The background of the entire page is a grayscale photograph of a modern university building. The building features a prominent glass facade with vertical window lines. In the foreground, there is a paved courtyard with several concrete benches and some trees. The overall scene is bright and clear.

# KRANNERT GRADUATE SCHOOL OF MANAGEMENT

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What Can Management Researchers Learn from  
Donald Campbell, the Philosopher?  
An Exercise in Philosophical Hermeneutics

by

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# **What Can Management Researchers Learn from Donald Campbell, the Philosopher?**

## **An Exercise in Philosophical Hermeneutics**

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That Donald Campbell was a fine social scientist is beyond dispute. But that he also was a cutting edge philosopher is apparently less well appreciated among management researchers. Browsing through the philosophy journals and books in a Humanities Library or book shop, we find many articles and book chapters praising Campbell as one of the ground-breaking philosophers of biology. Campbell was a major contributor to the stream of philosophy better known as evolutionary epistemology (EE). The Belgian philosopher, Werner Callebaut (1993), uses Campbell as a model to illustrate how contemporary philosophers work. Today, a more than 1100-item bibliography exists on EE (Cziko and Campbell 1997), investigating its implications for research areas ranging from the emergence of consciousness in the animal kingdom (Heyes 1987) to the nutritional origin of sensory receptors in photo-bacteria (Wächterhäuser 1987). If you review the management literature, however, you find few references to Campbell's philosophical papers in general or his publications on *hermeneutics*, the philosophical approach he explored increasingly during the later part of his life.

The purpose of this chapter is twofold: (1) to investigate the hermeneutical dimension in Campbell's scholarship and (2) to show how Campbell's own work, read from a hermeneutically-informed approach, takes on a richer meaning. For the purpose of illustration, I examine the essay Campbell delivered at the 1992 Conference on Evolutionary Organizational Dynamics at New York University, "How Individual and Face-to Face-Group Selection Undermine Firm Selection in Organizational Evolution" (1994b), hereafter called the New York essay. Briefly, this essay addresses the conditions that undermine firm-longevity. I first read this essay without attending to the philosophical dimension in Campbell's work. Read from this angle, Campbell appears to argue that groups are ontologically real, that it is important to understand firm-level selection as well as individual and face-to-face group selection given that lower-level selection

processes may undermine higher-level ones: selection “at individual and face-to-face group levels may lead to firm-level dysfunction.” Then I re-read the New York essay through the lens of *philosophical hermeneutics*. This lens reveals that, rather than believing that groups really exist out there, deep-down Campbell was attempting to make sense of the “nihilistic” neo-Darwinian implication that human beings are selfish (on average). The opening argument of the New York essay about ontologically real groups was his first, but not last, attempt to make sense of this view of humanity and its implications for the long-term performance of corporations. Moreover, Campbell believed we need a better understanding of how individuals relate to one another—face-to-face interactions—and not so much “real” groups. We then may realize that the idea of biologically induced opportunism is primarily a manufactured socially fact.

## **PART1: PHILOSOPHICAL HERMENEUTICS, A TOOL TO COPE WITH INTERPRETIVE DILEMMAS**

Broadly speaking, philosophical hermeneutics evokes a dialogue focused on understanding what it means to be *interpretive*<sup>1</sup> human beings (Crusius 1991). From a historical viewpoint, hermeneutical philosophers were at first primarily interested in uncovering the knowledge embedded in the Scripture (Palmer 1969). For example, what is an appropriate interpretive strategy to recover the true meaning of Matthew 4:1–11, Luke 4:1–13 and Mark 1:12–13 stating that, when Jesus went out into the wilderness to pray, the devil set out to tempt Him? How

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<sup>1</sup> There are many similarities between philosophical hermeneutics and Weick’s *Sense-Making in Organizations* (1995). For example, both use the words “interpretation” and “sense-making.” Nevertheless, there are also important differences. Perhaps the most obvious difference is situated in how Weick clarifies the word “interpretation.” He suggests that the word interpretation “connotes an activity that is more detached and passive than the activity of sense making” (1995: 14) and that “[w]hen people discuss interpretation, it is usually assumed that an interpretation is necessary and that the object to be interpreted is evident” (1995: 14). Philosophical hermeneutics attaches a much broader meaning to the term “interpretation”: being *is* interpreting (Crusius, 1991). In this hermeneutical view, if interpretation is perceived to be a passive process, this has more to do with the attitude of the

should we interpret the word “devil”? Is it a good idea to think of this word as a sign corresponding to a real entity out there? Or, should we view the idea of the devil as a fiction constructed for a specific purpose? Should we first study the world view Matthew, Luke and Mark were reasoning in before deciding how to interpret their Gospels? What does it mean to live in a world inhabited by devils and demons? (I use this example given that Donald Campbell himself was puzzled by the ideas of evil, original sin, and temptation as discussed in Part 3 of this chapter.)

