.

At the same time, we know that we are momentarily conscious of ourselves in a manner that seems to be uniquely human. We know ourselves as conscious in a singular way, and this seems to be very different from how any other creatures around us manage to experience the world around them. Yet, in sharing the same world, we must pause to wonder: How is it that we humans alone have achieved a sense of self awareness, one that is so very different from the relative oblivion in which all other living creatures seem immersed?

In knowing that the traits and attributes embodied by any creature we may encounter can only be the result of endlessly extended evolutionary processes, we can assume that our own conscious awareness arose somewhere in humanity's long past. We must admit that, at one time, that which became human was not yet conscious in an awareness of its own self: There must have been a time when, that which was closest to being as human as we are today, had not yet become consciously aware of itself.

And perhaps it is a matter of more than passing interest to ask ourselves when this might have been. We can see in our own children that, we are not born with the kind of conscious awareness we later develop in and of life. We might take to a conscious awareness of our self readily, as naturally as we do to walking and talking; but it is not

something that is immediately and effectively there within us, at the moment when we first auspiciously open our eyes.

Similarly, we must suppose that consciousness as we know it initially arose of humanity's portentous struggle to become the best it could be at being itself. This must have been a long, intermittent process of promise and purpose; of fits and starts, of deliriums and self-deceptions: but also of courageous change, flashes of brilliant insight, and dedicated efforts to keep alive those rare and beautiful aspects of consciousness that briefly crystallized awareness in new ways that any and all might then benefit in experiencing.

We are far from finished on this ingenious journey. In any given moment, we might still misstep; and worse yet, we are now aware that there will always be those who would unashamedly lead any of us astray in this, were it to prove advantageous to themselves. This is something we may never be able to change entirely; but we can perhaps hope to retrace those steps which in surety brought us all to where we stand today: and in this, we may well find some sense of a way through which we might tell a false step from one that holds true to our best collective direction forward.

Considering Consciousness: An Approach

We are conscious, and we know it. This in itself sets us apart from all else we encounter in this world we inhabit. And although we can certainly debate about the degree to which any other creature might share this great gift, nowhere else will we find anything approaching the extent to which we ourselves carry this conversation. We are not simply aware of our own consciousness: We live in this awareness, we think about and speculate upon the nature of our conscious awareness, and we compile at great length many considered opinions regarding our obvious and consistent awareness of our own consciousness.

Indeed, whole fields of study have arisen out of our determined efforts to understand this awareness of our own consciousness — which we otherwise exist so seamlessly within. We can cite a definitive historical progression in this, an evolution of knowledge and experience that extends from philosophy, through interpretive psychology, and on into the clinical study of neural processes. In each field, at every turn and with any advancement in the interpretive methodologies being developed and applied when defining and describing consciousness in its self-awareness, we keep finding new

and ever more specific approaches for talking about that which is under consideration. And so, that which is the clearest and most immediate experience to us all — consciousness, and our awareness that we are conscious beings — very quickly loses all its inherent transparency to a proliferation of specialized terminologies, all of which accrue from those various fields that lay claim to being the most sincere study of what consciousness is all about.

Yet if we are going to talk about consciousness, and understand what it is we are aware of when we experience being conscious, we need to be speaking about the same thing in the same way. I would like to suggest a specific way to proceed in this.

Defining Consciousness

It has been said succinctly that the essence of philosophy is, quite simply, a commitment to finding consistency within the chaotic experience of the world in which we are immersed. Through substantiating that conceptual elegance achieved when ideas mesh seamlessly, consistency establishes its relevance within philosophic inquiry. Realistically, though, such results remain unconvincing and are of little consequence unless the seams between ideas remain readily apparent and precisely defined, being as they are the very affinities that in fact constitute these coherences — of which we then can speak.

We necessarily lack an ability to speak of such things before we find them: Philosophy is not an essentially transcendental enterprise, where we pull ideas out of thin air. All concepts must be created out of something; and before we can lift any concept up into language, from out of the world where we find ourselves enmeshed (to then place alongside any other demonstrably authentic ideas), we must first trace out these exemplary consistencies through an empirical topology of our encounters with the real. In our experience, the consistent must always be held as contingent upon that which is real, for it need not answer to anything but that which actually exists: No rule of logic remains rational when it deviates from actuality.

That being said, we can naturally expect to find ourselves immediately cast into a quandary when seeking to define consciousness: for, how can we trace the contours of that which is itself undertaking this very act of survey in the first place? Implicit in this situation is the realization that we must be working immersed within the immanence of self-consciousness; but, how do we demarcate the seams of self-consciousness when the very composition of these transitions must therefore be creating immanence itself? That is to say: If we admit that our experience of consciousness always entails this immanence with itself, then we are conceding in the same breath that our experience of consciousness is something which varies from itself without ever actually being other than itself; but if this is the case, then, we can never think of what consciousness is without that thought also being itself formational of consciousness. This is a truly strange situation which never allows any degree of separation between the act of defining, and that which is being defined — in effect, this is a set of circumstances which can never allow any definition to definitively form.

If we are scrupulous when we try to create a truly transcendental concept of consciousness, as an idea that can stand by itself, then we effectively find in practice that any thought of what consciousness might be is also actively being created in the course of that act; and that this in turn must always therefore be itself implicit in the idea of consciousness that we end up producing. Now, we can dismiss this as being an example of an infinite logical regression — which it isn't, since we are engaged in describing the functional nature of that which we seek to define here; or, as being a matter of semantics — which it is not yet, since we are seeking the grounds to which we can ascribe the word we seek to define. Or what we can instead say is, we are dealing here with the contingency of consciousness, as immanent to itself; and this is a situation which insinuates immanence as actively integral to any definition of consciousness, in a way which is itself precedent to signification — such that the linguistic distinction between word and object cannot and does not form prior to the existence of consciousness.

This in turn means, that before we can ever begin talking about consciousness: We can never compose an idea of consciousness without taking into account how consciousness itself comes into being — that is, the conditions under which it appears; and any attempt we make to define consciousness and so name it as such must inevitably face the conundrum that consciousness necessarily occurs before the possibility does of any name being created to express its existence. We cannot name consciousness without being conscious ourselves; and so, the very naming of consciousness itself implicitly presumes consciousness as integral to the process of naming, rather than as standing apart in isolation as something that can be, as everything else is, simply given a referential name.

To try and grasp an idea of consciousness that transcends away from this process, that somehow manages to stand apart from the act of its creation, is to come away with something that has already ceased being what we are trying to talk about in the first place. Far from being formless, we find consciousness invariably implicates the conditions through which it is formed. Consciousness is not some “ghost in a (neural) machine”; it is not an apparition, but, it is necessarily conditioned by those processes through which it comes into being. Consciousness is determined by the conditions through which it appears: therefore, consciousness must be defined in terms of being apparitional (rather than as being an apparition itself):

“Although it is always possible to invoke a transcendent that falls outside the plane of immanence, or that attributes immanence to itself, all transcendence is constituted solely in the flow of immanent consciousness that belongs to this plane. Transcendence is always a product of immanence [Gilles Deleuze, *Pure Immanence*, pgs. 30–31].”

“There is a big difference between the virtuals that define the immanence of the transcendental field and the possible forms that actualize them and transform them into something transcendent [Gilles Deleuze, *Pure Immanence*, pgs. 31–32].”

Appearing Conscious {ref: Deleuze, *Sur Kant*}

To call consciousness “apparitional” may seem a matter of semantics, as a play upon a word almost made-up in this context; but this word has a very interesting origin, as a concept. Within the context of Western philosophy, the idea of defining the conditions under which things appear first gains prominence through the work of Immanuel Kant. Prior to Kant, it was generally thought that the proper study of any particular thing should proceed as a study of each thing’s being, in-itself. This study, known as “ontology,” had distinctly Platonic roots within Western philosophy; and over the course of time, had come to be defined within a theological context. With Plato, any particular thing could be considered as but an imperfect version of some ideal form; and in later theological affirmations of this principle, the perfect form of anything would exist solely in the mind of an omnipresent God.

Within philosophy at the time of Kant, the radical empiricists had called into question the possibility of ever knowing what the nature of anything might be in its own terms: We only know things through our senses, they insisted, and we know that our senses are prone to error. Further, we have no way of knowing if how we perceive anything truly corresponds to how others do; and if there are discrepancies — which always arise — then: How do we correlate these inevitable variances with the nature of whatever we are trying to define?

