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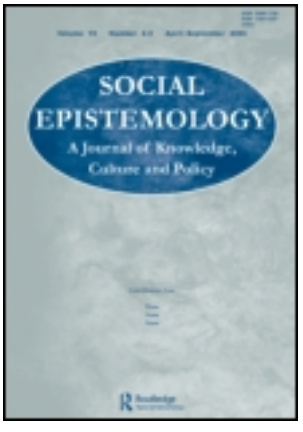


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# On the Ontological and Epistemological Dimensions of Expertise: Why "Reality" and "Truth" Matter and How We Might Find Them

James Hikins and Richard Cherwitz

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*This essay expands Johanna Hartelius' rhetorical understanding of expertise by probing the concept's ontological and epistemological grounds. Viewed through the lens of a realist-based theory of rhetoric, we contend that notions of being, consciousness, meaning, and knowing are essential to understanding expertise. Applying our theory of rhetorical perspectivism to link these concepts to expertise permits coherent distinctions between genuine expertise and faux expertise. The theory also suggests a philosophy of education centered on the preparation of experts who are "intellectual entrepreneurs." With a diversified yet integrated portfolio of theoretical and practical knowledge, these citizen-scholars discover solutions to challenges affecting communities and stakeholders, transcending traditional disciplinary boundaries.*

*Keywords: Expertise; Rhetorical Perspectivism; Intellectual Entrepreneurship; Engagement; Transdisciplinarity*

## Introduction

Johanna Hartelius (2011, 1) invites us to reflect on a pervasive feature of contemporary existence, namely, "modern culture depends on expertise." Reinforcing the central theme of her book—that expertise is a rhetorical construct—Hartelius offers a number of important insights contributing to our understanding of both

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expertise and rhetoric. Perhaps most significant among these is the observation that expertise is a function of a larger rhetorical situation, wherein what counts as expertise is negotiated among and between various stakeholders and the institutions and cultural entities they comprise. "Experts," argues Hartelius, are not merely autonomous repositories of factual information; rather, they are embedded in "social and discursive contexts" whose unfolding meanings are evoked by audiences, creating and legitimizing expertise (2011, 166). "To be an expert," she argues, "is to rhetorically gain sanctioned rights to a specific topic or mode of knowledge" (Hartelius 2011, 1). Put simply, Hartelius claims "[e]xpertise is rhetorical" (2011, 166).

Addressing the rhetorical dimensions of the concept, Hartelius alludes to a number of epistemological and ontological issues surrounding expertise; however, these are not pursued in her book. Questions inviting further elaboration include: what is the connection between those "sanctioned rights" that are "rhetorically" gained and the actual subject matter of expertise? Said differently, how does expertise "hook up" with those things it is expertise of or about? How do we know when that connection has been achieved versus when it has not? Can expertise be a subject of education and, if so, what kinds of pedagogy facilitate its creation? Is expertise a function of specific academic disciplines, or are there broader aspects of the concept that must be considered in its application to the real world?

In an attempt to address these questions, we apply our own theory of rhetorical perspectivism. We hope not only to further illuminate the notion of expertise, which we define as the capacity to make specialized veridical judgments about some aspect of the largely human-independent world, but to reconstitute a theory of rhetoric that accommodates the subjectivity of human experience, the rhetorical dimensions of expertise, and our claim that *inter*subjectivity can lead to veridical descriptions of human-independent reality. If we are successful, our discussion will contribute to a view of social epistemology bridging human subjective experience and an objectively constituted, extra-subjective world. This position is consistent with some recent explorations of the notions truth and expertise by social epistemologists (Goldman 1999, 2001; Kitcher, 2002). Our emphasis in this essay, however, is the development of a more explicit version of ontological and epistemological realism than grounds these scholars' work. One difference in our approach is to amalgamate the idea that expertise is, in a significant sense, a product of subjective experience and intersubjective validation, with the view that, nevertheless, such experience and validation is oftentimes about extra-human realities, aspects of which can be known.

We first explore the relationship between expertise, knowledge, and discourse—the world in which experts, objects of knowledge, and interested stakeholders, conceived as audiences, reside. We then discuss the theory of rhetorical perspectivism, with particular focus on the four aspects of the theory most directly relevant to expertise. Finally, drawing on the concept "intellectual entrepreneurship," we advance a philosophy of education designed to generate the expertise required to address the pressing issues of the 21st century. Intellectual entrepreneurs are

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engaged citizen-scholars imbued with both focused knowledge and considerable acumen beyond their principal disciplinary specialization. The expert who is an intellectual entrepreneur is thus better able to address critical contemporary issues holistically and with a fuller appreciation of the possibilities and implications of attempts to solve them.