During the quest for the true interpretation of the Scripture it became clear that interpretive processes and issues span many additional activities beyond biblical interpretation itself. So, the field of hermeneutics gradually modified its scope. While it was originally equivalent to biblical exegesis, over time it identified itself with philology, the science of linguistic understanding, the methodology of the study of interpretive beings (the social sciences), and, today, philosophical hermeneutics, which is the study of interpretation in its most elementary form (Crusius 1991). Given that the focus of this chapter is on philosophical hermeneutics I limit my discussion to this type of hermeneutics. (The appendix contains a brief discussion of the other types and how they are different from philosophical hermeneutics.)

Hermeneutical philosophers (e.g., Heidegger 1927; Gadamer 1960; Bernstein 1983) contend that ontological questions must be addressed at the same time as epistemological issues. Epistemological questions are questions about “the nature and derivation of knowledge, the scope of knowledge, and the reliability of claims to knowledge” (Flew 1984: 109), questions such as “Is knowledge possible?” and “How do we know that we know something?” Ontological questions, on the other hand, are questions about existence, our own existence and the existence

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interpreting individual rather than with the interpretive process itself.

of the entities we perceive to be in the environment. I briefly discussed how ontological issues—What is the essence of evil? —arise when we attempt to make sense of the knowledge communicated by the Scripture. Another widely discussed interpretive conundrum is Niels Bohr's (1928,1934) complementarity thesis.

The thesis of complementarity states that it is acceptable to use “apparently conflicting models in mutually exclusive domains of experience” (Polkinghorne 1993: 446-47). Bohr proposed this thesis to make sense of the paradoxical relationship between a quantum object as a wave and a particle, two classical concepts that are mutually exclusive both in classical and in quantum theory (MacKinnon 1996; Loder and Neidhardt, 1996). The experimental detection of a particle is usually its location at a point in space (e.g., on a photographic plate) at a particular time. A wave, on the other hand, is defined in terms of wavelength and frequency, which are related to the momentum and energy, the conservation of which is the basis of causality

But how should we interpret Bohr's solution to the quantum paradox? Did Bohr attempt to make clear that the reality *is* paradoxical? The randomly moving “electrons” postulated by quantum mechanics are really out there and, through a complex set of arguments and mathematical equations, we are able to express quantum properties in terms of macroscopic observable instruments? Or, is there, as hermeneutical philosophers argue, an ontological dimension that we first need to address? What are the ontological implications of arguing that randomly moving electrons exist behind macroscopic observable phenomena? What does this view imply about beings? Did Bohr equate free will with randomly inspired actions? Did Bohr believe that human beings are nothing more than stochastic atomic machines and was he trying to explain that this view allows to overcome the inconsistencies between classical and quantum mechanics? Or, was Bohr unwilling to make this ontological statement of human beings and the

universe? Was he intrigued by the role that language plays during the initiation of scientists and theory development as MacKinnon (1996) argues? Did Bohr formulate a complementarity thesis in his attempts to overcome the inconsistencies between classic Newtonian and quantum mechanics? Did he believe we need to view the quantum postulate as a helpful linguistic device to organize the thought processes of experimental physicists while they are figuring out the properties of matter<sup>2</sup>?

We must ask similar questions when we read Campbell's work. For example, what did Campbell (1994b) attempt to communicate when he stated that ontologically real groups may

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<sup>2</sup> Bohr expressed on several occasions that physicists must be agnostic and not try to explain what the Creator had in mind when S/he started up the Universe (Loder and Neidhardt, 1996: 285). Therefore, it is unlikely that he wanted us to view the thesis of complementarity as a natural causal law linking macroscopic Newtonian properties with quantum-level properties. Instead, it is generally agreed that he proposed the thesis of complementarity as a heuristic device to make sense of the inconsistencies between Newtonian and quantum mechanics (MacKinnon 1996; Loder and Neidhardt, 1996). One such inconsistency is the relationship between a quantum object as a wave and as a particle. An additional problem is that Newtonian and quantum mechanics are the product of two incompatible philosophical systems (Faye 1991). Newton believed he was describing the Universe as created by God, as if, he, Isaac Newton, could imagine what God was doing during the First Second of the Universe (Brooke 1996: 8). This belief acted as an assumption in his mental model: he presupposed a strict and immutable separation between the means of observation—the observer—and the object under study. So, Newton endorsed an epistemology that the researcher is capable of stepping outside his own existence and study the Universe from a God's Eye point of view. From that position a researcher would be able to discover to true nature of the universe and the true causal forces governing change.