Kant’s solution was so incisively brilliant that he is considered to be one of the primary originators of the scientific age. We may not ever know what things are in themselves, he noted; but we can always describe what things are as “phenomena”: we can describe the conditions through which things come to appear before us. That very simple observation is a fundamental principle of scientific method: If the conditions under which an experiment is conducted are duly and accurately noted, then any attempt by others to replicate that experiment, under exactly the same conditions, should produce results identical with all other instances of that initial, meticulous undertaking.

Here, both the problem we face concerning the nature of consciousness and a solution to the definitional dilemma noted earlier become quite clear. It is true that we have no way of knowing precisely what any other person actively thinks consciousness to be, in the moment of their thinking this; and so, when we talk about consciousness, we can never be sure that this word we are using is referring to the same situation for each of us in thought. But even as we agree to the virtual impossibility of our ever definitively establishing an implicitly consistent conceptual realization of what consciousness is — one that is transcendently definitional — we still have another option available. We can attempt to reach an agreement about the way we might trace the contours of how consciousness comes into being; and so, we can hope to find a commonality of how to describe those productive seams that constitute the consistencies of consciousness — as actually occurring within our experience of the world. If we can determine the conditions under which consciousness comes into being, then we can trace the contours of such occurrences to define the apparitional nature of consciousness.

I am proposing that the very philosophic undertaking which helped to established scientific method at its outset should be applied in defining the nature of consciousness. We can try to find how consciousness comes to appear, even if we cannot at first define a meaning for this word. In trying to find the conditions under which consciousness appears, we should do so in a way that is applicable to any animal; and, we should proceed from the privileged position of our own immanence with consciousness.

Observing Appearances

To clearly state my intentions: I intend to describe exactly what I am talking about when I speak of “consciousness”; I would like to explain why I define consciousness the way that I do; and I am proceeding thus to clear up what I consider to be a misguided (although, all too common) approach to talking about consciousness. To this end, I will be inquiring as to how consciousness appears; and I will be doing this from a position of philosophic self-observation.

To remain consistent with scientific method, this attempt should use the same approach as is applied to the study of all other animals: that of observing which reactions ensue from set external stimuli. This is the classical “black box” approach of behavioralism: When we do not know what happens within an animals brain, we must correlate specific stimuli with an animal’s observed reactions.

At the same time, we can observe to a much greater extent what actually occurs within our own consciousness when we are reacting to any distinctly perceived external stimulus; so, we must factor in our privileged position of immanence with respect to our own consciousness, as we determine how best to proceed in defining that which consciousness is for each of us.

In attempting to reconcile these two somewhat divergent interpretive positions, we must contend with what is perhaps the most basic of all cognitive biases — one that informs the most insidious form of confirmation bias that is encountered in the study of consciousness — and this is a bias which is very much a hold-over from the theological ontologies that preceded modern science: that of hierarchical value systems (which lies at the core of the “misguided approach” that I alluded to earlier).

If we are to assume by definition that consciousness is to be encountered in any animal — given that we are going to describe consciousness in terms of stimuli and corresponding reactions — then we cannot make a distinction between the nature of animal and human consciousness *before* we determine what consciousness actually is; and in particular, we must not begin with the preconception that human consciousness is somehow “better” than the mental states to which other animals are party. We may well find that each kind of animal has a form of consciousness which differs from all other types of animal; but this possibility offers no basis for ascribing any manner or degree of “relative value” to whatever different manifestations of consciousness might be encountered.

In a scientific context, we cannot begin by assuming that human consciousness is somehow “better” than that of other animals: We must first try to determine what the essential nature of consciousness is, and then proceed to

try and find how it differs between the various manifestations we find of it within the world. That is to say, we need to know under what conditions consciousness can be said to appear — only then can we examine and compare various instances of its occurrence.

In a philosophic context, we must guard against the above mentioned cognitive bias becoming a very specific form of confirmation bias: In describing human consciousness, we must avoid ascribing relative values to different instances of human consciousness. We must rid ourselves of the preconception that any one manifestation of human consciousness is somehow “better” or in some sense “more authentic” than any other. This is a fundamental principle of post-structural schizo-analysis; and to this end, my first step here (as informed by post-structural philosophy) is to address a very simple structural consideration, by seeking to remove all traces of the concept of “levels” from my consideration of the apparitional nature of consciousness.

Together Extending Thought

There is in Western thought a protracted history of defining consciousness in terms of different levels, as if consciousness were composed of layers: consciousness, the subconscious, the unconscious. Taken together, each of these ideas (as drawn into popular culture from psychology, and applied to thought) share a common collective characteristic: This approach to describing consciousness inadvertently introduces a sense of value into the discussion; and that in turn distorts the way we think about consciousness. By placing some aspects of consciousness “higher” and some “lower” in a relative hierarchy, we miss from the start a very important, defining aspect of what we need to see: Potentially, all aspects of our consciousness are working at the same time, possibly at any time — whether we are aware of them or not. From this observation, we can replace the concept of conscious “levels” with an idea that promises to be of greater service to us: Instead of trying to describe arbitrary “levels” of consciousness, we can proceed from the basic observation that different aspects of consciousness are all co-extended with each other.

What does this mean to us? What does this do for our inquiry into the nature of consciousness? Well, this approach accomplishes one very simple yet effective definitional modification: Using the concept of co-extension as essentially constituent of consciousness allows us to think and talk about consciousness with a consistent set of terms. Simply, when we talk about consciousness, we can describe what we are referring to in terms of co-extension, and of articulations within these co-extensions.

Describing consciousness in terms of articulated co-extension allows us to specify the conditions under which consciousness appears: that is, what is occurring together as being co-extended, and how that is articulating.

This approach is entirely consistent with scientific method, as it would be applied to the behavioral observations made of any animal: The nature of consciousness manifested by animals can be described through the activities they undertake, as expressed in terms of specific articulations between their sensory perception of stimuli, and, the corresponding responses of their co-extended motor reflexes. We describe animals as being

conscious by noting how they react to what they sense in any surrounding environment.

I am going to take exactly the same approach when it comes to human consciousness — with the exception that I am also going avail myself of the privileged position we humans realize with respect to an immanence with(in) our own consciousness. From my background in the martial arts, I am going to describe consciousness specifically in terms of articulation: I am going to say that consciousness is the articulation of sensory perception with motor reflex activations, and that consciousness appears in and as the articulations of our co-extended sensory perceptions and motor reflex activations.

This is a very simple approach, but it bears immense benefits: it allows us to say any animal which reacts to stimuli is to some definitional extent conscious; and in this way, we can be very exact as to the apparitional conditions which so define specific instances of consciousness. Following this approach, and after we reach a few conclusions as to the nature of consciousness, we might then find ourselves in a position to take one further step. At some point, we will need to contend with the indisputable fact that somehow, we humans have become aware of our own consciousness; and that is to say, somehow our consciousness has become co-extensive with itself, allowing us to experience and articulate self-conscious states.

This brings us to the whole point of what I am addressing herein: that we may be able to successfully inquire into the how, when, where, and why of consciousness becoming co-extensive with itself (since we already know the “who” — that now being, all of us); and that we can proceed in this endeavor from a very stable starting point: that of considering consciousness, at its base and throughout its many apparitional manifestations, as being essentially of a nature defined by articulated co-extension.

Being Between Thoughts

As close as each of us is to our own consciousness, in our awareness of our self, we all also realize that we are each individually unique from every other person. Yet in this, we rarely stop to wonder if what we each individually call “consciousness” might be, for any others, somehow different than exactly what we experience directly. Consciousness is an intimately subjective experience: As close as we are in our own awareness of our consciousness, we never have a similarly direct experience of how others are aware of their own consciousness.

In truth: We can never say knowingly that we each are conscious in a way all share; or conversely, that the consciousness of another is definitively different from what all else experience. Yet we generally consider that both of these alternatives can be (and are) at the same time true: Each is conscious as others are, yet, all are unique in their own conscious experience. And so, in attempting to reconcile such apparently contradictory considerations, we must reach one inevitable conclusion if we are to proceed in a way that makes any sense at all. Since, when we talk about consciousness, we cannot assure the direct experience of any is as that of others; and because at the same time, we can all talk about the experience of being conscious — we must first take the time to define precisely

what we are talking about when we speak of consciousness. Our one best direction forward here is to define as well as we can, in the language we are using, exactly what we mean when we use the word “consciousness”; and this, as we have already established, means describing the conditions under which consciousness appears.

