
The Cognitive Unconscious and Embodied Implicit Ways of Native Knowing

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ABSTRACT: In this paper, I address only one small parallel between one subsection of Western epistemology and cognitive theory and Native American epistemology. I draw the connection between the recent theories of embodied cognition and distinctive Native modes of embodied implicit procedural knowing, such as blood memory, vision questions, and non-binary logical systems. My reason for doing so is twofold. First, I show how these distinctive ways of knowing within Native worldviews are not mere mystical claims that can be cast aside in favor of more ostensibly “rational” knowing practices. To do so, I utilized Mark Johnson’s account of the cognitive unconscious to demonstrate how and that Native embodied knowing practices and knowledge sources are easily explicable when examined through a phenomenological cognitive lens. Second, I highlight one small respect in which Native epistemologies are conceived of procedurally. Embodied forms of knowing are merely one facet of the procedural performative nature of Native American epistemology but they are highly demonstrative of the fact that procedural ways of knowing—knowing-how—account for deeply implicit ways of knowing that are lacking from other procedural knowledge accounts that are often hamstrung without such an accompanying account of knowing-how beyond counterfactual knowledge.

IN RECENT YEARS, THERE HAS been an upsurge in the developments and analyses of Native American and other Indigenous ways of knowing. While many Western applied ethicists are becoming more aware of and familiar with these types of knowing in relation to environmental and food concerns, most Western philosophers continue to remain in the dark with respect to Native and other

Indigenous epistemology/epistemologies. Historically, and even today, many philosophers regard Native American ways of knowing as mysticism and typically relegate Native philosophies to the domain of religious thought. However, as many Native philosophers and theorists show, Native philosophies constitute complete systemic frameworks. The lack of acquaintance with Native philosophical frameworks by mainstream Western Philosophy results in a number of substantive intellectual and political drawbacks. First, and most recognizably, the exclusion—or even recognition of—Native American and other Indigenous philosophies results in the continued exclusion of Native and Indigenous peoples from the discipline itself; if one is told, as many often are, that there is no such thing as Native philosophy, those who belong to or descend from these worldviews will find no place to call home within Philosophy. Second, there is an insidious, lurking setback of expanding the discipline and canon, which inadvertently sustains a shortsighted perspective on how the world and humanity is conceived; and, therefore, there is a myopic approach to conceiving of the possibilities of how the world and humanity can be construed. In the absence of countering metaphysical and epistemic models about the world, Western philosophy asserts itself as the dominant model without ever exposing itself to critique or comparison from outside its own purview. Third, for some Western scholars working on either the margins or the forefronts of philosophical movements, an ignorance of Native and other Indigenous worldviews and their concomitant philosophies generates unforeseen disadvantages to their own work. There are numerous schools and camps within both marginal and mainstream philosophy today that would greatly benefit from the ideas of Native and Indigenous thinkers. Or rather, the work of some particular Western philosophers could be greatly enhanced and substantiated were they to give uptake to and incorporate aspects of Native philosophy that can provide them the sorts of conceptual resources that those theorists struggle to make sense of in the absence of similar conceptions within Western Philosophy. Certainly, these claims hold true for all marginalized areas of Philosophy, but the continued explicit rejection of the existence of Native philosophy as Philosophy makes the matter somewhat distinctive and urgent.

In this paper, I address only one small parallel between one subsection of Western epistemology and cognitive theory and Native American epistemology. I draw the connection between the recent theories of embodied cognition and distinctive Native modes of embodied implicit procedural knowing, such as blood memory, vision questions, and non-binary logical systems. My reason for doing so is twofold. First, I show how these distinctive ways of knowing within Native worldviews are not mere mystical claims that can be cast aside in favor of more ostensibly “rational” knowing practices. To do so, I utilized Mark Johnson’s account of the cognitive unconscious to demonstrate how and that Native embodied knowing practices and knowledge sources are easily explicable when examined through a phenomenological cognitive lens. But let me emphasize, however, that my use of Johnson’s framework is not to legitimate such ways of knowing by virtue of the fact that they can be translated into a Western model. My point is rather the inverse—that Western cognitive theories are now coming to understand embodied forms of knowing that have always been a mainstay in Native epistemologies. Second, I

highlight one small respect in which Native epistemologies are conceived of procedurally. Embodied forms of knowing are merely one facet of the procedural performative nature of Native American epistemology but they are highly demonstrative of the fact that procedural ways of knowing—knowing-how—account for deeply implicit ways of knowing that are lacking from other procedural knowledge accounts that are often hamstrung without such an accompanying account of knowing-how beyond counterfactual knowledge. Certainly, many feminist analyses of procedural embodied knowledge could greatly benefit from Native and other Indigenous insights into deep embodied knowledge²².

Also, I want to highlight that I do use the term Native American specifically because much of the philosophy that I draw on and incorporate is done by Native American philosophers. However, I deploy the term Native generally to incorporate other Native North Americans; many theorists that I cite use the term generally—which I typically follow—though other Native North American theorists use the term Aboriginal or Indigenous. Moreover, I frequently use the pairing of Native and Indigenous together to remind the reader that there is relevant overlap between Native American/American Indian (as conceived of specifically as a US identification), Native or Aboriginal, and other Indigenous groups, such as Native South Americans, Indigenous Africans, or Indigenous Pacific Islanders.

I divide this paper into three sections. In section one, I offer a very short overview of the aspects of Native epistemology that capture its procedural structure. This section is not to be taken as the whole of Native and Indigenous epistemology, much as Western philosophical arguments must delimit their range to that which is most salient to the matter at hand. I offer this section as limited background for those who have not encountered Native epistemology before. In section two, I give an extensive overview of Johnson's account of the cognitive unconscious. While my aim is to prioritize the Native epistemological argument, I invest in a substantial amount of time outlining and explaining Johnson's frame. For those who are more familiar with Native philosophy and less familiar with cognitive theory, Johnson's analysis can be a little overwhelming the first time around. I aim to clarify and give examples to help those who are being newly introduced to the material so that my claims regarding Native embodied modes of knowing will be easier to follow. In section three, I introduce three embodied sources of knowledge within Native epistemology that are most frequently dismissed by Western scholars. I first apply the analysis of the cognitive unconscious to these modes of knowing to demonstrate how they operate phenomenologically. Next, I proffer a few arguments to clarify how embodied implicit ways of knowing are, in effect, procedural ways of knowing—which fleshes out that respect of Native procedural performative epistemology outlined in section one. As Brian Burkhardt posits quite succinctly:

²² Vrinda Dalmiya and Linda Alcoff. "Are 'Old Wives Tales' Justified? ". In *Feminist Epistemologies*. Linda Alcoff and Elizabeth Potter, eds. New York: Routledge Press, 1993.

