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# After Naturalism: Wild Systems Theory and the Turn To Holism

A Reply to Saskia K. Nagel

J. Scott Jordan & Brian Day

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We agree with Dr. Nagel's assertion that explanations within cognitive science can be *thickened* by an infusion of pragmatism and anthropology. We further propose that because of its direct challenge of the correspondence thinking that tends to underlie contemporary indirect- and direct realism, Wild Systems Theory provides a *coherence* framework that conceptualizes reality as inherently context dependent and, therefore, inherently *meaning-full*. As a result, pragmatists can appeal to the reality of lived experience, anthropologists can appeal to the meaningful, multi-scale influences that shape an individual, and both can do so without having to justify the reality status of meaning in relation to the meaning-less view of reality we have been led to via the indirect- and direct-realism inherent in contemporary naturalism.

## Keywords

Coherence theory of truth | Correspondence theory of truth | Direct realism | Embodiment | Epistemic gap | Indirect realism | Intrinsic properties | Modes of experience | Multi-scale self-sustaining systems | Reality | Wild systems theory

*"We are caught up in an inescapable network of mutuality..."*  
Dr. Martin Luther King, Jr., 1964

## 1 Introduction

In her commentary on our paper, Dr. Saskia Nagel calls for a thickening of the descriptions we give in cognitive science. By *thickening* she means, ...a dense description specifying details and patterns and considering contextual factors, of human experience and cognition. ([Nagel this](#)

[collection](#), p. 3). Dr. Nagel further asserts that one way to achieve such a thickening is to infuse cognitive science with the views of pragmatism (i.e., John Dewey) and anthropology (i.e., Timothy Ingold). We couldn't agree more, and we applaud Dr. Nagel's appeal to Dewey and

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Ingold as a means of allowing multi-scale contextual factors to play a much larger role in our accounts of cognition and consciousness.

Given our agreement on the important contributions that pragmatism and anthropology can make to cognitive science, we also feel the need to express our belief that WST (Wild Systems Theory) and its conceptualization of organisms as *self-sustaining embodiments of context* (versus physical-mental, or mind-body systems) actually creates a conceptual framework within which the views of Dewey and Ingold can move beyond the conceptual constraints of contemporary pragmatism and anthropology.

## 2 Pragmatism and Wild Systems Theory

In a recent paper regarding WST, [Jordan & Vinson \(2012\)](#) propose that Dewey's brand of pragmatism represented a rather unique combination of an idealist approach to metaphysics and an epistemic (i.e., pragmatic) approach to science. Specifically, Dewey's early training as an idealist philosopher led him to reject the objective-subjective, correspondence-driven approach to reality and truth that was prominent in the *indirect-* and *direct-realist* versions of naturalism that were emerging during his time. Instead, Dewey believed, as did his idealist, *coherentist* mentors, that meaning and value were *constitutive* of reality. In addition, given his *coherence-* (versus *correspondence-*) driven metaphysics, Dewey believed that science was a practice that afforded us the opportunity to reveal patterns of contingency within the contexts in which we are embedded. He repeatedly emphasized this epistemic, pragmatic approach to science as a way to challenge the more ontologically minded, metaphysical approach to science that was being espoused by indirect- and direct-realist forms of naturalism:

The search for 'efficient causes' instead of for final causes, for extrinsic relations instead of intrinsic forms, constitutes the aim of science. But the search does not signify a quest for reality in contrast with experience of the unreal and phenomenal.

It signifies a search for those relations upon which the *occurrence* of real qualities and values depends, by means of which we can regulate their occurrence. To call existences as they are directly and qualitatively experienced 'phenomena' is not to assign to them a metaphysical status. It is to indicate that they set the problem of ascertaining the relations of interaction upon which their occurrence depends. ([Dewey 1929](#), pp. 103-104)

Despite Dewey's concerns, his unique combination of idealist ontology and scientific pragmatism eventually gave way to what [Gardner \(2007\)](#) refers to as the *Hard Naturalism* of our time, in which meaning and value are seen as completely unnecessary in a scientific, causal description of reality:

By the time we get to Freud ... let alone Quine, naturalism is conceived as resting exclusively on theoretical reason and as immune to non-theoretical attack—it is assumed that nothing could be shown regarding the axiological implications of naturalism that would give us reason to reconsider our commitment to it: we have ceased to think that naturalism is essential for the realization of our interest in value, and do not believe that it would be an option for us to reject naturalism even if it were to prove thoroughly inimical to our value-interests. (p. 24)

Within the contemporary context of Hard Naturalism, pragmatic philosophers such as [Richard Shusterman \(2008\)](#) tend to downplay and even eschew ontology. Specifically, Shusterman asserts that 20<sup>th</sup> century ontological approaches to the mind and body that were espoused by the likes of William James and Merleau-Ponty actually led us to devalue bodily sensations in the name of developing our rational capacities.