## Expertise, Knowledge, Discourse

Against the backdrop of a growing multidisciplinary literature on the concept, Hartelius' (2011) rhetorical analysis of expertise directs and *re*directs our attention toward what has become a cornerstone of contemporary rhetorical theory—that there exists a rhetorical dimension to all human enterprises (Bazerman 1988; Ceccarelli 2010, 2011a, 2011b; Gross 1990, 2006; McCloskey 1998; Pethö 2005). Yet, as important as this theoretical epiphany has been in unmasking the rhetorical dimensions of enterprises heretofore regarded as wholly insular and "objective"—activities such as science, education, economics, and even inquiry in general—foregrounding its rhetorical qualities runs the risk of ignoring what we believe are two essential extra-rhetorical components of expertise (Hikins and Zagacki 1988; Stettler 1995). One is ontological; the other is epistemological. Considerations arising from these two theoretical purviews, we argue, afford conceptual coherence to the idea of expertise. Conversely, ignoring humans' situated reality (ontology) and methods for attaining knowledge about that reality (epistemology) leaves the notion of expertise vacuous. To be clear, our analysis proceeds within the context of a realist view, wherein significant aspects of the world, as well as our knowledge of some of those aspects, are extra-rhetorical. Moreover, we contend that possessing such knowledge is an essential criterion of expertise.

These points are illustrated by cases where deference to experts is lost or redirected to competing specialists. A purported expert who fails to assay and "handle" reality effectively will soon be discredited. We are likely to bid *adieu* to the automobile mechanic whose repair does not remedy the odd sound coming from our automobile's transmission and look until we find a mechanic whose expertise remedies the problem. Nor will we brook much patience when a medical professional misdiagnoses the pain in our right side as a pulled muscle instead of appendicitis. Deference is lost in such cases because the expert's claims about some subject or state of affairs are found to be false, disconfirmed by experience, or overridden by claims perceived to be more worthy of trust. Defective descriptions of reality undermine the expert's ethos, rendering his or her "expert opinion" (knowledge claims) suspect. In extreme cases or when repetitive miscues occur, the incompetents are not experts, despite what they may call themselves and despite the fact that some duped audience of stakeholders might label them as experts.

Hartelius briefly alludes to the role of ethos in expertise, associating it with the "expert's individual identity as well as collective belonging" (2011, 166). While identity and belonging may contribute to the rhetorical efficacy of expertise, we suggest ethos is rooted more deeply in the veracity of the descriptions of those

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aspects of the world within the expert's scope. Descriptions adequately reflecting reality build the expert's ethos; those not attaining such adequacy undermine it. This is precisely Aristotle's (1991) account of ethos in Art of Rhetoric:

> [There is persuasion] through character whenever the speech is spoken in such a way as to make the speaker worthy of credence ... And this should result from the speech, not from a previous opinion that the speaker is a certain kind of person. (Aristotle 1991, 38)

In other words, no rhetor can be viewed as credible unless the audience views the rhetor's discourse as knowledgeably describing reality.[1] Put simply, truth-telling generates credence (ethos). Notions of truth and reality, then, provide conceptual coherence to the notion of ethos as it bears on expertise, whatever other rhetorical conditions obtain (e.g. audience approbation or emotional reaction to discourse).

Once these ingredients are recognized as inherent in the rhetorical notion of expertise, a variety of questions implied but not addressed directly in Hartelius' book invite closer inspection. For one, given that expertise is often central to life-and-death decision-making, how is one to distinguish between "real" and "faux" expertise?[2] For another, given competing versions of truth among diverse discourse communities, how are questions of truth itself to be adjudicated? Moreover, if questions of truth and reality are fundamental to expertise, what are the implications for scholars whose theories of rhetoric are driven predominantly by post-humanist and post-structuralist theorizing? Of particular urgency is the question: how can the academy best educate and train experts to integrate both the socially created (rhetorically constructed) and human-independent (rhetorically discovered) dimensions of inquiry?

These questions underscore the potential consequences attendant to failed or defective expertise. We live in an age where numerous specters of technology, unleashed by accident or design, as well as the ever-present threat of natural disaster, loom. Given these realizations, reliance on faux expertise, failure to adjudicate among competing versions of truth, inability to assess persuasive expert discourse, incapacity to adequately educate and train experts, and negligence in discriminating between the rhetorically discovered and the rhetorically constructed will surely invite catastrophe. This realization compels an understanding of expertise that considers jointly its rhetorical, ontological, and epistemological features.