...knowledge in experience is the kind of knowledge we carry with us. This is the kind of knowledge that allows us to function in the world, to carry on our daily tasks, to live our lives. This knowledge is embodied knowledge (2004, 20).

Native Epistemology as Procedural

In a Native or Indigenous worldview, the craft of philosophy is seen as always a creative act. To have knowledge, then, requires us to interact with others—to tell them the stories of some thing or experience—and then to ask them for their stories so that we each may develop a broader understanding of that thing or experience. Marlene Castellano (2000) adroitly expounds on what multiplicity within knowing entails. She explains:

The personal nature of knowledge means that disparate and even contradictory perceptions can be accepted as valid because they are unique to the person...people do not contest with one another to establish who is correct—who has the ‘truth’. Aboriginal societies make a distinction between perceptions, which are personal, and wisdom, which has social validity and can serve as a basis for common action. Knowledge is validated through collective analysis and consensus building (26).

Consequently, knowledge exists for the purpose of being shared; it is a social product yielded through social interactions and practices for the purpose of action.

D’Arcy Rheault explains that knowing emerges through subjective processes aiming at theoretical and practical meaning and thus Truth is made evident through our actions (1999, 11). And Gregory Cajete describes Indigenous knowing as a creative, participatory process (2000, 5). Thus, Native American epistemology culminates in an analytic procedural—as opposed to propositional—analysis of knowledge and Truth (Norton-Smith 2010). According to Thomas Norton-Smith, Truth is defined by the respectful successful performance of some action to achieve some goal. Knowledge consists in knowing *how* to P, not *that* P. One typically cannot know how to P without “knowing that P” but one can easily “know that P” without knowing how to P, and thus makes a propositional construal of knowledge and Truth relatively useless in the practical sense on which Native epistemology focuses. Actions are guided by information and facts, which are a function of accuracy or correctness. Truth, on the other hand, is an assignation of action and only those actions that satisfy the constraining normative criteria, which function as the basic truth conditions for the Truth of performance. Norton-Smith explains that it is perfectly consistent to admit that you do not know whether a story is factual but that you also recognize that telling the story can successfully achieve its goal of conveying the sanctity and symbolism of the target in a respectful manner and therefore be True (68). Furthermore, knowledge exists both at the individual and the collective level.

Some knowledge that affects the community, either in terms of its goals and commitments or its histories, psychologies, and politics, cannot be known by individuals alone and members of the community can know those truths only as a collective.

Within the Native worldview, it is processes that achieve whatever goal is desired (Gross 2014, 107). Actions, unless involuntary or nonconscious, are never without purpose. If I do a handstand, I have as my objective practicing handstands, curing boredom, and/or showing off. I do not dance, cook, chat, explore, speak, or scratch without some aim to satisfy in mind. And when I engage in action, I already have propositional content regarding the action *and* the conditions for goal satisfaction or else I could not *do* the action. I could not practice handstands if I did not know what it was to do a handstand or what it was to practice. And practicing handstands vs. attempting handstands both require knowledge of handstands but the goal of attempting and the goal of practicing have distinct satisficing criteria and ends. Propositional content is never employed outside of action insofar as it is utilized to, again, achieve some purpose.²³ Action is required to transmit propositional content. If I tell you a story, I can have as my objective entertaining you, entertaining myself, and/or providing guidance. If I tell you the earth is flat, I have as my objective that of informing the listener, countering, tricking, and/or posturing. Even in the instance in which propositional content is merely presented in some form, as in a book, it does so *qua* action. The book was written by someone—someone told that story of history or science—and then someone reads it (hopefully!).

Native North American languages largely give rise to this praxis-based epistemology. Generally speaking, Native languages are verb-based. Conjugated verbs can account for the vast majority of the content of European grammatical components. Subjects are within the verb. In this sense, the subject is a part of the action—not merely grammatically but also ontologically. And similarly so for adjectives, which are built into the verbs. Native and many other Indigenous languages identify objects and concepts according to their relationship to other things in an active process (Battiste and Youngblood Henderson 2000, 50). Lawrence Gross explains the distinction between English “the book is blue” and Anishinaabe “the book blues” (2014, 112). So from the Native epistemological point of view, the relation between blueness and the book is only True if the book successfully achieves its goal of, well, blueing²⁴—that is, if it displays and is perceived as blue to one with whom it is in relation; for why else would it blue if it did not intend to be seen by you as blue? It is certainly true that agents may engage in actions for purposes other than those which the receiver interprets. There remains some controversy on what color

²³ See also: Gallese and Lakoff (2005).

²⁴ While I will not get in to specificities here, I should point out, and it is important to this line of thought, that the book could not blue in the absence of a perceiver. Colors only happen as exist as a property of our body’s interactions with some thing. Without our color cones, there would be no colors since what exists outside of our color cones are merely untranslated light waves. For more, see: Lakoff and Johnson (1999).

that silly white and gold? black and blue? dress “*really*” was. I suppose we would know the truth of the matter if we knew the goal of the dress maker (or even the dress!). Maybe the dress maker had no goal aside from confusing observers. And in that case, claims that the dress was gold OR that the dress was blue would both be False because the aim was never for us to really know in the first place.²⁵ Or, rather, in all actuality, both claims would actually be a little bit True. In English, the phrase “actions speak louder than words” hints at the idea that Truth cannot be strictly about propositions of the subject-predicate form; this is the one idea that I often use as an example for my students to clarify how Truth is a measure of an action rather than a statement. And because many Native languages are largely verb-based, this colloquium would be trivially true insofar as Truth attributions, and the propositions regarding Truth, are simply linguistic markers for the actions themselves rather than something else entirely.