Merleau-Ponty's commitment to a fixed, universal phenomenological ontology based on primordial perception thus provides further reason for dismissing the value of

explicit somatic consciousness. Being more concerned with individual differences and contingencies, with future-looking change and reconstruction, with pluralities of practice that can be used by individuals and groups for improving on primary experience, pragmatism is more receptive to reflective somatic consciousness and its disciplinary uses for philosophy. (Shusterman 2008, p. 66)

Clearly, there are important continuities between the pragmatic philosophies of Dewey and Shusterman (Jordan 2010). Specifically, Shusterman's focus on *practice* overlaps with Dewey's conceptualization of science as a practice as opposed to a tool for metaphysics. In addition, Shusterman's emphasis on *primary experience* is consistent with Dewey's idealist commitment to the reality of experience. The major difference between the two seems to be Shusterman's lack of interest in, or perhaps outright disdain for metaphysics.

One possible reason for Shusterman's (2008) lack of interest in metaphysics may be our contemporary commitment to Hard Naturalism. As was stated in the quotation by Gardner (2007), Hard Naturalism seems so implicitly accepted these days, it seems difficult, if even possible, to propose a metaphysics in which value, meaning, and experience are constitutive of reality. Because of its commitment to the reality of experience however, as well as its clear questioning of the indirect- and direct-realism that lie at the core of Hard Naturalism, WST seems perfectly situated to take-up Dewey's anti-correspondence arguments and place them within a 21<sup>st</sup> century coherentist framework. Instead of remaining within the centuries-old conceptual framework of *mind* and *body* however, as Dewey did, WST takes the philosophical risk of creating a new concept: specifically, *embodied context*. We say *philosophical risk* because the notion of embodied context conceptualizes meaning in the exact opposite fashion as Hard Naturalism. Specifically, it renders meaning ubiquitous throughout reality. Given the century of philosophical work that has ultimately led to the Hard Naturalist belief that reality is inher-

ently meaningless, we suspect some might see it as simply silly or heretical to assert that reality is inherently meaningful, through and through. This is why we consider the concept of *embodied context* risky. Regardless of the risks however, we see WST as a means of getting meaning back into reality. It does so by following the lead of the idealists, particularly Oakeshott (1933), who did not appeal to the a priori, the transcendental, or the absolute, and refused to describe reality in terms of the observer-independent intrinsic properties that ultimately make it difficult, if not logically impossible, for meaning to be constitutive of reality. Within WST's coherentist perspective, Dewey's pragmatism is restored as a 21<sup>st</sup> century framework, and pragmatism, in general, can commit itself to the reality of lived experience in an ontological fashion that does not require justification in relation to Hard Naturalism.

To be sure, there have been those scholars who have attempted to introduce meaning back into Hard Naturalism by referring to it via terms such as *emergent* and *irreducible*. Gardner (2007) however, refers to such attempts as *Soft Naturalism* and states the following:

If, then, it is demonstrated successfully by the soft naturalist that such-and-such a phenomenon is not reducible to the natural facts austere conceived, this conclusion is not an end of enquiry, but rather a reaffirmation of an explanandum, i.e., a restatement that the phenomenon stands in need of metaphysical explanation. Irreducibility arguments, if successful, yield data that do not interpret or explain themselves, but call for interpretation: the soft naturalist needs to say something on the subject of why there should be, in general, phenomena that have substantial reality, but do not owe it to the hard natural facts. (p. 30)

WST avoids collapsing into Soft Naturalism because it directly challenges the Hard Naturalist assumption of intrinsic, context-independent properties. It does so by asserting that all properties are necessarily context-dependent and

thus, inherently meaning-full. In short, meaning is constitutive of reality.

### 3 Anthropology and Wild Systems Theory

In addition to providing a contemporary framework for pragmatism, WST also provides a straightforward means of integrating cognitive science and anthropology. For example, in her comment on our paper Dr. Nagel points to the work of [Timothy Ingold](#) as a contemporary example of an anthropologist whose work can *thicken* our understanding of cognition and experience.

Knowing does not lie in the establishment of a correspondence between the world and its representation, but is rather immanent in the life and consciousness of the knower as it unfolds within the field of practice set up through his or her presence as a being-in-the-world. (2011, p. 159)

While WST couldn't agree more with [Ingold's](#) (2011) critique of correspondence approaches to the nature of knowledge, WST's conceptualization of living systems as multi-scale, self-sustaining embodiments of the phylogenetic, cultural, social, and ontogenetic contexts within which they emerged and within which they sustain themselves provides a straight forward explanation of why *knowing* is, "...immanent in the life and consciousness of the knower..." ([Ingold 2011](#), p. 159). Specifically, knowing is immanent in *being-in-the-world* because organisms, as embodiments of context, *are* knowledge ([Jordan 2000](#)). In short, they are *world in world*. Thus, as implied by Ingold, to *be* is to *mean*.