## What is Expertise?

The 20th century abounds in cases of failed expertise, the defects of which can only be inadequately explained on rhetorical grounds. The resignation of President Nixon, the 1989 repudiation of "cold fusion," the decline of veneration for the American space program in the wake of the Challenger and Columbia disasters, and waning support for President Obama's economic policies in the shadow of the 2010 mid-term elections are, of course, all significant rhetorical failures. But these

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rhetorical shortcomings are predicated to some degree on rhetors' and audiences' knowledge of facts and the real-world context in which those facts reside.[3] In the aforementioned examples, facts and their implications are relevant to culpable criminal activity, to replicable measurements of energy, to cold weather effects on o-rings in solid rocket boosters or the effects of foam debris impacting a Shuttle's wing on launch, and to measurable outcomes of stimulus efforts on the economy. A more prudent application of expertise, or the application of additional or different expertise would, we suggest, have wrought different outcomes in all the examples just mentioned.

We do not question, of course, that facts are interpreted and integrated into that dimension of expertise that is rhetorical performance. Yet the examples of failed expertise just cited depend significantly on temporally and historically locatable causes and effects. These causes and effects are clearly extra-rhetorical, despite their mention in rhetorical discourse, a point illustrated by the frequency with which rhetorically constructed social "realities" are trumped by reality *per se*. Nixon could keep the truth behind Watergate at bay only for so long; political expertise failed him. Headlines announcing successful cold fusion eventually caused great embarrassment to universities on two continents because the scientific expertise of Martin Flaischmann and Stanley Pons failed them.[4] NASA's carefully cultivated image of space flight as so routine that even high school teachers could be launched into orbit came crashing down because the vaunted know-how of the space agency was defective—their expertise relevant to cold weather and impact effects, in addition to (or, perhaps, despite) the rhetoric of dissenting engineers, failed them. And the outcomes of the USA midterm elections of 2010 hinged in large measure on the weekly unemployment figures. For the USA audience, the economic facts were not consonant with the hopes and predictions of experts within the Obama Administration. In all these cases, failed expertise was grounded as much in ontological and epistemological factors as in rhetorical ones.

On this analysis, expertise is significantly a function of the rhetor offering a factual depiction of some aspect of the world. It is, to use the familiar metaphor made unpopular by Richard Rorty (1979), a process of "mirroring nature." As we contend in the remainder of this essay, re-introducing the mirror of nature into discussions of social epistemology is not to abandon the significant rhetorical dimensions of the human condition, or to diminish the rhetorical aspects of expertise. It is, however, to argue that the "rhetorical turn" has perhaps been a turn too far—that social knowledge can never fully escape the gravity field of realism.[5]

In our own discipline of rhetoric, the attempt to sever discourse from both epistemological and ontological realism has often taken the form of an aversion to the concept "truth." As John Lucaities and Celeste Condit have observed:

> Whether "truth" is defined as the word of God, the result of scientific experiment, or the outcome of philosophical debate, rhetoric has often been seen as self-consciously employing other methods and seeking goals other than the production of truth ... (1998, 127)

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By rejecting conceptions of "truth" and "objectivity," contemporary theory has left us unable to recognize the important role these concepts play in rhetorical and social practice. If, however, we are right in our contention that these notions are critical to understanding expertise, then we must refocus rhetorical theory once again on the central place of ontology and epistemology in understanding persuasion. To elaborate our contention that expertise must include the factual description of some aspect of the world by a knowledgeable source we turn to our theory of rhetorical perspectivism.[6]

## Rhetorical Perspectivism

Rhetorical perspectivism is a response to constructionist rhetorical theories that began to emerge in the last half of the 20th century (Brummett 1976, 1982; Carleton 1978; Farrell 1976; Railsback 1983; Scott 1967, 1976). These views were part and parcel of the anti-realist revolution, leading to ontological and epistemological skepticism in every corner of the academy, from literary studies to the philosophy of science (Gross 2006; Khalifa 2010; Latour 1988; Latour and Woolgar 1986). As a rejoinder to this literature, rhetorical perspectivism has relevance beyond the discipline of rhetoric, implicating trends that have evolved across the academy in the past half-century. Our goal in the remainder of this essay is not to attempt an extended philosophical argument for, or defense of, rhetorical perspectivism. These are available elsewhere (Cherwitz and Hikins 1983, 1986). Instead, we seek to outline the fundamental tenets of the theory and use them to illuminate the notion of expertise. Summarized here are four aspects of rhetorical perspectivism with implications for expertise, including the theory's realist ontology, theory of consciousness, epistemology, and theory of meaning.

### *Ontology*

Rhetorical perspectivism's ontology is rooted in the concept relationality. Based on work by mid-20th-century philosopher Evander Bradley McGilvary (1953), relationality posits that all things in the universe are products of relations, not fundamental physical particles. Relations, we have argued, are ontologically more basic than physical constituents and are their progenitors:

> To suggest that the world is essentially relational in character is to suggest that it is composed of numerous particulars, each a member of a context of particulars, and each particular deriving whatever nature it has from that context. As a result, each particular exhibits various characters or aspects which emerge wholly as a function of the relations in which the particular stands to other members of its context. (Cherwitz and Hikins 1986, 124)

Relationality, then, posits that the ontological status of extant physical objects and abstract ideas is secondary to and derived from the collections of relations that instantiate them.