Native epistemology is not procedural merely because its language is verb-based; its language is verb-based because the worldview is fundamentally grounded in dynamicism²⁶. This dynamicism stems from two sources. First, dynamicism is inherent in the foundational principles of Native metaphysics, science, and epistemology. This is because the Native worldview posits a creative and creativity inducing energy and chaos that orders the universe, which is always in states of flux and that proceeds through moments of balance and harmony that are established through the participatory activities and actions of persons (Cajete 2000; Welch 2017). Cajete sagely explains that:

Native science [, which can be used interchangeably with knowledge,] continually relates to and speaks of the world as full of *active* entities with which people engage. To our sensing bodies, all things are active. Therefore, Native languages are verb based, and the words that describe the world emerge directly from actively perceived experience. In a sense, language “*choreographs*” and/or facilitates the continual orientation of Native thought and perception toward active participation, active imagination, and active engagement with all that makes up natural reality.... (Cajete 2004, 27, italics mine)

From this one can see that the second respect in which Native epistemology is dynamic ensues from its phenomenological nature. The nature of nature, the nature of our bodies, and the nature of knowing as sensed and sensing active entities accentuates the extent through which our lived bodies are vessels of knowing. Knowing always happens from and within the body and the things that we know

²⁵ If you were on another planet and out of the dress sensation loop (or you just weren’t born by the time this was written), see: <https://www.wired.com/2015/02/science-one-agrees-color-dress/>

²⁶ For further clarification of Native metaphysics and ontology, see: Cajete 2000; Fixico 2003; Gross 2014; Norton-Smith 2010; Peat 2002; Welch 2017.

emerge from the ways in which we participate as embodied beings with nature and with others.²⁷ Moreover, knowing and knowledge result from our actions and our doings, which always connect with our phenomenological performances and interactions. The nature of verb-based languages is to purposefully capture the dynamicism of knowing and Truth by linking all ideas, concepts, objects, and persons as being in active processes of reciprocity. Battiste and Youngblood Henderson sagaciously jibe that a noun-based language is grounded in artificial ideas about the world that “proceed from mastery to enslavement” (2000, 73).

As one can probably tell at this point, an analysis of Native epistemology must extend beyond narrowly conceived analyses of procedural knowledge as consisting of mere know-how.²⁸ It must account for the active participation and creativity in the doing that itself engenders knowing, coming to know, and sharing what one knows. The centrality of phenomenological embodiment, both in terms of our perceptive and cognitive capacities being dependent upon our bodies and also in terms of our lived experience to knowing, shifts the paradigm of knowing entirely out of the Western epistemological obsession between knowing-that and knowing-how. Ultimately, Western epistemology is historically only concerned with this debate insofar as it is concerned with the nature and truth of propositions and the inquiry into knowing how is really only an extension of the need to convert knowing through action into knowledge claims. When I use the term procedural, and I suspect this pertains to Norton-Smith’s analysis as well, I mean something much broader than the concept as it is denoted within the Western paradigm; I do not deploy the term to account only for skill, though that is certainly a major, explicit way of knowing how to know. I use the term procedural to capture and encompass the very vast range of actions and activities, both individually and in relations, that persons enact and explore in order to come to know through their bodies and through others and the world. Knowing within the Native American framework—as well as many other Indigenous epistemologies—dives much deeper into the question of *how* without any ulterior motive of eventually tracing itself back to questions regarding *that*.

One markedly distinctive aspect of Native epistemology that stems from the experiential and procedural foundations is its emphasis on what Willie Ermine terms the “inscape” (2000). Because knowledge is phenomenologically embodied and praxis-centered, it is intuitive and largely implicit insofar as the knowledge of knowing-how resides in the subjective, knowing body and is a well from which to draw understanding. The inscape is an inner universe of being within each person that is synonymous with the spirt, self, and being (103). People come to have knowledge by exploring the inscape through processes of reflection, introspection, and self-actualization that can yield deeper insight on existence and the world (*ibid*). Ermine explains that knowledge that comes from the inner space gives rise to a subjective

²⁷ An analysis of perception itself as an action, and a particularly participatory action, is fleshed out in Noë 2006.

²⁸ For further related material on the role of the success criterion for procedural knowledge in Western epistemology, see: Carr (1979; 1981); Hawley (2003); Hoffman et al. (1987); Ryle (1945–1946); Wallis (2008).

world-view that then maps back onto the external world for profound understanding (108). He uses, as an example, the Cree word *mamtowisowin* to demonstrate the centrality of praxes and embodiment to knowledge. This concept signifies one's capability of tapping into the inner space by capturing one's capacity to be creative and one's capacity to be or do anything (ibid). It is not a marker of the self; it marks how one is in constant connection with the happenings of the world and thus the external world manifests the creative force in the context of the knower (ibid). Thus, it is important to recognize the importance of phenomenological embodiment at the cognitive level for Native American ways of knowing.²⁹

The Cognitive Unconscious

Most simply, knowledge is constituted by meaning. That is, we have knowledge of the world as a result of determining what objects and relations signify for the kinds of beings we are, what others intend (or not) when they interact with us, and how our encounters with and in experiences of our environment bring about or are consequent of similar past or future encounters. Knowledge is a product of our active and creative worldmaking machinations at the cognitive level. Meaning imbues all of our experiences but it is not engendered *ex nihilo* or *sui genesis*; it emerges at the cognitive level in the form of connections that we ascertain and draw between things and events, which get mapped into our neural connections as patterns through repetition of significance to us. Our experience is rich and we go about forging our path in the world by recognizing distinctions within the "flow of our experience" and then mark them for use in understanding and transforming our experiences (Johnson 1987, 88, 89).