A potential advantage of WST's approach to this issue is that it directly addresses the Hard Naturalism that underlies the correspondence-driven thinking [Ingold](#) (2011) critiques. That is, by problematizing the realist assumption of context-independent, intrinsic properties, WST asserts it is logically impossible for meaningless *things* to exist. That is, it is logically impossible to *be* and *not mean*. By engaging in this ontological spadework, WST does not suffer

the risk of collapsing into Soft Naturalism, as does Ingold's position, or any position for that matter, that attempts to establish the reality of experience without addressing Hard Naturalism's assertion that meaning is not constitutive of reality.

In addition to addressing [Ingold's](#) (2011) *being-in-the-world* approach to meaning, WST also addresses Dr. Nagel's assertion that anthropology can *thicken* cognitive science by leading us to consider the continuous, un-ending influence that multiple scales of context (e.g., phylogenetic, cultural, social, and ontogenetic) have on the nature of bodies and meaning. She develops this point by referring to [Susan Oyama's](#) (1985) assertion that in addition to inheriting genes, infants also inherit a heterogeneous collection of multi-scale contexts, including other persons, that continuously shape, and are shaped by, the developing individual. Oyama refers to this collection of contexts as a *developmental system*. While describing Oyama's work, Dr. Nagel states:

This multi-scale, interaction-driven dynamics requires an approach that does justice to context-dependency, since it is a particular context that leads to the emergence of a specific phenotype. Neglecting the context would thus necessarily lead to a failure to understand the developmental system. ([this collection](#), p. 6)

Again, we couldn't agree more with Drs. Nagel and Oyama. What WST potentially adds to the notion of a developmental system is the idea that self-sustaining systems constitute embodiments of their developmental contexts. The advantage here is the same advantage we encountered when addressing WST's relationship to [Ingold's](#) (2011) *being-in-the-world* approach to meaning. By providing a coherentist ontology that renders reality inherently meaningful, WST constitutes a meaningful alternative to Hard Naturalism's correspondence-driven assertion that reality is inherently meaningless. As a result, WST allows one to utilize [Oyama's](#) (1985) notion of *developmental contexts* in a way that prevents one from having to explain how it is that developmental contexts

render an inherently meaningless reality meaningful. Specifically, developmental contexts don't have to render meaningless reality meaningful because, according to WST, all phenomena are context dependent and, therefore, inherently meaningful.

## 4 Conclusions

In the end, we agree with Dr. Nagel's assertion that pragmatism and anthropology provide a means of *thickening* our descriptions of bodies and meaning. We further propose that WST helps achieve such a *thickening* because it asserts that bodies (i.e., embodied contexts) are meaning. From this perspective, anthropology and cognitive science both involve the study of meaning, and differ only in that they focus their descriptions on different levels of nested context, or, to say it another way, different levels of nested meaning.

In addition to providing a means of integrating cognitive science and anthropology, WST's focus on a coherence approach to truth, as opposed to a correspondence approach to truth, puts it in a position to provide an integrative framework for scholarship in general (Jordan & Vandervert 1999; Jordan & Vinson 2012). In short, all disciplines study some scale of reality, and any scale being measured, because of its inescapable context dependence, is inherently meaningful. This observation leads to yet another point at which we are in agreement with Dr. Nagel. Specifically, we very much appreciate her assertion that WST helps to develop a different approach to *what people are*. By modeling all of reality as context-dependent, and self-sustaining systems as embodiments of context, WST conceptualizes each and every one of us as *world in world* instead of as meaningless physical systems. As a result, we are all inescapably meaningful and efficacious. Everything we do alters the contexts within which we sustain ourselves. Everything we do matters.

Given WST's ability to provide a means of bypassing the meaningless view of reality we have been led to via Hard Naturalism, it is not clear to what extent philosophy is so much ex-

periencing a *pragmatic* turn (Engel et al. 2013) as it is experiencing a *holist* turn (Jordan 2013). If it proves to be the latter, sustaining such a turn will be difficult, for it will force us to experience our scientific concepts (e.g., physical, chemical, biological) as epistemic tools we must necessarily utilize if we are to get on with the cooperative, social practice of science. As was stated by Oakeshott (1933) however, science as a mode of experience is inherently an abstraction, an arrestment from the whole. This means that while the practice of science necessitates that we generate conceptual abstractions regarding that within which we are nested, we must always remember that our abstractions can never satisfy a correspondence-driven definition of truth. In short, while we must necessarily represent, we must simultaneously commit to uncertainty. Perhaps it was the potential pathos of this conundrum that W. G. Sebald was referring to in his poem *After Nature*:

For it is hard to discover  
the winged vertebrates of prehistory  
embedded in tablets of slate.  
But if I see before me  
the nervature of past life  
in one image, I always think  
that this has something to do  
with truth. Our brains, after all,  
are always at work on some quivers  
of self-organization, however faint,  
and it is from this that an order  
arises, in places beautiful  
and comforting, though more cruel, too,  
than the previous state of ignorance  
(2003, p. 2)

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