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Any existent (subatomic particles, atoms, molecules, compounds, planets, stars, galaxies) is a context of particulars among other contexts because everything depends for its existence, characteristics, and relative stability on relationships framing the various contexts of particulars in which they are ensconced (Cherwitz and Hikins 1986, 125). Relations such as height, weight, color, frequency, viscosity, mass, and degree constitute the world's furnishings, large and small. A thing is a phenomenon that emerges from a collection of relations. What, then, are the implications of this ontology for expertise?

Rhetorical perspectivism's ontology entails that expertise is actually the capacity to describe and manipulate collections of relata (particulars) and their relationships to myriad other contexts of particulars, including the social and political contexts in which they are situated. At times, expertise will be directed to collections of relata that are "internal" to humans, such as when a physician assesses the significance of a patient's subjective state of pain. More often, expertise will be directed to collections of relata that are "external" to humans, such as when an aircraft engineer passes judgment on the safety of a new aircraft design after wind tunnel testing, or a chimney sweep assesses the fire hazard of hydrocarbon deposits in a fireplace flue after close inspection.

The ontology of rhetorical perspectivism preserves the commonsense notion that the vast majority of objects constituting the world exist largely independent of humans, created not by "internal" mental or by purely intersubjective social processes, but by relational sources that are largely "external" and typically independent of human social creation. Knowledge of these typically extra-human sources, and of their interactions with other relational sources, accounts for the wide application of the term expert to physician and chimney sweep alike. Expertise, we contend, is principally and ultimately a function of human-situated relational interactions with the furnishings of the real world—furnishings whose character and behavior are themselves the products of relations. Even esoteric knowledge claims emerge subsequent to such experiences, or are deduced from premises rooted in or illustrated by experience. But how is it that humans can be conscious of the extra-human world to begin with?

### *Consciousness*

In managing things and events in the extra-human world, expertise must achieve perceptual consciousness of extra-human objects. This follows from the intentional nature of consciousness (Searle, 1983). Expertise is realized in conscious beliefs, and beliefs are always about things and states of affairs, whether a collection of concrete "objects" (O-rings, freezing temperatures, and solid rocket boosters) or abstractions (issues of ethics in the assessment of behavior, aesthetics in the judgment of art). In the most philosophically skeptical contemporary rhetorical theories, language (or some other symbolic barrier to direct perception) always mediates between the knower and the purported object of knowledge (Whitson

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and Poulakos 1993). On this view, perception is rendered entirely inferential and representational. But representationalism inevitably entails philosophical skepticism. As Gustav Bergmann (1967, 131) succinctly observed: "If all we are ever presented with are representatives, how do we know that they represent anything, and, in case only some of them do, how do we know which do and which don't"? To avoid this skeptical quandary, a way must be found to join conscious subjective experience directly with the intentional objects of perception.

Rhetorical perspectivism holds that the key to a non-representational theory of consciousness is the same doctrine of relationality that underpins the theory's ontology. To see how requires a comparison with contemporary "causal chain" accounts of consciousness. At the very end of the 20th century, philosopher John Searle described consciousness as "the most important problem in the biological sciences" (Searle 1997, 4). In identifying consciousness as a biological problem, Searle is committed to the view that "neurobiological processes in the brain cause consciousness" (1997, 4). Searle's remarks typify contemporary theories of consciousness, contending that the initial impulse of any conscious experience is transmitted through a long causal chain of biological structures and processes before it becomes an "idea" in one's "mind." Such views are inherently skeptical, since the purported cause of any perceptual experience (for instance, a tree) must be radically transformed by its "travel" through the environment and subsequent biological processes. One's idea of the tree (the last link in this complex causal chain) must be nothing like the entity that is the first link in the causal chain. Such "banging and clanking" causality entails skepticism.

In the language arts, Cixous (1981), Derrida (1988), Foucault (1972), Kristeva (1986), Lyotard (1984), and Ricoeur (1996) enlarged the skeptical quandary by interposing layers of language and culture between perceiver and thing perceived. Friedrich Nietzsche is a common philosophical source for this skeptical "linguistic turn":

> [W]e believe that we know something about the things themselves when we speak of trees, colors, snow, and flowers; and yet we possess nothing but metaphors for things—metaphors which correspond in no way to the original entities. (Nietzsche 1979, 82–83)

This insistence on the tropical nature of all discourse, most famously epitomized by Jacques Derrida's (1988) remark that "there is nothing outside the text," coupled with the biological theory of consciousness, makes ontological and epistemological skepticism unavoidable.