Cognitive functions derive the intelligibility of conceptualizations for the purpose of worldmaking via innovative imaginative structuring tied directly to our subjective experience. That is, meaning is not independent of us—it is not out in the world whether we are present or not, nor is it in some "mind" that exists independent of our relations and experiences. There are a few mundane but strikingly obvious examples of how meaning does not exist outside of us and our experience. One example would be that technology has no meaning for most of the world's persons. Certainly, humans, apes, dolphins, elephants, and many pigs have found their way to being amused by gadgets but most of our other-than-human neighbors have no use for touch screens. This does not indicate that there is meaning in these objects but that these other-than-human persons are merely insufficiently advanced to appreciate it; it means technology literally has no meaning for those kinds of persons because those persons have no need for Tinder or selfies. And in a dystopian world absent electricity-like forms of power, one's most beloved smart phone would have no meaning at all anymore—it would be abandoned entirely as a nonentity unless one chose to shove it under a wobbly table to create symmetrical balance. In this instance,

²⁹ I would like to point out that contemporary embodied cognitive science stems from pragmatist philosophy (Johnson 2007), which itself has been argued to stem from Native philosophy (Pratt 2002).

its meaning would be entirely different from what it was and not much different from a chunk of wood. On the up side, while folks would have to forgo their swiping and GPSing and gaming and texting, the “block of phone” would have meaning that could be shared with plenty of other kinds of persons, especially Beaver who always needs support for her dams. Similarly, we can see how meaning does not naturally and automatically inhere in objects when we go through our junk drawers. How many times have we pulled out some doodad, confused of even what it could be, what it could be for, why it is even there, and then simply tossed it in the trash as if it ought not to have existed in the first place (ok, none of us actually ever throws that stuff out because just maybe....)? We create meaning and attribute meaning to objects and relations so that we can make sense of our lived experience.

We, ourselves, do not even exist naturally in the world as subjects over objects; we create this relation (20). This can be seen when we compare the Native American worldview to the Western worldview. In the Western sense, as follows from foundational binary logic, human subjects exist over everything else—objects. Alternatively, in the Native American worldview, as follows from the non-binary logic, most of the inhabitants of the world are subjects and very few things exist sans spirit, soul, energy, agency, or relation. One worldview envisions itself in perpetual hierarchical relations through which as much domination as possible may and must be perpetrated. The other abjures hierarchies and recognizes agency in all beings who play a role in the continuation and sustainment of the universe (regardless of human participation). We create, and thus are, all of our relations.

This is but one respect in which meaning is relational. There are two other manners in which meaning is relational. Native American ways of knowing maintain that the purpose of knowledge and Truth is to establish harmony between ourselves and our environment for the purpose of traveling the right path. This is certainly an ethical claim but there is a deeper, yet simpler, normative way in which this use of meaning for harmony is relational—pragmatically. And this relationship between meaning and harmony obtains within naturalistic, embodied theories of meaning. According to Antonio Damasio (1994), meaning is generated and bestowed by beings like us for the purpose of creating and sustaining harmony. This approach, which he terms the balanced equilibrium theory, posits that all meaning we establish consequent of the relations we deem relevant to our experience and all of the actions that we engage vis-à-vis this meaning serves one purpose: to aim to function well by instituting harmony, or avoiding disharmony, between ourselves and our environment. Second, but less rousing, is the obvious claim that meaning is necessarily social and cultural—the meaning of something must be shared at the ground level of recognition for that thing to be meaningful. If meaning arises as a mode through which to function well in our environment, communicative practices and coordinated action with others will be requisite. Meaning will motivate linguistic practices, concepts, and social structures and practices so that we may make sense of our experiences with, of, and in the world.

But the question becomes: if meaning does not extend from an independent mind or exist objectively in the world, where must it come from? For both Native American philosophy and embodied cognitive theory, meaning is grounded in

corporeality. According to embodied cognitive theory, meaning is phenomenological and stems from embodiment in that it comes together for us through nonconscious and mostly unaware bodily perceptions of space, movement, and environmental qualities that constitute our experiences (Johnson 1987; 2007). The very fact that we live on a planet with gravity gives rise to a vast amount of meaning and knowledge regarding ourselves and others that would never crop up on planets lacking gravitational pulls. Movement, specifically, grounds our ongoing connection to and interaction with others and the world; it is what keeps us in touch with the world (Johnson 1987, 20). We wade through creeks full of algae and fish for fun or for hygiene, we climb mountains to get closer to heaven, we twirl, we itch, we scratch, we move always—even when we are dead and merely slowly decomposing—and this movement is always in response to others or to our environment; even an involuntary wiggle of the nose is, in part, communication with our environment because it tells us that something is in the air—and if it's April in Atlanta then it is telling us that the flowers and trees are having a party (though to be fair, at this point your whole face is doing all kinds of involuntary unpleasant movements). However, because meaning is born from unconscious embodied perceptions and movements, its role in the process of worldmaking becomes invisible. Johnson explains:

...the meaning is in what you think and feel and do, and it lies in recurring qualities, patterns, and structures of experience that are, for the most part, unconsciously and automatically shaping how you understand, how you choose, and how you express yourself. You *have* meaning, or are *caught up* in meaning, before you actually experience meaning reflectively. (2007, 79)

Johnson intimates that the world as it presents itself to us, and our situatedness in that contextualized world, is minimally meaningful and requires our active embodied participation in and with it to extract and construct the kind of meaning that makes human (and other-than-human) life intelligible and meaningful. Our contextualized positions are a field of possibilities and opportunities and as we think and act, we create and structure meaning by creating connections. This then leads to further opportunities to explore and inquire (2007, 265). Initially, meaning arises from embodied movement and interactions that are later extended metaphorically in the form of image schemas in our linguistic and conceptual mappings. An image schema develops when our sensorimotor experiences track repeated patterns and relations. The resultant image schemas are what give our broader experiences shape and meaning, as well as serving as models and modes of reasoning insofar as the repetitions generate neural mappings that eventually constitute what gives rise to abstract thought. Examples of embodied perceptions that engender meaning include: verticality, twisted, circular, toward, away from, into and out of, sharp, hot, shape, and rush. Thus, not only knowledge, but even our particular cultural logical forms of reasoning stem from how our bodies operate in situations.