To this end, I am going to demarcate a distinct path to proceed upon when talking about three particular “things”: consciousness-of-self; consciousness; and non-conscious processes. I am going to hold to the position that aspects of each of these can — and so very often does — occur at the same time as any of the others; that none of these will exclude those others; and that, in fact, what we are saying when we speak about consciousness only makes sense when we are talking about what happens *between* each of these, as articulation. Moving forward, it will be precisely the nature of what happens through these “in-betweens” that holds the most interest for us.

These “in-betweens” are in essence how consciousness forms as appearing in the very nature of its immanence: as that which varies from itself, without being other than itself:

“A life is everywhere, in all the moments that a given living subject goes through and that are measured by given lived objects: an immanent life carrying with it the events or singularities that are merely actualized in subjects and objects. This indefinite life does not itself have moments, close as they may be one to another, but only between-times, between-moments; it doesn’t just come about or come after but offers the immensity of an empty time where one sees the event yet to come and already happened, in the absolute of an immediate consciousness [Deleuze, *Pure Immanence*, pg. 29].”

Non-Conscious Processes

To begin, then: What am I talking about when I use each of these terms (non-conscious processes; consciousness; and, consciousness-of-self) — how can a formal definition of consciousness be stabilized here as consistent?

What we can call “non-conscious processes” have been recognized (in some form) for almost as long as our consciousness itself; and indeed, it is through becoming aware of our own consciousness that we are forced to recognize these forces acting within us — forces that we see only through the actions they seemingly compel us to take.

Although the range of neural processes which do not occur consciously were long considered to be the realm of “demonic” forces, clinical studies backed by modern neural imaging techniques have greatly changed the way we think about those parts of our minds that we “do not consciously control.” Destructive compulsions and aberrations of thought aside, we now understand that much of what contributes to shaping thought occurs without our direct awareness coming into play. We do not need to actively produce in thought images for that which we are looking at directly; nor do we need to actively think into awareness that which we hear. Similarly, we move our bodies in complex patterns seamlessly, immediately, without first

having to think of which muscles we need to activate, or the sequence of motions we need to realize, in order to do something at once both as simple and as complex as grasping and lifting a glass to drink. We now realize that there are very necessary and dynamic processes occurring all the time within our minds, many of which we are never directly conscious; and that these processes need not be “sequentially logical” in form to function effectively — they need only capture the random contingencies of that which is real in our experiences of the world around us.

As an example: It has been shown that we continuously process visual information in two very distinct ways. For instance, we are so immediately aware of what we see before us that it can be difficult to separate whatever we are looking at, from that which we have just seen: Our awareness of who we are, realized in terms of where we are, will include any room we have just left as surely as it does one we are now entering. As little sense as it makes logically, we are often at once in the contingent awareness of both what we actually see before us, and that which we actively visualize in our minds. Without a second thought, we can unite together in the continuity of our immediate experience both where we are now, and, where we were moments before — or even, where we were years ago.

This is the nature of being within our immediate experience of consciousness: We are at once aware of that which is in our direct perception, as well as that which has passed into our memory to become the imaginative recollection of what has been but is no longer before us.

In contrast, at the same time and in every moment, we are visually processing a constant stream of spatial relationships holding between ourselves and the world around us: how fast we are approaching a doorway, the distance on either side of us as we pass through, the way a room we enter opens out in front of us. All of this visual information informs our immediate consciousness, but, none of it enters into or persists as conscious perception; and if it did, we would be at a severe disadvantage in the world. Could we walk through a doorway if we consciously and continuously retained a mental image of the distance between its frame and ourselves at every instant of our approach? Would our physical relationship to the things in a room as we entered make any sense to us if we were also always still thinking of how far we were from the sides of a doorway we had already passed through, as retained from the experience of walking into the room? Would anyone ever be able to catch or hit a ball if we became and remained consciously aware of all the locations it passed through, in each instant on its way to that one moment in time when, and that one position in space where, we connected with it? No; so much ceaseless information would be overwhelming if consciously retained.

We visually process our physically spatial relationships to the world around us on a continuous basis, but we do so through non-conscious processes. These non-conscious visual processes (and many other non-conscious neural processes) occur at the same time as our conscious, visual awareness of our surroundings. The non-conscious processes, through which we situate ourselves relative to our surroundings, are co-extensive with visual processes of consciousness that present us with relationships holding

between the objects in the world around us; and all of these processes, conscious and non-conscious, are consistently being articulated together to inform our actions.

That we non-consciously process visual information relevant to our own physical actions on a continuous basis has been demonstrated in clinical studies. Simple optical illusions, formed of converging lines that mimic the appearance of parallel lines receding into the distance, will trick us when we try to accurately decide the correct distance to an object placed upon and between these lines. However, when we reach to grasp that object, we will unfaillingly be able to open our fingers at the appropriate width which corresponds to the actual size of the object. It does not matter how far we consciously think the object is from us, as judged by its relationship to the converging lines it is placed between: we can still non-consciously determine how big the object actually is, relative to our own reaching hand. So although we are consciously fooled as to how far away the object is (and thus its apparent size), as determined through the visual relationships it seems to form relative to its surroundings, at one and the same time we can non-consciously process correctly how large the object will actually be when placed within our grasping hand [Goodale and Milner, pgs. 104–107].

Studies of this and other such latent abilities have made clear a simple, basic fact: much of what happens within our conscious awareness occurs in conjunction with processes of which we are not directly aware. In considering non-conscious processes from such a practical position, all such clinical observations seem a world away from the idea of an “unconscious” submerged below a conscious mind, where it occasionally asserts some impulsive control to force us into acting in ways we do not understand. Instead, it is now apparent that non-conscious visual processes are vital to such simple everyday tasks as walking over uneven ground without stumbling, and effortlessly navigating stairs.

And yet: within the extensive history of inquiry directed toward the human mind, a significant portion unfolds from a presumption that “animal instincts” force themselves onto “rational thought” and bring an uncontrollable, chaotic “evil” into the well-measured world of finely tempered logic. This is the sort of prejudicial thought that we would be wise to eliminate from within the way we speak, when we talk about consciousness; and a persistence of this kind of mindset is almost impossible to avoid lapsing back into at some point, if we insist upon thinking about consciousness in terms of “levels” (which inevitably impose hierarchical value within interpretive thought, through being arbitrarily derived into terms of “good” and “bad” and upon being transposed from any relative positions considered in terms of “higher” and “lower”).

This, then, is the one simple insight I would bring into any study of human consciousness:

Instead of speaking about “levels” of consciousness, it is far preferable to describe consciousness in terms of articulated co-extension.

Instead of saying that, in the human mind we are dealing with a conscious level that is somehow localizable as occurring over various lower, unconscious levels (with all topped by a supreme level called self-consciousness), we

should instead say: All aspects of consciousness occur as co-extended with each other. When starting with this approach, we can concentrate upon finding where various articulations form between the co-extended tendencies and processes that thereby constitute consciousness; and we can start to deal with whatever it is that makes any particular instance of consciousness unique — while at the same time realizing, all of consciousness shares some very basic traits.

Consciously Thinking:

We are immediately aware of our own consciousness. This makes of our conscious awareness an entirely unique place for us to begin our inquiry, when we wish to proceed toward expanding our understanding of consciousness in its own nature. And in starting from the position that consciousness can be expressed in terms of articulated co-extension, we can then ask: What is consciousness as awareness, if we consider it consistently to be the articulated in-between of co-extended neural processes and tendencies?

Of course, I must confess that this is not how I actually contextualized my initial approach to understanding consciousness, when I first sought to set it within a philosophic framework! Rather, I am starting here from the conclusions I reached after I began considering such philosophic questions within the context of my own specific experiences, during several periods of dedicated study within the martial arts that lasted through many decades of practice. I was led to the conclusions I am outlining here, through working to reconcile these experiences together with my academic background in Western post-structural philosophy.

Looking at both classical Western philosophy and traditional Eastern martial arts, we can begin to ask if any consistencies we might find within either occur as common to both; and indeed, there is at least one common ground holding as an “in-between” that claims the same name in either case: that of “meditation.”