Rhetorical perspectivism, by contrast, contends that the causal chain theory of perception is flawed because it is incomplete. To remedy its deficiency, rhetorical perspectivism relies on the theory of relationality to conceptualize consciousness both as a physiological process and a relational one.[7] Missing from the standard causal account of consciousness is the recognition that conscious experience is both a physiological act and a relational act. While a particular biology is necessary for conscious experience, it is not sufficient. Conscious experience cannot occur

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unless a particular set of relations (call it the set of "consciousness relations") obtains between a biological organism and its environment. McGilvary explains:

> "[S]ee" names an occurrence analyzable ... into a physiological process or act, *and* a relation of its own specific kind; and the grammatical object of the verb "see" does not name an object to which the *physiological act* physically passes over. It names a *term of this relation* whose other term is named by the grammatical subject of the verb. A relation of the same kind is found in occurrences that are named by the verbs "remember," "think," etc. In each of these cases there is also a physiological process or "act." This *act* does not "go over" to what is denoted by the grammatical object of the verb, but the *relation does* "go over" in the way in which any relation "goes over" from one term to another in relating the terms. (1953, 46)

Relations "carry" the emergent causality making consciousness possible.

To illustrate, imagine a tractor towing a cart with a long, absolutely inelastic, metal rod. The force of the tractor's tow moves along serially among the various molecules comprising the rod. However, because the rod is inelastic, there is no delay in the cart beginning to move in response to the tow. The towing impulse "jumps across" the inelastic rod immediately, just as a relation does between two collections of particulars. Similarly, the consciousness relation "jumps across" the biological systems interposed between object of consciousness and perceiver. Consciousness is generated both biologically and relationally. The relational component is emergent from the biology of conscious systems when the biological system achieves the appropriate perspective in relation to an object of perception.

This view of human consciousness not merely situates, but integrates, the conscious subject within the contexts of particulars comprising the world. Few theorists have recognized the need for such integration. One exception is philosopher Alva Noë, who writes: "[T]he relation itself thanks to which our thoughts and ideas and images are directed to events, people, and problems in the world is the fact of our being embedded in and our dynamic interaction with the things around us" (2009, 164). This "embeddedness" and dynamic interaction with the furnishings of world both accounts for, and is accounted by, the relational theory of consciousness.

One advantage of this theory of consciousness is that it renders a more coherent account of intentionality. Any strictly biological account of consciousness cannot provide much confidence, let alone guarantee, that intentionality is of anything more than the biological system that is its cause, or the idea in the mind that the system might produce. The biological explanation beckons epistemological skepticism, calling into question the reality of any extra-human object of intentionality.

By contrast, rhetorical perspectivism re-establishes the plausibility of an extra-human world, the conscious experience of which is made possible by the unique capacity of relations to "jump back" immediately from term to term. In doing so, the theory re-establishes a philosophical foundation for the idea that expertise is about intentional, extra-human objects and states of affairs, not about "ideas in the mind." Immediately, our concern focuses on managing and assaying the

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conscious experiences of experts and their symbolic interactions with stakeholders. Two questions then arise. First, how is expertise communicated? Second, how are we to evaluate the subjective experiences that purportedly lay at the root of communicated expertise? Given our ontology, terms such as "truth," "knowledge," "belief," and "opinion" will unavoidably be involved in addressing both questions. An answer to the first requires an analysis of meaning, the second, a theory of epistemology.

### *Meaning*

Shared conscious subjective experience among experts and their publics assumes the effective communication of meaning. How language and associated symbol systems, including non-verbal behavior, attain and transmit significance has been a perennial topic of inquiry (Martinich 2001; Salmon 1986). Rhetorical perspectivism accounts for communication by grounding meaning in the notion of relationality. Transmission of meaning occurs (in the simplest case) when one subject is able to duplicate aspects of conscious experience in the consciousness of another. Communication of meaning is, like consciousness itself, "about" collections of relata and the various contexts of particulars in which they are situated (Cherwitz and Darwin 1994, 1995).

On this view, meaning is embedded relationally in words and other signs and symbols. However, recognition of the relational nature of communication recasts our understanding of meaning from one focused on symbols as representations to one identifying symbols as "embodying" relations. Ensconced in all discernible units of communication (morphemes, words, sentences, non-verbal communication, and even syncategorematic terms) are relations that become significant to subjects when used in the act of communicating. Signs and symbols do not stand deputy for things or "point out" things; rather, they are shorthand formulae for relations and the contexts of particulars formed by relations. The meaning of any term "establishes for any self a set or purported set of relationships in which the self is contextualized" (Cherwitz and Hikins 1986, 83).

In terms of a general model of meaning, instances of communication carry meaning by making conspicuous the relationships among rhetor, extra-human world, and audiences, each one of these three arenas being themselves comprised of relata as their own contexts of particulars. To garner meaning from an instance of communication is to recognize the relations ensconced within that instance. To transmit meaning is to generate signs and symbols that, by convention, carry relational significance. Given the complexity of these communicative tasks, it is not surprising that communication sometimes goes awry. Yet neither should we be skeptical concerning the possibility of knowledge, given the capacities of communication to embody relations. Genuine expertise will exhibit such knowledge; thus, any theory of expertise must articulate not only a theory of meaning, but an explicit epistemology as well.