...life is change and existence is an ongoing process. The logic we humans have is an embodied logic of inquiry, one that arises in experience and must be readjusted as situations change...Logical thinking can thereby actually change experience, because it is in and of that experience. (105)³⁰

A foundational, pervasive image schema, which serves as a universal primary metaphor, is that of a container. Through our embodiment, we come to have understandings of and meanings for experiences of ourselves and other things as being “in” or “out” of some perceived boundary. We can be in the water or out in the cold or within an embrace or under a car, etc. These sensorimotor experiences, which are source domains, help us extend meaning to similar situations or ideas, which are target domains. From the basis of the source domain mapping, we then understand ideas such as categories and family concepts as operating as kinds of containers of smaller ideas. Ultimately, without our body’s capacities to act—to move, perceive, manipulate, and engage—we would have no source from which to imaginatively draw ideas, induce, or infer. Imagination itself is a function of this embodiment at the deep level and therefore cannot spawn meaning and concepts on its own.

For example, we cannot have a conception of a chair without our bodies, specifically the bodies we have as humans, and having a repeated experience of being seated upon something.³¹ We then identify certain kinds of objects as a chair if we perceive—or can imagine—them as being the kinds of things that operate in a way that ignites the neural mapping of being seated. If we take the image schema of a container plus the image schema of being seated, we can see why so many kinds of bizarre objects can fall under the category of a chair: papson chairs, rocking chairs, and those god forsaken bougie bar stools in high end clubs that are literally only two inches wide with some sad-sack excuse of a back that is only one inch high and is nothing other than an insult the very neural mapping of being seated. And our imaginations give rise to the odd ball things that can be included in the chair category—bean bag chairs, seriously?!?! And in unfortunate situations—well, beyond those where our only options are papson or bean bag chairs—our imagination combined with our spatial logic and embodied logic of inference lets us extend the category even further when other objects afford similar or closely related simulations

³⁰ The role and significance of cultural constructs and practices in embodied logic helps clarify how it is that some different cultures operate according to differing logic systems. The Native American system of logic is non-dualistic and therefore does not contain nor need the law of non-contradiction.

³¹ I tend to love relying on the scatterbrained conception of chairs when teaching about conceptual analysis in my classrooms. As it turns out, Johnson (2017, 23) also uses chairs as an example when explaining how it is that our understanding of concepts of physical objections is not based on representations but instead on our embodied history of engaging things like that.

of the requisite sensory modalities³²; when you're in a car garage, a stack of tires or tool box easily becomes a chair. I will address embodied conceptual metaphors in more detail in the following section but, suffice it for now to point out that when someone tells us to "take a seat", which means we are not to remain standing, no matter where we are, we look immediately for a chair or for something that could operate as a chair in that context.

Here's another example; this is a thicker example involving blended conceptual metaphors, which I will discuss shortly, but it is helpful to get a good grasp on how the image schemas work. We have an image schema between being twitchy and someone being twitchy; our bodily sensation of a twitch, which is the source domain, maps onto suspicious behavior, which is the target domain. When we twitch, it's uncomfortable, unpredictable, and if it's repeated then it's bothersome and suspicious and we tend to look for an underlying problem that is likely not going to be pleasant (I'm betting on a pinched nerve—ick). Similarly, when we regard someone as twitchy, they make us uncomfortable, we perceive them as unpredictable, bothersome, and suspicious, and we often look for an underlying problem (I'm betting on him trying to swipe something). In a twitchy situation, our body tells us something is off and we immediately start moving about trying to adjust because our body is searching for the root of the problem. When we encounter someone who appears or moves in awkward and jumpy ways, we infer that they are a bit off or suspicious and we either get out of there or we look for the root of the problem. The embodied logic that unfurls when we have a repeated twitch gives rise to the logic of inference that we apply to someone we have identified as twitchy.

Yet movement and embodied logic alone cannot motivate our imagination. Despite what the canon of mainstream Western philosophy argues, another key factor in embodied meaning-making processes and cognitive engagement is emotion. The blending of movement, emotion, and imagination provides a means through which to evaluate our experiences and situations and therefore allows us to cultivate rich forms of knowledge. Emotion, like perception, manifests in the body at the deepest level; it is experienced not only consciously in the manner in which we most commonly recognize it, but also nonconsciously. As in the case of being twitchy, the emotion we experience is suspicion. Emotions contributes to the balanced equilibrium theory insofar as its primary operation is to monitor and regulate our bodily states in response to experiences and environments. They tell us whether our situation is one of danger, pleasure, or over exertion and then give signals for us to respond in apt ways. Emotions denote whether or not our bodies and ourselves are in harmony or disharmony in our interactions. As such, emotions are the most fundamental and one of the first instruments at our disposal to give us reason and the capacity to evaluate, deliberate, and act. Damasio (1994) portends that emotional engagement, both at the nonconscious and the conscious levels, are requisite for reasoning insofar as it is necessary to both choose and pursue our ends. In fact, emotions are crucial to rationality itself insofar as it structures our means-ends reasoning. As it turns out,

³² This strikes me as a sort of embodied version of the family resemblance approach to conceptual analysis, as opposed to necessary and sufficient conditions approach.

bean bags and papasons are often so named absent the accompanying term chair (or stool or seat). One might reason that this is because the position of being in them does not map back to our neural pattern for being seated; these sorts of highly hostile chairs usually scrunch our bodies in ways that more closely correspond to the embodied experience of being trapped. And no one likes being trapped. These questionable items, then, often come fully equipped with emotions of hatred and resentment because we feel ourselves to be out of harmony with our environment, our body, and our supposed seat. Emotions can unwittingly motivate or engender reasons behind logical premises.