Today, “meditation” has a wide range of meanings. One can find the term “meditation” used to describe some of the most central philosophic discourses in Western philosophy — those of Rene Descartes, for example — although, what would constitute a ‘meditation’ in the Cartesian tradition is quite different from what is generally meant by meditation in Oriental traditions. The common theme of inner observation, however, remains consistent across those uses to which the term “meditation” is applied, no matter how widely the actual procedural methodologies employed in the course of what is said to constitute ‘meditation’ might vary. For instance, internal styles of martial art — such as taijiquan — are often described as “meditation in motion”; and in point of fact, the actual meditative practices which are cultivated to augment such physical exercises are often as advanced as those martial techniques simultaneously being refined.

1) Within The Western Philosophic Tradition;

Michael Foucault, in his seminal text *History of Madness*, provides an exceptionally clear definition of ‘meditation’ by outlining that concept in the course of a dispute with Jacques Derrida (regarding their respective readings of a

brief section from Descartes' *Meditation on First Philosophy*):

"A meditation implies, in short, a subject who is mobile and capable of being modified by the very effect of the discursive events that take place. We can see from this what a demonstrative meditation would be: a set of discursive events that form at the same time groups of the enunciations linked to each other by formal rules of deduction, and series of modifications in the enunciating subject, modifications that continually follow on from each other; and more precisely, in a demonstrative meditation, enunciations which are formally linked modify the subject as they develop, and liberate him from his convictions or induce systematic doubts, provoke illuminations or resolutions, free him from his attachments or his immediate certainties, induce new states, but inversely the decisions, fluctuations, displacements, primary or acquired qualifications of the subject make possible sets of new enunciations, which are regularly deduced from the others [Michel Foucault, *My Body, This Paper, This Fire*, page 563 in *History of Madness*]."

I think it both interesting and insightful that Foucault's description rests as it does upon the concepts of mobility and modification. In this description, one encounters a sense of the changes and constant adjustments made in thought as a response to thinking itself: a mobility of thought, in response to the perceived demands of thinking.

It is not surprising that the ways in which the term "meditation" can be used vary as widely as do the uses of the word "consciousness" — we are after all talking about the same thing, the human mind. However, while we must ceaselessly wonder if each of us might be using the term "consciousness" in the same way, it very quickly becomes obvious that each "meditation" as such need have little in common with any other practices going by the same name.

Meditation in itself holds a vast "in-between" spanning the many ways of which it speaks to and through human thought. Entering into the Eastern martial arts from the perspective of Western philosophy, I certainly ended up spending a little more time than most considering what might be found in common across such very different approaches; and of course, one certain thing I found in common was exactly that sense of being "in-between".

That might sound to be an easy, even flippant, answer; but, in truth, simple answers rarely come easily. Yet we have already encountered some sense of what this "in-between" might be, through our initial considerations of these matters: we called it "articulation" and we found it forming of co-extensions between various non-conscious and conscious processes within thought. So let's look again at consciousness — from a Western perspective, as articulated co-extension; and let's see how and where this description might apply to the practice of traditionally Eastern martial arts. Let's see what kinds of consistency arise of the in-betweens that articulation spans, of consciousness as co-extended neural processes.

I would suggest that the first step in moving toward a functional definition of consciousness — one that is not at outset entirely determined by consciousness-of-self, since

that is where we would like to end up — should be to consider how motor reflex activity might directly articulate with co-extensions of our sensory perceptions, within our immediate experience of consciousness.

My intention in employing a new conceptual framework for describing consciousness is simply to seek a more viable interpretive methodological — one which might lend itself more readily toward creating new and valid configurations of knowledge. Bearing in mind that our understanding in this must always be contingent upon what is real; and, that reality is under no obligation to conform with what we would like to think it should be: any such approach must be consistent with demonstrable contingencies of the real.

From this point onward, I will be as exact as I can manage to be in describing specific instances illustrating conscious awareness in terms of articulated co-extension.

2) Within An Eastern Philosophic Tradition: Taijiquan.

In the course of an ongoing research project directed toward deconstructing (and then reconstructing) a previously undocumented form of image writing (used by the First Nations of North America prior to European contact), I decided to hold myself to describing consciousness in terms of articulated co-extensions forming between neural processes; and that is all very well and good, but, what does it mean in terms of our immediate experience of the world around us? As I mentioned, this particular approach is grounded within my own experience of practicing the Chinese martial art of taijiquan; so, let's consider now what that practice experientially entails.

Taijiquan belongs to a family of practices that can be broadly described as "gymno-therapeutic". These are exercises which were originally devised as prescriptive health care practices — a little like physiotherapy, but, practiced with a very holistic intention toward preventing illness. Many Eastern cultures developed such systems of exercise as a way of both preventing and treating illnesses and injuries. However, unlike any of the established regimes of exercise found in Western culture, there was often a very highly developed mental component embodied in these Eastern physical exercises. Typically, there are entire bodies of meditative practices that accompany any such exercise systems. This is certainly true of taijiquan, which claims a lineage from within the religious tradition of Taoism that extends back to Shamanic origins in Paleolithic times; but in its own right, taijiquan is often also referred to as a "meditation in motion."

The practical study of taijiquan can afford us with a directly immediate experience of consciousness — as it forms of articulations in the co-extension of motor reflex activity and sensory perception. If meditation can be defined, within the current context of this discussion, as an exercise that seeks to experience consciousness as it originates within itself; then, practicing taijiquan can be seen as inherently meditative — in that, through the course of this practice, consciousness is being actively produced by the direct and immediate articulation of motor reflex activations, as co-extensive with, sensory perceptions.

In short, the practice of taijiquan entails a coordinated

orchestration of sensory perception with motor reflex activations. It takes form through articulations of conscious awareness forming through perceptions of body movement. Practicing taijiquan, in its most developed manifestation, almost precludes in any sense grounding consciousness-of-self: at its most extreme, it is an exercise in pure conscious embodiment that defines the apparitional nature of consciousness.

Finding some form of footing in such a position can prove pivotal to an understanding of what consciousness is for any of us: Here, we are as close to realizing the importance of input from non-conscious processes in the formation of our conscious states as we can become. At the same time, we stand to gain a sense of how our “simply being conscious” might differ from our more usual experience of self-consciousness; and in this, we might gain some insight into what consciousness is, in itself.

Further, as practical as such an approach might initially prove to be, its utility is further enhanced by the promise it provides for some possibility of integrating clinical insights into non-conscious neural processes with our immediate experience of being conscious. Beyond this, as a source of ready insights regarding what we are — as beings conscious in some sense of our awareness — we may even find ourselves gleaning new insights into this, one of the greatest philosophic questions that has faced humanity for as long as we have looked into ourselves for answers about anything: What are we, as creatures who think; and, why are we so?

If nothing else, we stand to grasp here how non-conscious processes, consciousness, and consciousness-of-self differ from — while at the same informing — each other in the articulations that form of their co-extensions together. Let's consider, then, the nature of consciousness as articulation.

Stretching Toward A Grasp of Consciousness

I started practicing taijiquan in the fall of 1983, following a winter backpacking around archaeological sites in Mexico's Yucatán, and a summer again working for a First Nations' newspaper (“The Native Press”) in Yellowknife, the capital of Canada's Northwest Territories. Returning to university that autumn, I decided that persisting in such solo travels meant it would be prudent to learn some form of self-defense. As a philosophy major, I chose taijiquan as my least violent option.

Subsequent to my leaving university, I availed myself of instruction in various internal martial arts (such as Taijiquan, and Jiulong Baguazhang), as provided by some of the top practitioners in North America. In “unpacking” my taijiquan forms over these intervening years — to find what had been put into these art forms in the course of their development over millennia — I decided to see how fast it was humanly possible for me to perform one continuous, 108 movement set of this martial art. Although taijiquan is often practiced in a very slow and methodical manner, it should be obvious to all that this would not be the case in its martial application.

After years of practice and preparation, my best time ever for performing the complete Yang Family Long Form was one minute and 58 seconds. This time is consistent with

international standards, where completion of a double-sided long form (108 movement right-side form, with the left-sided mirror version) would be allotted 4 minutes in competition. Most people who practice this set, for instance in its derivative form of ‘Taoist Tai Chi,’ do so at a leisurely pace and take about 20 minutes to complete the entire long form (on one side). Performing at the extreme end of human abilities occurs, then, at a full order of magnitude beyond casual practice.

This experience proved to be immensely insightful. When practiced at the utmost expression of what a human body can sustain, the movements which are characteristic of a taijiquan set produce what can only be described as waveforms within a practitioner's muscle/tendon groups.