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*Epistemology*

The ontology of rhetorical perspectivism, and its associated theories of consciousness and meaning, implies a realist and non-skeptical theory of knowledge. Although individual experience is always subjective in the sense that it is the experience of individual persons, aspects of experience can also be shared. In such cases, intersubjectivity and social knowledge are consistent with epistemological realism. When perceivers stand in the same or similar relationships to the objects of perception, they typically share the same or similar subjective conscious experiences—experiences that can also be shared through communication. Again, the doctrine of relationality makes shared perceptions possible, since one quality of a relation is that it may be duplicated. The relationships, for example, between topographical distance and scale are duplicated numerous times in the production of maps of Paris. Visitors to Paris, using these maps, can know whether from their hotel to turn left or right to get to the Eifel Tower, how many minutes the trip will take, and that the Rue de Rivoli will take them to the Louvre. They know these things because, contrary to Korzybski's (1931) well-known and oft-quoted cliché, the map *is* the territory. If maps were not relationally identical to the features they illustrate, navigation would be impossible. The very same relations that (ontologically) generate the specific topographical features that are the city of Paris are presented (relationally) on road maps of Paris.

Although not conditioned to think in relational terms, a moment's reflection suggests that we are immersed in a world of relations that make all knowledge, whether pedestrian or expert, possible. We find our way in the world of ordinary experience by applying knowledge of relations. One's knowledge of relations and how to manipulate them in order to recognize a relative in a crowd does not rise to a level we would normally identify as "expertise." By contrast, a piano virtuoso's application of the notes on a sheet of music to the complex coordination of finger movements when performing a Brahms concerto, or a neurosurgeon's application of techniques learned from medical school and residency while navigating the structures of a patient's cerebral cortex, exhibit such an unusual and sophisticated level of relational knowledge about some specific context of particulars that we reserve for their specialized knowledge the identifier "expertise." Between the extremes suggested by the aforementioned examples are those individuals who have more or less expertise because they possess more or less knowledge of the relations comprising the world.

Rhetorical perspectivism's relational ontology and its model of consciousness entail a realist epistemology. We are aware not of representations or inferences, but of extra-human entities whose nature is generated by relations and which reside in contexts of particulars that are largely extra-human and independent of our subjective consciousness. "We are directly aware of the objects of reality. We are aware of them because within the conscious subject, relationship to the object of consciousness 'passes over' to the 'object' of consciousness" (Cherwitz and Hikins 1986, 136).

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This epistemology must not be equated with traditional formulations of direct realism or naive realism, from which it differs in its analysis of perspective. We are not aware of reality all at once, nor are our perspectives to be regarded as immediately available independent truths. The accretion of knowledge—that is, the accumulation of expertise—is a function of broadening current perspectives and attaining new ones. Neither with regard to empirical nor social questions does reality offer itself whole for our immediate inspection. Human subjective awareness is always of some more or less limited aspect of the object of perception—some context(s) of particulars limited by other such contexts; we are aware of an aspect of the object from the perspective of the subject.

While such perspectival awareness has been held to entail subjectivism, we have argued at length elsewhere that this skeptical analysis of perspective is mistaken (Cherwitz and Hikins 1983, 1986; Hikins 1999; Hikins and Zagacki 1988). One's view of the world is never a "god's eye view"; but neither is our acquaintance with it made opaque to the understanding by virtue of being perspectival. Observation of the far side of the moon was hidden from astronomers until the 20th century. Yet it would be absurd to claim that astronomers did not possess knowledge—detailed knowledge—of half the moon's topography. Moreover, the fact that spacecraft eventually permitted us to view the half of the moon always facing away from earth demonstrates that perspectival limitations on knowledge can be overcome. Similarly, in the social realm, obstacles to viewing women and minorities in ways that would lessen their oppression have been removed as we have become aware of and explored alternative perspectives.

The idea that perspectivism is consistent with realism is particularly illuminating for the subject of expertise. In our ordinary understanding of the term, expertise suggests focused knowledge; that is, knowledge of a narrow set of issues or problems. Rhetorical perspectivism embraces but also expands this common understanding of expertise, coupling to it the idea that expertise accumulates as perspectives on a given issue become more evident, both in breadth and depth.

Here arises the important notion of transdisciplinarity (Hikins and Cherwitz 2010). The same relational ontology that makes knowledge possible entails the interconnectedness of all the furnishings of the world. Some of these relational connections will be largely inconsequential to the interests of some stakeholders and vital to the interests of others (agronomists and wheat farmers struggling with a blight in Kansas instantiate a context of particulars that may be of little interest to a British Parliament hearing on the wisdom of raising university tuition). But interconnectivity requires that expertise in any particular arena not be viewed as insulated from adjacent arenas. One might say that the best expertise exhibits "peripheral awareness" as well as "focus."