Whether we are in the flux of a motorcycle accident or break up, our emotions ignite at the nonconscious level first to trigger that we are in a situation that requires us to attempt to transform our experience. Johnson rightly claims that “[m]ost of the time we do not need language, nor even elaborate conceptual schemes, to grasp the felt meaning of our current situation as it is unfolding, moment to moment (2007, 61). We do not experience cognitive descriptions of our situation along with accompanying subjective emotions. Our emotions fire off and motivate our more cognizant calibration and reasoning practices. Thus, all of our perceiving, acting, and thinking—all of which are actions—originate in and from emotions before we are even aware of them. The state of twitchiness is one of discomfort and suspicion and it informs us that we are in a state of disharmony either in our body or in our interaction with the twitchy person. This then motivates us to reason as to how to act. With respect to our body, our motivation is to wiggle and shimmy about until the twitch is resolved; if it’s not, we tend to try to poke the misbehaving body part to see what the problem is. With respect to the twitchy person, we tend to be motivated to resolve the problem by getting out of dodge if we can’t figure out why this person strikes us in this way, and more so if we do and our intuitions are confirmed. The subconscious initial firing emotion is discomfort that then leads to the related implicit but conscious emotion of suspicion that then leads us to ascribe meaning, then evaluate, then reason, and then act.³³ Therefore, our emotions are a cornerstone of our cognitive capacities. They are the ground floor of our evaluations and deliberations and thus facilitate rather than hinder them. What this entails, then, is that by the time we become aware of our emotions in moments of danger, pleasure, or creative practices, those conscious emotions have already been rendering our cognitive practices meaningful; none of our experiences and actions do or could carry meaning outside of or apart from emotion. Moreover, the meaning-making nature of emotion at the nonconscious level is part of why we experience intuition and carry implicit knowledges and biases, as in the case of suspicion. They allow us to read others’ faces and body languages, as well as their social cues and locations, in order for us to respond in a way that protects our well-being. They also aid us in knowing when even our thoughts and words are off point. The very emotion of hesitancy, which connotes disharmony, rears up when we are trying to make a claim or explain some idea and

³³ Damasio draws a distinction between feeling and emotion, where emotions correspond to the cognitive unconscious and feelings are conscious (Johnson 2017, 61).

we are not finding the right words.³⁴ That certain words seem to us to be inadequate is our emotions informing us that we are on the wrong track, even if only slightly. Moreover, our nonconscious emotions can drive our intuitions and implicit knowledges in our innovative and creative thinking and acting by urging and shaping our outputs in distinctive ways that we did not expect.

Initially, as I intimated above, embodied cognitive processes initiate at nonconscious level and much of the content and products of this processing remains at that level. This level, this ground-floor production site—the cognitive substratum—is what Lakoff and Johnson (1999) term the “cognitive unconscious”. The cognitive unconscious is the realm of the vast majority of our reasoning; it encompasses all of our mental operations and structures, including embodied emotion, perception, and memory. The reason why these operations manifest at the nonconscious level out of our control is because they occur too swiftly for us to be aware of them. They refer to this base of operations as cognitive, even though we are unaware of it and do not have access to it, because all aspects of thought, including motor operations, are cognitive “when they contribute to conceptualization and reason, including conceptual systems, meaning, inference, [induction,] and language” (12). They postulate that:

[Our unconscious conceptual systems] creates the entities that inhabit the cognitive unconscious—abstract entities like friendship, bargains, failures, and lies—that we use in ordinary unconscious reasoning. It thus shapes how we automatically and unconsciously comprehend what we experience. It constitutes our unreflective common sense”. (13)

Therefore, if the cognitive unconscious is the locale where our embodied meaning emerges, then one can reason that it will also be the seat of our subconscious tacit knowledge, which is the deep knowledge we have of conceptual rules and structures. Embodied logic at the tacit level is the foundation for our explicit abstract logic in that it is our bodies that give meaning and understanding to rules and inferences such as causation, containment, and transitivity (Johnson 2007, 139). From here, as mental operations ascend closer and closer to the conscious level, we develop much of our implicit knowledge by gaining more access to embodied rules of logic and inference and applying them practically through phenomenological experience, which makes us more consciously aware of them. One can imagine the chain of meaning and knowledge reliant on embodiment progressing in the following manner: from the cognitive unconscious and tacit knowledge to implicit knowledge (intuition

³⁴ Hesitancy is the most commonly cited emotion for illuminating the cognitive role of emotions as well as the embodied nature of logic.

and implicit procedural knowledge³⁵) to, finally, explicit knowledge (propositional and explicit procedural knowledge).³⁶

Native Embodied Implicit Ways of Knowing

Native American and other Indigenous sources of knowledge are more substantial and prolific than those acknowledged within Western epistemology. Dreams, visions, vision quests, and interactions with nature, along with insight and intuition are all salient to meaning and knowledge. Some scholars refer to the source of insight and intuition as the inscape (Peat 2002) and some call it the inner space. Others, such as Ermine (2000), identify intuition more specifically with terms such as the Cree concepts *Muntou*³⁷ and *mamtowisowin*. *Muntou*—literally, the mystery—is the law of the underlying energy of the universe and existence qua interconnection and *mamtowisowin* is our capacity to tap into our inner energy that comes from the universal energy in order to be creative, be in connection, or simply become (104). V.F. Cordova (2007) calls this energy *Usen*³⁸. Similar concepts include the Algonquin term *Manitu*, *Namandu* in Gaurani, *Orenda* in Iroquois, *Nigilia* or *Wakan* in Lakota (Battiste and Youngblood Henderson 2000, 76). In Māori and Melanese, this power and energy is known as *Mana*. In Anishinaabe, dreams—*manidoo-waabiwin*—and visions—*naanaagede'enmowin*—are regarded as primary sources of *revealed* knowledge. Intuition—*gidisi'ewin*—is a form of revealed knowledge but it also points to our internal capacity to recognize Truths. Rheault explains that “truth or the ability to perceive truth is the ‘feeling’ that one has, at the moment of intuitive clarity. Intuition is the voice of one’s spirit” (1999, 92). Many Native peoples utilize dreams and vision quests as a way of closing the gap between our internal connection to the energy of the universe and our more explicit knowing and understanding of the world (McPherson and Rabb 2011, 63).

While embodied cognition is shared among us, our embodied knowledge and the intuitions and subsequent insights it gives rise to will be specific to us as individuals as a result of our experience in and with the world. Similarly, we all carry some aspect of *Muntou* or *Usen* with us by virtue of our embodiment and interconnectedness with others and the universe but our unique experiences and relations will synthesize the two to move between the inner and outer spaces for meaning and understanding. Joseph Couture rightly argues that most non-Natives

³⁵ Lieberman (2000) demonstrates that the relationship between intuition and implicit knowledge is a recurring feedback loop.