Through a long-term practice of taijiquan, the elasticity of the tendons is gradually and steadily increased. At the same time, muscle mass increases in a balanced fashion, and the muscles are trained to function in a state of relaxed tension. In this way, the elasticity of the tendons and the relaxed tension of the muscles — the muscle ‘tone’ — gradually begin to approach each other. Muscles that are usually in either/or states of rigidity and relaxation acquire an intermediary tone which is characteristic specifically to each; rigid tendons acquire an elastic stretch and bounce. As this occurs, muscles begin to function as partial (dedicated) extensions of tendons, and tendons begin to



Practicing Taijiquan on a Bagua carpet designed to my own body proportions. A film camera with the self-timer activated caught this image while set on a tripod. The lighting was a mix of natural and incandescent. The multiple trace images of my arm's movement were caused by the flicker of the incandescent bulbs, which cycle at 60 hertz; so the time elapsed in this image is about one tenth of one second.

function as do muscles of relaxed tension. Both structures begin to share the natural dynamics of each other: and the result of this is the stabilization of integrated muscle/tendon groups, which can then function as single yet differentiated structures.

Such muscle/tendon structures, having achieved a greater internal integration, also articulate to a greater degree of functionality with the body's other muscle/tendon groups. This enables the body to move in ways which are quite unexpected: not just through extreme speeds but also, as an integrated unit which shifts the body's mass entirely into the movements which it undertakes. When practiced in such an extreme form, at the utmost expression of what a human body can sustain, the movements which are characteristic of a taijiquan set occur as unified waveforms expressed through the entire body of a practitioner.

Such oscillations of coordinated tissue, induced by the passage of energy (as force) through the body's structure, are constrained in a tempering fashion by minute proprioceptive adjustments in muscle tonality. A slight tightening or relaxing of muscle tissue serves to modify the waveform oscillations occurring within, and passing through, muscle/tendon groups. At the same time, a constant variance of light muscular tension structurally maintains relationships between opposing muscle/tendon groups; and this state of tensioned articulation serves as the transferential medium whereby the energies of transitional forces oscillate in and propagate through the body's muscle/tendon groups.

When taijiquan is practiced at great speed, the elasticity of the muscle/tendon groups serves to store the accumulating energy of movement, capturing this inertial force through the stretch of tendons in play at the body's structural limits of motion and, redirecting that force through channels of relaxed dynamic muscular tension in expending energy outward. The energy of the body's momentum, circulated through muscle/tendon groups by positional changes articulating these muscle/tendon groups, propagates through the body as waveforms called "solitons".

Solitons are very a specific type of waveform. In a soliton, the amplitude of the energy pattern being transferred physically matches the dimensions of the medium through which that force is passing. As a result, no energy is lost in the waveform's passage: the force simply propagates without diminishing.

What is of greatest interest here is that, at this point one's conscious awareness is of such solitons transitioning through the body precisely as the movements that are being undertaken: in other words, one's conscious awareness occurs specifically as the articulation between internal sensations and body movements. The transitional speeds at which these movements are undertaken leaves little time for other thoughts to form — a state which seems to oddly preclude the representational thought that is such an essential characteristic for consciousness-of-self, as the intentionalities of imaging consciousness — and so, one is consciously aware as, specifically, the forces being transferred through these differential configurations of the body's muscle/tendon groups, such as constitute the positional variations which make up a taijiquan set.

Thinking As A Sense Of Movement

In this way, solitons can serve proprioceptively as waveform signatures for movement sequences — because they are specific to muscle/tendon groups, and yet are variable as the adjustments articulating changes in body position. Thus, the relationships of physically dimensional specificity that solitons embody have some direct and very interesting consequences:

First, the efficiency of a taijiquan set is such that, at its most extreme degree of practice, the initial force which sets the body in motion can be maintained with minimal effort throughout the set. The force with which one 'throws oneself into' a taijiquan set can be sustained for the duration of the set, with very little additional energy being added or expended.

Second, any additional force being physically added to the body in the course of such activity can easily be absorbed into, and redirected through, the movements being undertaken. This makes taijiquan a characteristically self-defensive martial art: the force of attacks against a practitioner can be redirected back into the attacker, but with a considerable degree of extra force being added.

Third, the muscle/tendon groups are actually being physically animated by the transferential energy of waveform patterns passing through them, rather than simply by intentional thought; and this in turn has two very important consequences:

First, coordinated muscle/tendon activity can be physically induced by transferences of waveforms within the body INSTEAD of by conscious intention;

And second, coordinated muscle/tendon activity can be produced by consciously intending such waveform signatures. Instead of intending to move muscles in a specific way (by thinking of a range of motions to perform, such as lifting an arm to reach an object), the practitioner can instead "think" or "intend" the proprioceptive sensation of a waveform signature and, in doing so, can trigger a specific movement sequence — by directing that physical waveform from the body's ongoing oscillations of movement, out through the appropriate muscle/tendon groups, in a reconfiguration of muscle tensions that is directly coupled to the shape of the soliton inducing the movement being undertaken.

In other words, an experiential familiarity with the sensations of such waveform signatures occurring as solitons — characteristic to specific muscle/tendon groups during specific, coordinated movement patterns — establishes in a very real and very functional way a conscious vocabulary of muscle/tendon activations directly derived from such characteristic waveforms. One does not need to remember and mimic the outer form of such movements when the body remembers these proprioceptive sensations of motion. Instead of 'thinking' to move the body in a certain way, one recalls the proprioceptive sensation of that waveform which characterizes the experience of the movement — and immediately expresses the movement, out of the oscillations already being stored as standing waves within muscle/tendon groups.

We all have the immediate experience of moving our

limbs through muscle contractions which are simply 'thought', with no conscious sense of how these movements are functionally generated. Here, the formation of a specific conscious intention in the form of the remembered sensation of a waveform transference occurring during the practice of a characteristic Taijiquan 'position' is used to reanimate the dynamic form of that positional configuration. Instead of 'thinking' to move the body, one 'thinks' that characteristic waveform as the physical sensation of its experience — which induces the intended motion in the affected muscle/tendon groups.

This is a perfect example of consciousness being experienced precisely as articulations forming between the co-extension of sensory perception and motor reflex activations. What is of particular interest here is that the awareness of such articulations is in itself actively that of consciousness: We are certainly dealing with a definitionally behaviorist-type of “input/output” that would correspond to what we observe of any animal; but, due to the immanent nature in which we directly experience consciousness, we also have the distinct formation of demonstrably discrete elements of conscious awareness — we have the production of conscious states that are persistent and repeatable in their ability to induce specific articulations between proprioceptive sensory perceptions within the body and motor reflex activations that externalize intentional acts, as distinct movements.

What we do not have here is any kind of reflective consciousness-of-self: we do not find any imaging for consciousness, as in first imagining and then mimicking the form of movements to be undertaken; we do not have an ongoing series of reflective “corrections” that align movements to the ideal of a “proper form”; and we do not have any kind of mental check list outlining the proper progression of movements to be sequentially undertaken. Instead, we simply have sensations of the forces being transferred within the body, and the awareness of modulating these forces through adjustments to the ways in which the tensions within muscle-tendon groups configure the body's positions.

In this way, taijiquan can be said to establish articulations characteristic of a co-extension between motor reflex activity and sensory perception. The sensory elements of such articulations are proprioceptively characteristic of muscle/tendon groups; they occur as distinct tonalities of feeling associated with the particularities of each, and, any such groups in general. The motor reflex activations in such articulations are the configurational changes which produce the proprioceptive sensations. The immanent state of these articulations is transcendently apprehended through the solitons they produce, as inductive “signatures” for the initialization parameters that generate specific movements.

We could say the apparitional nature of consciousness is functionally occurring here as articulations which constitute a waveform 'language'; and that such articulations of conscious awareness motivate specific motor reflex activations through proprioceptive instances of sensory perception. That might seem to be a lot to say, but, in a sense we are talking in the same breath about the conscious nature of every animal this world has ever seen;

because we are talking about being conscious of and within the world — without necessarily being distinctly conscious of our own individual existence, as such.

In other words, this is what it is like to be conscious — without necessarily having any sense of self-consciousness.

To repeat this very important point: Practicing an extended "sequence" or "program" of pre-determined movements like taijiquan at such an extreme speed demands a specific way of being conscious. Essentially synonymous with the 'being conscious' of any other wild animal, a simple co-extensive unity of sensory perception and motor reflex activity is achieved. Thought is as spontaneous as is movement; but here, thought is completely given over to the waveform intensities which define the body's motion and which are embodied in a sense of physically oscillating through movement patterns.