Just as radio waves exhibit both frequency and amplitude, the best expertise will always exhibit two dimensions. The first is the focused arena of interest to which particular expert knowledge is applied (the context of particulars generated by a given set of relations), such as "the AIDS epidemic" or "the Federal deficit." The second is the collection of collateral phenomena in the surrounding

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environment that both influences and is influenced by the exercise of focused expertise. Without proper attention to this second dimension, expertise may be rendered ineffectual or may produce unanticipated adverse effects. Applying transdisciplinary expertise is more likely to avoid the perils of myopic self-interest and the consequent risks of overlooking vitally important adjacent factors when attempting to solve complex problems. To be clear, peripheral awareness and focus are made possible—and are requisite to transdisciplinarity—because of the relational interconnectedness of the world and the nature of humans as potential knowers of relations. Although individuals with very focused knowledge may still be regarded as experts within the confines of their focus, experts with significant peripheral knowledge will be better prepared to manage larger issues whose complexity inevitably results in overlapping arenas of expertise.

In their concern with peripheral awareness and focus, the best instances of applied expertise employ knowledge, accurately describing and effectively manipulating various contexts of particulars residing in and among larger contexts of particulars. Ideally, expertise will be based on accurate—that is, true—descriptions of the world. In earlier work (Cherwitz and Hikins 1986) we modified the traditional definition of knowledge as justified true belief and the referential view of truth. The ontology of relations provides a defensible context for these views, although discussion of them is outside the scope of this essay. It will suffice here to say that rhetorical perspectivism reintroduces terms such as "truth," "knowledge," and "justification" in ways that permit a clear contrast with such terms as "opinion," "belief," and "false," providing a rationale for distinctions among such terms and phrases as "genuine expertise," "faux expertise," "amateur," and "professional." These distinctions raise the practical question: what educational philosophy would best embrace the concept of expertise developed in this essay and train experts to recognize, broaden, and deepen the relational perspectives comprising their knowledge?

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## Intellectual Entrepreneurship: Toward an Educational Philosophy of Expertise

The second decade of the 21st century promises to be one of educational reform in the USA. Here, the academy's tradition of educating experts primarily in insular and discrete subject matters through the application of compartmentalized curricula and for the purpose of accumulating repositories of narrow disciplinary knowledge is being reconsidered (Boyer 1996; Cherwitz and Hartelius 2006; Hartelius and Cherwitz 2010). One alternative model seeking to better adapt education to the challenges confronting contemporary life is encapsulated by the phrase "intellectual entrepreneurs"—scholars with the capacity to engage contemporary problems creatively and holistically (Hikins and Cherwitz 2010). This pedagogical approach emphasizes critical thinking, problem-solving, and the generation of intellectual capital, not just discipline-specific certification. Education on this model is best suited to addressing the problems of real life because real-life problems do not come wrapped in disciplinary packages; their antecedent causes,

effects, and solutions blur the boundaries of disciplines, often defy conventional labels, and so demand transdisciplinary solutions.

Consider, for example, that such vexing issues as global warming, atmospheric pollution, overpopulation, depleted fresh water resources, agricultural failure, commodity shortages, famine, political unrest, and deforestation exhibit intertwining causes, implications, and solutions. Effectively addressing such a multidimensional set of issues requires a holistic approach, embracing a global terminology, such as "sustainable environmentalism." Grounded in a version of philosophical realism, the perspectivist epistemology and ontology we describe in this essay is best suited to identify the real-world constituents that must be understood and the real-world problems that must be solved if sustainable environmentalism is to proceed from abstract conception to coordinated solution. It follows that the ways we train experts to address complex contemporary issues such as environmental challenges must be consonant with their multidimensional character.

The holistic approach we have in mind calls for citizen-scholars to develop a highly diversified portfolio of expertise—one exhibiting an appropriate mix of disciplinary knowledge and a heavy concentration on creative, critical thinking, and problem-solving capacities that transcend disciplines. Generating expertise of this sort accords well with the theory of rhetorical perspectivism elaborated above. Each of the various arenas of environmental concern mentioned, for instance, represent their own context of particulars, even as they are embedded in larger contexts. On an earlier model, each would be treated by expertise representing discrete and insular specialties (geology, sociology, meteorology, agronomy, epidemiology). This approach runs the risk of specialists in these fields ignoring both the larger context of particulars circumscribed by the phrase "sustainable environmentalism" (which no single discipline is equipped to address), as well as the intricacies that develop at the margins among and between disciplines. At these critical junctures, academic specialties and particular communities and stakeholders meet and invite transdisciplinary solutions.