³⁶ For a general account of the differences between kinds of knowledge, see: Davies (2015). For a more detailed distinction between intuition and insight, especially as it relates to implicit forms of learning, see: Brock (2015).

³⁷ Because the notion that there is an underlying energy which organizes the world and allows us to create relations is a foundation of Native American metaphysics, most Native American languages have some version of this concepts.

³⁸ I capitalize *Usen* and *Muntou* because they are terms that identify the great energy of the universe and thus are concepts of great significance.

cannot make sense of this nonlinear way of knowing that oscillates between both analytic and metaphorical intuitions (2013, 49), as we have seen historically through mainstream Epistemology and Philosophy of Mind. He explains that:

Native “seeing” is a primary dynamic, an open and moving mindscape. This process determines and drives the Native habit to be fully alive in the present, without fear of self and others, non-compulsively and non-addictively in full relationship to all that is—in relationship with the “is”-ness of a self-organizing ecology, a cosmic community of ‘all my relations’. (48)

These intuitions and insights are believed to be gifts to us from our relations to the Earth and the world. Castellano points out that “[s]ometimes knowledge is received as a gift at a moment of need; sometimes it manifests itself as a sense that ‘the time is right’ ... to make a decisive turn in one’s life path” (2000, 24). Our individualized experiences of knowledge in and about the world, much of which evolve from the interplay between embodied tacit knowledge and intuition, is what constitutes both the phenomenological and the pluralist, polycentric components of Native American ways of knowing. Universal, “objective”, knowledge as Western epistemology conceives it is not simply not possible, it’s not even desired. The subjectivity of experiential knowledge that stems from our unique interactions is what gives us more authentic meanings of the world and more practical and sharable bits of knowledge that tie us together.

There are two other specific Native modes of knowing that this understanding of embodied cognition and the cognitive unconscious helps to flesh out, rather than contradict. The first is the notion of blood memory.³⁹ Blood memory is a Native concept that connotes the passing down of knowledge from the ancestors and the spirit world through the body to other members of the community through generations. Dancer Monique Mojica explicates this idea by saying that:

...our bodies are our libraries—fully references in memory, an endless resource, a giant database of stories. Some we lived, some were passed on, some dreamt, some forgotten, some we are unaware of, dormant, awaiting the key that will release them. (2009, 97)

She relies on praxes of improvisation as a method of “mining” her body for “organic texts” to motivate her choreographic storytelling. However, blood memory is within all of us and we all carry it with us; it is just that it may be more accessible through embodied activities and processes, such as dancing. While blood memory is a term that is unique, at least historically, to Indigenous peoples, it is not a wholly unique conception. There are two strands by which blood memory extends to other similar

³⁹ For more on how blood memory is a function of ancestor related collective memory, see: McLeod (2007).

notions. The first is in the idea of generational trauma. Most people conceive of this idea of blood memory as being passed down as a result of violence and genocide, much like the generational trauma⁴⁰ of the Jewish community. Trauma rewires the neural synapses and both the behavior of trauma and the way of thinking consequent of trauma can be passed down biologically and behaviorally (Welch 2015). Another similar concept is that of the collective unconscious.⁴¹ This is the idea that all humans inherit cultural archetypes, primordial images, and ideas from their previous generations.

Blood memory is not necessarily tied to trauma and therefore can be imagined as occupying the intersection of generational trauma and the collective unconscious—both of which are instances of the cognitive unconscious. Moreover, blood memory, generational trauma, and the collective unconscious all give rise to knowledge in the form of intuition. Dancer Rosy Simas explains:

Recent scientific study verifies what many Native people have always known: that traumatic events in our ancestors' lives persist in our bodies, blood, and bones. These events leave molecular scars that adhere to our DNA. (2016, 29)

But unlike generational trauma, in most cases Native individuals see themselves as benefiting from the inheritance of blood memory as it functions as a tie to Native ways of coming to know and be. Dancer Shalan Jourdry posits that:

My understanding is that as we go from one generation to the next a part of our spirit and body is passed on to our children, and they pass on a bit of their collected spirit, and so on. Therefore, within me is a piece of all my ancestors, and I have that memory within me somewhere. The challenge is to get in tune with that, to hear and feel it, and respond to that kind of memory. (Shea Murphy 2007, 224)

Similarly, blood memory is distinct from the collective unconscious because it can be accessed and made aware of through individual or collective efforts qua practices, even if only intuitively or minimally explicitly.

This leads to the second mode of knowing which might be thought to be in tension with embodied cognitive theory—the vision quest. The vision quest is its own mechanism through which to gain insight into intuitive knowledge through bodily practices; but it is also a bodily practice through which access to blood memory, more specifically, might be gained. Most times, vision quests are an individual journey towards deeper meaning and knowledge of the world and themselves through an extended testing of the body in exposed natural conditions. In some instances, these quests can be taken on in the confines of a sweat lodge alone, in community, and/or

⁴⁰ See: Fromm (2011).

⁴¹ See: Jung (1981).

in the presence of a medicine person. But in all cases, the embodied practice is to deprive the body of nourishment and expose it to extreme conditions in order to turn in towards the inscape to tap into the knowledge that lives there. In the chapter “Dancing with Chaos: Phenomenology of a Vision Quest”, McPherson and Rabb (2011) interview a Blackfoot Métis man named Douglas Cardinal to demonstrate how it is that supposed “mystical” and “magical” Native experiences, typically discounted by Western culture and theory, actually shares common features with many other similar embodied phenomena, such as the near-death experience. In their discussion of the vision quest, they argue:

In the case of the vision quest, phenomenological description allows us to discuss it without dismissing such experience as mere dream or hallucination, as many non-Natives might be tempted to do. At the same time, we are not required to admit that such experience is actually a glimpse into the spirit world, whatever that would mean. Note that many Native Americans believe that dreaming itself is a glimpse into the spirit world (60) ...[And] to ask these kinds of questions [that interrogate the authenticity and reliability of Native embodied ways of knowing] is to miss the point. In one sense it really doesn't matter whether or not he was, in a technical sense, hallucinating. What is important is what you learn from such an experience, what you take away with you (62).