In such instances, the unparalleled neural processing abilities of the human brain are completely taken over by the intricacies of orchestrating such complex energy patterns within the body (and immediately assessing movement patterns perceived of the surrounding environment). Consciousness is no longer of a reflective self, but is instead the reflexivity of spontaneously orchestrating variances in the waveform patterns that animate the body: One's self becomes simply the ability to direct the forces which are accumulating and transitioning within one's body, as its movement, in each moment.

This is a state of consciousness which is subjectless. There is no reflective sense of a conceptual self; there is only the experience of waveform patterns animating the body. I would also say this state is in a very real sense "pre-linguistic": It is my experience that the areas of the brain which process speech patterns will not do so when intensely engaged in processing the dynamics of whole body motion. One can speak of such experience, but, not in the moment of being so activity engaged.

At the same time, certain functional characteristics here are proto-linguistic in nature. External stimuli will trigger modifications in the movement patterns practiced as taijiquan, with these modifications consisting of proportional response patterns. Such internal modifications to a taijiquan set seamlessly articulate with changing, external circumstances; and in doing so, they define a dynamic of interaction that is conditional upon the actuality of proximal events. Taijiquan generates a range of waveform patterns within the body, and these patterns can be transformationally adapted to external stimuli.

Such is how I would describe what I have referred to as a conscious state that is not characterized by consciousness-of-self, or by any other form of self reflection beyond the immediacy of an immanent articulation between motor reflex activity and sensory perception. A conscious state in this form functions in a pre-linguistic manner, in that the functional nature of consciousness is not here being determined by patterns of speech. Thought certainly occurs, but, not within the context of a phonetic language.

Articulating Consciousness

I would thus like to propose that the conscious state described above is characteristic of human thought prior to

our developing consciousness-of-self — or even, consciousness-of-consciousness. In this context, thought would instead be the immediacy of an immanent articulation between motor reflex activity and sensory perception. This would be a state of consciousness not characterized by consciousness-of-self, or by any other form of self-reflection. A conscious state in this form functions in a pre-linguistic manner: The generative nature of consciousness is not being determined by patterns of speech, but in articulations between a co-extension of motor reflex activity and sensory perception; and this in turn is capable of producing forms of proto-linguistic functionality arising prior to spoken languages. The differential nature of such articulations, in transferring perception into action, is adequate for the formation of non-verbal linguistic functions — and may even be a necessary precondition for the development of language.

Further, as immediately adjunct to the functional immanences of those non-conscious processes which determine the articulations of which consciousness is formed, such conscious states should at the very least provide some indication of how non-conscious processes are actually and actively experienced as integral for — yet as, of course, “other” to — conscious states. Exploring how articulations of co-extended neural processes may be formative for consciousness itself might also provide insights into how consciousness comes to articulate with itself, in producing a consciousness-of-consciousness and, therefore, the state we most readily associate with conscious awareness: consciousness-of-self.

Taijiquan is a language of body motion which produces conscious states of characteristic variability. In this, a description of experiencing taijiquan is interestingly consistent with Foucault’s description of meditative practice, as thought in motion; and this in turn suggests the possibility that, descriptions of consciousness in terms of articulation and co-extension might remain consistent for descriptions of self-consciousness, where consciousness becomes co-extended with itself to articulate as consciousness-of-self.

Please note: In choosing to describe consciousness in terms of “articulation” and “co-extension”, I am employing these concepts as a matter of what is most properly called “metaphysics” — that is, theory construction. My approach here is a decidedly post-structural one, undertaken with the specific intention of removing from the methodological arrangement of conceptual materials with which I am working, any traces of the value judgements that are too often residual in determinations that are predicated upon hierarchical levels. In this, the core concepts that I am employing serve as the parameters for a form of “survey” through which I can attempt to identify any consistencies that may eventually prove to be indicative of the actual components inherent within the material (a form of image writing used by the First Nations of North America prior to European contact) I am trying to accurately describe and document.

This is a key issue residing at the heart of what is at stake when comparing a theory that describes the materials it encounters in terms of “layers”, and one which works with “articulation” and “co-extension”: Insofar as either

approach will be dedicated toward forming material into an interpretive theoretical structure, it will also necessarily exclude any matters that are not consistent with the base concepts used to structure the interpretive methodology in question. If I start by separating the focus of my research into “layers” or levels, and then work to define each such ‘level’, I am going to have difficulty in integrating each of these separate areas together. If it turns out that the nature of such integrations is essential to the issues I am actively researching, then the theoretical structure that defines my approach will never be able to adequately address the realities I am trying to describe in the course of my work.

On the other hand, if I begin with core concepts that are as neutral as I can manage to make them, and if these concepts are consistent with the situations and matters I am trying to describe, then I will by necessity need to proceed slowly: I will have to investigate thoroughly how information is reconfigured through the use of my new conceptual approach; I will need to meticulously recompose the relational interactions defined through my new approach; and I will have no other option but to follow where the contours of these new arrangements lead, as I trace out the new conceptual configurations revealed through the use of this new interpretive methodology.

This is what makes philosophy a rigorous discipline: the need to continuously start again when new conceptual structures are introduced, and the demand that each concept so formed be tested thoroughly, that it might be shown adequate to the tasks it is employed in addressing.

Perceptions of Conscious Function: A Conceptual Application

Beginning with the aforementioned considerations, it is possible to further extend the approach outlined above through some of the basic theoretical prospects entertained by Gilles Deleuze and Félix Guattari, with regard to their assessments of the interrelationships holding between perceptions, philosophic concepts, and scientific functions:

“The object of science is not concepts but rather functions that are presented as propositions in discursive systems. The elements of functions are called *functives*. A scientific notion is defined not by concepts but by functions or propositions. This is a very complex idea with many aspects, as can be seen already from the use to which it is put by mathematics and biology respectively. Nevertheless, it is this idea of the function which enables the sciences to reflect and communicate. Science does not need philosophy for these tasks. On the other hand, when an object — a geometrical space, for example — is scientifically constructed by functions, its philosophical concept, which is by no means given in the function, must still be discovered. Furthermore, a concept may take as its components the functives of any possible function without thereby having the least scientific value, but with the aim of marking the differences in kind between concepts and functions [Deleuze and Guattari, *What Is Philosophy?*, pg. 117].”

The distinction between philosophic concepts and

scientific functives is an important one, because it provides the opportunity to comparatively assess the roles played by concepts — and to do this in contrast to a relative “other” that is more closely affiliated with scientific frameworks. Indeed, it seems probable that this distinction traces back to one proposed by Kant, which differentiates between the synthetic nature of concepts (as generalized composites which are created from specific instances of occurrence individually localized in time and space), and, those schematic protocols describing productive practices that yield specific and singular instances as their outcome. Note that, according to Kant, ‘the synthetic’ is conditioned by ‘the sublime’ (which attends shifts of differences-in-kind); and ‘the schematic’ is attended by ‘the symbolic’ (which will have implications for grammatological functions).

In addition to this fundamental distinction, Deleuze and Guattari also engage in observations concerning the ways in which perceptions appear within consciousness:

“We paint, sculpt, compose, and write with sensations. We paint, sculpt, compose, and write sensations. As percepts, sensations are not perceptions referring to an object (reference): if they resemble something it is with a resemblance produced with their own methods; and the smile on the canvas is made solely with colors, lines, shadow, and light . . . How could the sensation be preserved without a material capable of lasting? And however short the time it lasts, this time is considered as a duration. We will see how the plane of the material ascends irresistibly and invades the plane of composition of the sensations themselves to the point of being part of them or indiscernible from them . . . What is preserved by right is not the material, which constitutes only the de facto condition, but, insofar as this condition is satisfied (that is, that canvas, color, or stone does not crumble into dust), it is the percept or affect that is preserved in itself [Deleuze and Guattari, *What Is Philosophy?*, pg. 166].”

In this, I must observe here the emergence of what is at least a partial philosophic lacuna, as revealed in a potential pairing of percepts and concepts: functives appear to lack a correlated category of distinct inquiry. Extending prior assessments of consciousness as articulated co-extension, a logical candidate to pair with functives emerges from motor reflex activations; and this might well be termed “motives”. If consciousness could be described as the articulated co-extension of percepts and motives, then inquiries into the nature attending consciousness-of-consciousness might fruitfully proceed by assessing how concepts and functives articulate — an approach which is entirely consistent with how grammatological functions define conceptual grouping patterns within the form of image writing I have been documenting.