At the same time, intellectual entrepreneurs have more than superficial or generalist credentials. They are expected to have deep expertise, but not in one narrow subject or discipline. Unavoidably amalgamated with our day-to-day commonsense understanding of the world is the presumption that experts have more extensive knowledge than do lay persons. Thus, it is important for audiences to distinguish between real expertise and faux expertise. Indeed, from the advice offered by our cardiac specialist, to our confidence that the air bag in our car will deploy in a collision, our lives depend every day on the application of competent and efficacious expertise—expertise that interfaces with the extra-human, real world.

## Conclusion

Regrettably, much contemporary thought—influenced by a tradition of skepticism as old as Gorgias' (McComiskey 1997) three-part argument against reality, knowledge, and communication—renders our dependence on expertise not just tenuous,

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but incoherent. This essay suggests that rhetorical perspectivism reestablishes connections among existence, knowledge, and communication. In so doing, we hope to have provided a tenable realist conceptual foundation for understanding and making effective use of expertise, and to have contributed to renewed interest in anti-skeptical philosophical foundations for social epistemology and rhetorical theory.

An important implication of this essay, then, is that rational decision-making on any socially significant, or even individually significant, issue cannot be achieved in the absence of considerations linking expertise directly to the world in which the human animal resides. The best decisions in such a world, where persuasive possibilities abound, require intellectual entrepreneurs to apply expert knowledge as citizen-scholars engaged in critical, holistic, perspectival problem-solving.

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## Notes

[1] In his translation and commentary on Aristotle's *Rhetoric*, George Kennedy associates *ethos* with "credence" and credence with "thought and contents"; that is, with truth claims about the world. In other words, according to Aristotle, one's credibility is a function of the perceived truth or falsity of the rhetor's description of reality (Aristotle 1991, 38, and notes 41, 42, and 43).

[2] We use the term "faux" in contrast to "real" expertise to underscore the fact that in contemporary life the notion of expert is often compromised by those who profess knowledge in some domain when, in fact, they possess little or no such knowledge. The prevalence of "hucksters" or "quacks" in virtually every enterprise has always underscored the importance of defining the genuine expert in more than rhetorical terms. We would also apply the phrase "faux expertise" to an individual who actually regarded himself or herself an expert but who actually was more or less incompetent. Just as faux diamonds have deceived the unwary jewelry purchaser, so too have various stakeholders been deceived by faux expertise, as our examples in this essay illustrate.

[3] We use the term "fact" to mean a state of affairs obtaining in the world. Most facts in the cosmos are at any given time largely irrelevant to human attitudes, beliefs, values, and communication, and would exist even if no humans existed (e.g. the number of craters on the dark side of the moon). Other facts are more bound up with humans and human interests (e.g. 21st-century carbon monoxide levels in large cities). In the language of our relational ontology, a fact is a context of particulars embedded in a larger context of particulars. Space and time (and, thus, history) are two constituents in the very large context of particulars comprising the cosmos.

[4] Although the possibility of cold fusion continues to spark interest, it is still regarded by most nuclear physicists as unattainable. In any case, we contend that its attainability in reality *per se* must be a function of the real-world relational processes relevant to generating nuclear and chemical energy. These are largely independent of human attitudes, beliefs, values, or rhetorical reality construction. The question of the possibility of cold fusion will ultimately be decided by scientific discovery of real-world processes, not social reality construction (Rousseau 1992).

[5] Even the most cursory reading of the other essays in this issue of *Social Epistemology* reveals that their authors tacitly accept realism as the ontological and epistemological context for their scholarship. They all, for example, assume a real world in which expertise functions, as one essay puts it, "against the intractable characteristics of a particular situation" (Majdik and Keith 2011, p. 275 in the present issue). Agreeing with John Searle's (1995) contention that realism is a "background condition" for intelligible discourse, we suggest that even those who explicitly argue anti-realist and pro-skeptical positions all, in one way or another, commit the "self exempting fallacy" (Waddell 1988), offering a

compendium of truth-claims directed against competing authors, engaging arguments and authors who are part of a shared real world. Indeed, such examples only make sense on the assumption that *real* communicators reside among *real* furnishings of the *real* world.

[6] This requirement is consistent with our definition of rhetoric as "the art of describing reality through language" (Cherwitz and Hikins 1986, 62).

[7] Subsequent to our discussion of the topic in the rhetorical theory literature (Cherwitz and Hikins 1983, 1986), there has emerged a robust discussion of the relational nature of perception in the philosophical literature. While some of this scholarship has attempted to link a relational theory of perception with both propositions and intentionality (Stoljar 2004), none has explored relationality as a fundamental ontological principle undergirding existence, perceptual consciousness, meaning, and communication. For a recent exploration of the relational theory of perception and associated issues, see Crane (2006).

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