And while it is true that it is a moot point as to whether or not the experience is mystical, spiritual, or neural, it does matter that it can be shown that these experiences create and give access to meaning. Both modes of Native embodied knowledge—blood memory and vision quests—have accounted for the kinds of meaning and knowing that Western philosophy has rejected as valid ways of knowing historically because Western philosophers and scientists were unable (or unwilling) to identify, examine, and analyze them until only very recently. Thus, yet again, it becomes apparent that Native American epistemology has born more accuracy and comprehensiveness with respect to knowing and Truth than has Western epistemology. This also sheds some light on why it is that much of the contemporary cognitive science and quantum physics references Native American theories within their own.

A third instance of a Native way of knowing is much subtler and connects more directly to the cognitive unconscious. As Johnson and others have demonstrated, the image schemas that evolve from our embodiedness contain within them embodied logics related to spatiality and temporality that we then extend and apply to other aspects of the world, including abstract reasoning practices. Moreover, because image schemas are embodied and equally culturally situated, the logical practices are social and culturally specific (Johnson 1987; 2007; 2017; Lakoff and Johnson 1980; 1999). This revelation is not quite a *revelation* from the Native epistemological perspective, but it does help explain and further clarify the distinctive structure of Native American logic, which is also shared by other Indigenous groups,

as non-binary and non-dualistic. Anne Waters (2004) discusses third and fourth genders, most commonly known as Two-Spirit persons⁴², to highlight her explication of non-binary, non-dualist Native logic. What I have discerned, though, through the understanding of logic as embodied, is not that Two-Spirit people are a mere example of non-binary, non-dualist logic; I would argue...well, I am inclined to believe with great reason, that Native logic is as such because Native bodies are as such. That is, Two-Spirit persons are not examples of Native logic, they are (one of) the foundation of it. That Native persons live, phenomenologically, without contradiction as multi-gendered might be (one of) the source of the Native rejection of the law of non-contradiction.⁴³ Thus, it would turn out, yet again...and we should no longer be surprised at this point...that Native and other Indigenous worldviews and concomitant logics have known that logic was embodied all along and only now are Western theorists catching on.

These implicit and intuitive ways of knowing within Native epistemology are not only embodied forms of knowing, they are instances of tacit procedural knowledge. This holds in two related manners. The first is quite simple and straightforward. As I have shown, the cognitive unconscious is a site of great activity that we are engaged in at all times. Even when you are not thinking or reflecting or deliberating, your cognitive unconscious is operating to harmonize your body and emotions with your environment or with the energy of others around you. One need only consider an experience of heightened stimulation, such as sitting in the dark as a wild hurricane or tornado tears at the tenuous safety of your surrounding walls, or—to harken to the hallmark moments of every thriller—to be sitting in a dark closet trying not to even breath as a monster (of any variety) prowls around looking for you (this experience is also, to some extent, simulated just by watching such movies), to realize that you don't have to be doing much of anything to be worn out by the activity of your embodied cognitions. To be less dramatic, this is why a panic attack can suck every spark of juice out of you even when you're just face down on the couch. Or even when, especially for those of us who are severely introverted and/or empathic, you are trying to function in large groups. I think the evident way this is accounted for within Native American epistemology is through the Anishinaabe term *noodin*. *Noodin* is a verb that captures the tumult of the wind; and this is the term by which the Anishinaabeg refer to the mind. Rheault further elucidates:

This is the way the mind is understood: it is blown around by the force of knowledge that acts from the exterior upon the mind (i.e., *Nenemowin*: the way of thought). It is also understood that *minjimendamowin* (the way of remembering; i.e., memory) is

⁴² See also: Driskill, Finley, Gilley, and Morgensen (2011); Driskill, Justice, Miranda, and Tatonetti (2011); Jacobs, et al. (1997).

⁴³ I am emphasizing Two-Spirits as one of the foundations of non-binary logic because there are many others. The nature and character of the trickster is another example. However, Two-Spirit persons, as far as my mind can think, is the only example of embodied non-binary logic.

literally the act of holding in and stitching together that knowledge that comes to a person. (Rheault 1999, 74)

This leads into the second way in which the cognitive unconscious yields properly procedural forms of knowing. Our tacit and implicit ways of knowing, such as intuition and blood memory, among all of the others, are direct and continuous performances by our bodies of peculiar kinds of know-how skills. Our bodies don't just member, to use the above example of *minjimendamowin*, as if it were some unbridled and disorderly culprit out to strike us with random piecemeal images of our narrative; our memory works for us in ways that allow us to either sustain harmony both within ourselves and our environment or to reestablish our harmony within ourselves and our environment (sometimes your memory has to poke you to remember you are just watching a scary movie and aren't actually being stalked by a monster). In short, the unconsciously cognitive actions, such as those taken by our memory, are smaller actions of know-how that contribute to more explicit instantiations of know-how skills that we dispatch when attempting solve minor or major problems—one's memory is exceptionally significant in everything from trying to find those damn keys to trying to reflect on who you really are in your narrative self-construction.

While the claims articulated in this piece constitute a mere facet of broader Native American and other Indigenous epistemologies, my aim is to direct the reader to the substantial implications such frameworks can bring to our understandings of knowing. First, Native epistemologies take such knowing as a given rather than as a way of knowing that one must struggle to substantiate. Thus, Western epistemologists who direct their attention towards these marginalized epistemologies can find footing for many of the present-day debates and discourses related to procedural and cognitive embodied knowledge. Second, the account of Native embodied implicit ways of knowing contributes to other marginalized epistemologies by providing groundwork for approaches that draw on spiritualism. While I have not developed this conception at this point, I often try to clarify the compatibility of spiritual knowledge with embodied knowledge by terming it as a form of spiritual naturalism. Embodied procedural knowledge frameworks can bolster similarly marginalized embodied epistemologies, such as those in mainstream and Black feminism, by evidencing an understanding of embodied knowing that escapes the dangerous clutches of propositional knowledge-based Epistemology that has historically rejected and denied these knowledges.

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