It is of course not entirely accurate to claim that what might be termed “motives” are excluded from the philosophic inquiries undertaken by Gilles Deleuze and Félix Guattari: In fact, one of the most innovative approaches pioneered by these two post-structural philosophers was to reassess “the unconscious” in terms of

desire-as-production (rather than as a Freudian “lack”); and in this, certainly, the motivational nature of non-conscious neural processes is brought to the forefront of their philosophic inquiries.

Applying An Interpretive Methodology (with reference to images found on the final page)

Now we are in a position to ask: What does it mean to define an interpretive methodology in such a way as to determine consciousness in terms of articulated co-extension? What are the immediate implications that proceed here from what is basically a conceptual maneuver? In answer to these question, I submit: Through applying such a methodology in analyzing an example of the previously undocumented image writing I have been systematically researching, a clearer understanding of what is at stake can emerge.

Any pixel-based image that exists can be converted into frequency-based space using a technique called a Fast Fourier Transform (FFT). Once converted into frequency space, an image can be edited by selectively masking for specific spatial frequencies, which are retained to the exclusion of any others once the image is converted back into pixel-based space. Applying this technique to examples of image writing facilitates the extraction of specific spatial frequencies that are characteristic for selected visual textures, image elements, and grouping patterns of image areas; and Dr. John Russ explains quite well the process for working with the power spectrum produced using an FFT:

“The spacing of the features that produce the point in the power spectrum is simply the width of the image (e.g. 256 pixels in the example, times whatever calibration applies) divided by the distance in pixels from the origin to the center of the peak in the power spectrum [Russ, pg. 345].”

Simply measure the characteristic size in pixels for any spatial feature in an image; divide this value into the actual size in pixels of the entire image; and, the result will be the distance in pixels from the center of the FFT conversion for *all* features in the image of that specific spatial frequency. Masking for that value in the FFT conversion will return *only* those feature of that specific spatial frequency when the image is converted back into pixel-based space.

Using software for FFT conversions created as a Photoshop plug-in by Chris Russ of *Reindeer Graphics*, I decided to explore how a possible co-extension between motor reflex activations and sensory perception might be articulated in an example of image writing I have that originated with the Lenape First Nation from the area of New York City. This example presents an overt visual context that corresponds to the pattern of tree trunks in an old growth forest; and this virtual landscape in turn is populated with a wide range of faces and silhouettes, both animal and human — all of which would correspond to conceptual composites, as produced from visual schema and grammatological functionalities within this form of image writing. Starting from this context, and using the width measurement of a virtual tree trunk as a baseline (providing some indication of the intentional focus for whomever created this example of image writing), I then

generated ranges of spatial frequencies I could selectively edit to extract from Fast Fourier Transforms, by converting my initial baseline measurement using values found to be preferential for visual and tactile components in the paper *Fractal-Scaling Properties as Aesthetic Primitives in Vision and Touch*:

“Here, we explore the aesthetic qualities related to the fractal-scaling characteristics in a variety of visual and tactile surfaces.”

“Importantly, unlike many visual and tactile objects in conventional psychophysics, fractals are non-Euclidian and defined as shapes “made of parts similar to the whole in some way” (Mandelbrot 1977). Fractal-scaling properties reflect the relative structural density at coarse and fine spatial scales thus capturing the relational structural qualities of both natural and synthetic patterns, images and surfaces that they are associated with.”

“One commonly used method of representing the distance-dependent variations in the intensity of individual points in natural scenes is through the shape of their spatial frequency amplitude spectra [Viengkham *et al*, pg. 2].”

Fractal values are of particular use when dealing with this form of image writing, because the process of inscribing images into the mediating surface renders that surface as experientially greater than simply two dimensions, but, less than a full three dimensions as inclusive of depth: thus, a fractal surface of partial dimensionality (greater than two dimensions, but less than three) results.

From the values I generated in this way, I selected those which overlapped as adjunct between visual and tactile spatial frequencies. Because the tactile frequencies were expressed as characteristic of a volume, I subtracted the value of one full dimension from these to bring them in accordance with the dimensionality of a surface. I then excluded these adjunct spatial frequency values, for touch and sight, from the image being processed; and the result highlights areas which engaged neither a tactile nor a visual preference during the production of the spatial frequencies that were inscribed upon this example of image writing.

It would seem, then, that the white areas of this final edit’s rendering would trace the pattern of rotations this stone underwent in the hand of the person inscribing images into its surface: that is, the areas that were not preferentially worked upon in physically modifying the stone’s surface with image composites.

If this assessment is accurate, then it provides an elegant illustration for the possibility that conscious intention can be demonstrated for this form of image writing as the articulation of co-extended motor reflex activations (tactile preferences, from the physical inscription of images) and sensory perception (visual preferences, for the images created). What is particularly compelling in this interpretation is that, as pertinent as the information extracted might be, it is in no way obtainable through any manner of analysis which proceeds through an inquiry into “levels” or “layers” of consciousness. This is a trace of conscious intent extracted from across what are no doubt

uncounted millennia of time, which is obtainable exclusively from within an interpretive methodology that is predicated upon the concept of consciousness as the articulated co-extension of motor reflex activation and sensory perception.

Moreover, the application of this interpretive methodology has positioned us in a very interesting context. We know that the fractal nature of the mediating substrate is directly linked with the partiality of the surface: that, through inscription, this is partially a depth as well as a surface. But we also know that there is a necessary linkage between the nature of the mediating surface, and, the percepts that it sustains:

“Sensation is not realized in the material without the material passing completely into the sensation, into the percept or affect. All the material becomes expressive. It is the affect that is metallic, crystalline, stony, and so on; and the sensation is not colored but, as Cézanne said, coloring.”

“By means of the material, the aim of art is to wrest the percept from perceptions of objects and the states of a perceiving subject, to wrest the affect from affections as the transition from one state to another: to extract a block of sensations, a pure being of sensations [Deleuze and Guattari, *What Is Philosophy?*, pgs. 166–167].”

Since the material substrates utilized in creating this form of image writing are compositionally a random assortment of metrical properties (differences-in-degree), they constitute a chaotic assemblage; and as a sectioning of the chaotic, engaging with these material substrates in order to create visual percepts also entails the creation of conceptual structures, by virtue of the consistencies imparted into these chaotic metrical differences:

“The plane of immanence is like a section of chaos and acts like a sieve. In fact, chaos is characterized less by the absence of determinations than by the infinite speed with which they take shape and vanish. This is not a movement from one determination to the other but, on the contrary, the impossibility of a connection between them, since one does not appear without the other having already disappeared, and one appears as disappearance when the other disappears as outline. Chaos is not an inert or stationary state, nor is it a chance mixture. Chaos makes chaotic and undoes every consistency in the infinite. The problem of philosophy is to acquire a consistency without losing the infinite into which thought plunges (in this respect chaos has as much a mental as a physical existence). *To give consistency without losing anything of the infinite* is very different from the problem of science, which seeks to provide chaos with reference points, on condition of renouncing infinite movements and speeds and of carrying out a limitation of speed first of all. Light, or the relative horizon, is primary in science. Philosophy, on the other hand, proceeds by presupposing or by instituting the plane of immanence: it is the plane’s variable *curves* that

retain the infinite movements that turn back on themselves in incessant exchange, but which also continually free other movements which are retained. The concepts can then mark out the intensive ordinates of these infinite movements, as movements which are themselves finite which form, at infinite speed, variable *contours* inscribed on the plane. By making a section of chaos, the plane of immanence requires a creation of concepts [Deleuze and Guattari, *What Is Philosophy?*, pg. 42].”

This observations provide us with a directly derivational linkage between the material substrates utilized (as being randomly chaotic), the percepts inscribed upon them (as necessarily retaining something of the material substrate’s chaotic nature), and the conceptual compositions that result (as grouping patterns that each coalesce as others dissolve). In exploring the articulated co-extension of motor reflex activations and sensory perception in the particular example being assessed here, we also noted that the nature of this articulation (as indicative of conscious intention) seems to implicated a distinct aspect of production: the rotation of the object being inscribed by the hands re-marking its surface. Relative to conscious awareness, rotation plays a very important role that seems to define the distinction between perception and memory:

“Our study found that the brain avoids interference between sensory and memory representations by rotating the memory representation to become orthogonal to incoming sensory inputs.

“We found that the brain avoids such interference by rotating sensory information into a memory subspace. In our experiments, the A/X memory encoding existed on day 1, but became orthogonal to the C/C* sensory axis with experience. Thus, despite the associative learning between A/X and C/C* sensory inputs, new stimulus inputs did not interfere with the memory of the context. These population dynamics, which we observed in the auditory cortex of mice performing an unsupervised learning paradigm, are surprisingly similar to those found in the prefrontal cortex of primates performing working-memory tasks [Libby *et al*, pg.11].”

Not to confuse or conflate the physical rotations of a rock by a hand, with neural shifts in patterns of activation that distinguish memories from perceptions; but rather, to simply narrow the focus of inquiry undertaken here: If we identify grammatological functions as constituting compositional parameters for the grouping patterns which define this form of image writing, it seems reasonable to at least inquire as to the role that “motives” could play relative to these “functives” (given that the roles played by percepts and concepts have already been localized). We might begin to examine linguistic aspects characteristically attributable to memory, such as a “narrative carriage” which would provide ‘the possibility of connectivity’ (as otherwise precluded by the chaotic) — what Foucault might well describe as ‘the motion of thought’ — that might be found in physical traces of movement patterns (such as rotations)

found within this form of image writing.

Once again, the possibility for a very tangible approach toward defining how this form of image writing functions emerges from a consideration of consciousness as articulated co-extension — an interpretive methodology which is quickly establishing its worth, and that warrants further inquiry.

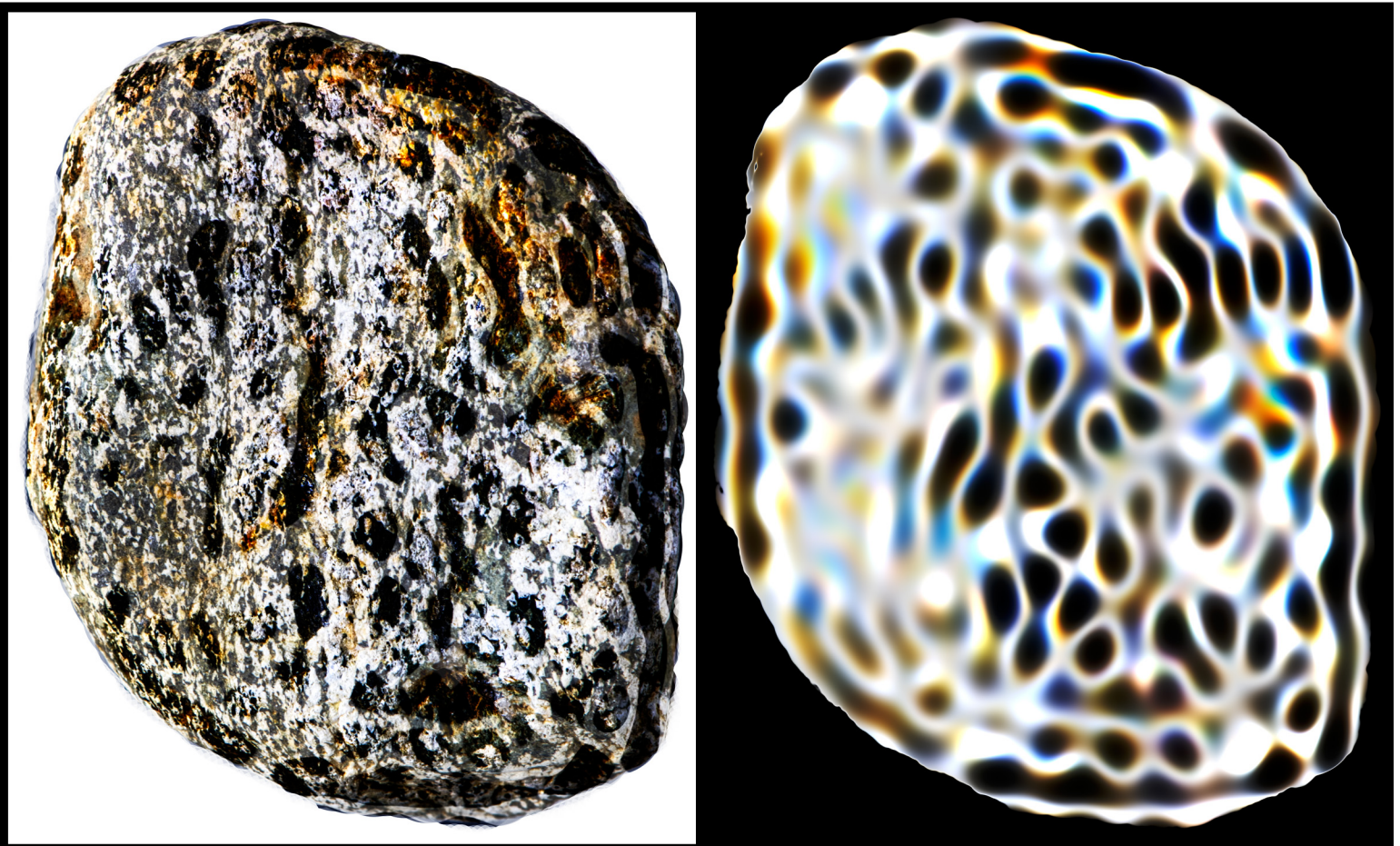
“The first aspect of the haptic, smooth space of close vision is that its orientations, landmarks, and linkages are in continuous variation; it operates step by step . . . There is no visual model for points of reference that would make them interchangeable and unite them in an inertial class assignable to an immediate outside observer. On the contrary, they are tied to any number of observers, who may be qualified as “monads” but are instead *nomads* entertaining tactile relations among themselves . . . These questions of orientation, location, and linkage enter into play in the most famous works of nomad art: the twisted animals have no land beneath them; the ground constantly changes direction, as in aerial acrobatics; the paws point in the opposite direction from the head. the hind part of the body is turned upside down . . . the whole and the parts give the eye that beholds them a function that is haptic rather than optical. This is an animality that can be seen only by touching it with one's mind, but without the mind becoming a finger, not even by way of the eye [Deleuze & Guattari, *A Thousand Plateaus*, pgs. 493-494].”

Works Cited:

- Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus*. Translated by Brian Massumi; U. of Minnesota Press, 1983.
- Deleuze, Gilles. *Pure Immanence: Essays on a life*. Translated by Anne Boyman; New York: Zone Books; 2005.
- Deleuze, Gilles: *Sur Kant*. Translated by Melissa McMahan, (<https://www.webdeleuze.com/cours/kant>).
- Deleuze, Gilles and Félix Guattari. *What Is Philosophy?* Translated by Hugh Tomlinson and Graham Burchell New York, NY: Columbia University Press; 1994.
- Foucault, Michel, and Jean Khalfa (editor). *My Body, This Paper, This Fire*; Appendix II in *History of Madness*. Routledge, 2009 (translated by Jonathan Murphy and Jean Khalfa).
- Goodale, Melvyn A., and A. D. Milner. *Sight Unseen: An Exploration of Conscious and Unconscious Vision*. Oxford University Press, 2006.
- Libby, A., Buschman, T.J. *Rotational dynamics reduce interference between sensory and memory representations*. *Nat Neurosci* (2021). <https://doi.org/10.1038/s41593-021-00821-9>
- Russ, John C. *The Image Processing Handbook*. CRC/Taylor and Francis, 2006.
- Viengkham, C., Isherwood, Z. & Spehar, B. *Fractal-Scaling Properties as Aesthetic Primitives in Vision and Touch*. *Axiomathes* (2019). <https://doi.org/10.1007/s10516-019-09444-z>



Top Left: A selection of tree trunks during winter in the last remaining old growth forest on the island of Manhattan (Inwood Hill Park).
Top Right: An example of anametric image writing, created by the Lenape First Nation on the island of Mannahatta (Manhattan). The stone utilized for this example appears to have been selected due to the match between its natural grain pattern, and the environmental backdrop of the original forest that surrounded the Lenape when this example of image writing was created, in the time prior to initial European contact.



Left: Original image (enhanced detail). *Right:* Selecting for fractal dimensions perceived as favorable in vision (as for the production of images), and, fractal dimensions perceived as favorable to touch (as for the techniques of production used in working the stone). The white areas are those which were not selected for either fractal preference; and these differential exclusions may indicate how the stone was turned in the hand of the person inscribing images upon it.