The theory of relativity, on the other hand, explicitly presupposes that it is impossible to ascribe properties to objects independently of the experimental set-ups in which they make themselves known. It implies that the properties described by the classical Newtonian concepts are not absolute, but relative to a frame of reference selected by the subject (Faye 1991:169–70). Thus quantum mechanics is based on an epistemology that sets up a researchers as an insider—an extension of the detecting instrument—and not an outsider.

Thus we may view the complementarity thesis as an attempt to overcome inconsistencies between two incompatible reference frames, in a practicable way. To be sure, to this day physicists are not sure what to make of the inconsistencies between quantum mechanics and Newtonian mechanics and Bohr's answer to these paradoxes (Beller 1993; MacKinnon 1996: 270).

undermine firm-longevity? Did he want us to do research on causal group-level and firm-level forces? Or, did he view this argument as a trial-and-error schema to organize our thoughts on the social processes in companies, and their effect on long-term performance? (This question is addressed in Part 3 of this chapter.)

The need for philosophical hermeneutics is especially great when we deal with texts that have special authority and function as a decision-making guide, as in the case of a sacred text, a legal code, or even an article in the *Academy of Management Executive*. Every text, irrespective of whether it is published in *The Scripture*, *Physics Review*, *Nature*, *Metaphysics*, or *Strategic Management Journal*, presents choices of interpretation. Philosophical hermeneutics helps us characterize these choices and understand what is at stake.

At face value, it may seem that it is a reasonable approach to study and interpret the ontological status of entities such as demons, atoms, groups, and firms *independent from* studying our own ontological status, as if it is possible to gather knowledge about the “objects” in the environment, independent from gathering knowledge about our self. Philosophical hermeneutics questions this surface approach to ontology. It argues that how we view the existence of objects in the extra-mental reality is *a function of* how we frame our own existence and relationship with the environment. (By “extra-mental reality” I mean the world as it exists independent from how an individual perceives it.) Our perception of the outside reality is a function of how we *frame* our own position in and relationship with worldly phenomena—in the past, present, and future. We, therefore, need a better understanding of the reference frames<sup>3</sup> we

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<sup>3</sup> Throughout the chapter, I use the terms, “reference frame,” “frame,” “view,” “world view,” and “viewpoint” interchangeably to denote what social psychologists call a “schema,” —a cognitive structure that organizes an individual’s knowledge about an object, person or situation, including knowledge about attributes and relationships among those attributes (Fiske and Morling 1995: 489–494).

use to make sense of this relationship and the extent to which these frames confuse us or help us clarify and focus our thought processes—especially if we want to develop a proper understanding of the processes taking place in the world.

Philosophical hermeneutics makes the following three arguments. (1) It is possible to identify two frames of reference with which to make sense of questions of interpretation: a God’s Eye frame and a Participant frame. (2) The God’s Eye frame tends to have a mind-closing effect. It reinforces dogmatic argumentation and, therefore, promotes conflict and intolerance. As such, the God’s Eye frame *is not* an attractive way to make sense of the world. Instead, it is preferable *we all* eventually reason in a Participant frame of reference. (3) Given the problematic nature of the God’s Eye frame, we need a better understanding of issues of framing; that is, the difference between a God’s Eye and Participant frame of reference.

One way to clarify these three arguments is by invoking the hypothetical construct of “Mr. Jones.” Mr. Jones is a researcher who has not paid attention to the philosophical literature on framing. He does not realize that he has a tendency to oscillate between a God’s Eye and Participant mode of reasoning and that he takes a different approach to research depending on the frame of reference in which he works. Given that this chapter is written in the context of management and organization studies I set up Mr. Jones as a management researcher. (But the arguments developed next apply to any type of institutionalized academic discourse.)

### ***THE GOD’S EYE VIEW OF READING A TEXT***

Broadly speaking, the God’s Eye view is a way of reasoning that implies that certain individuals are in privileged positions to discover Deep Truth about the universe. As Putnam<sup>4</sup>

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<sup>4</sup> I primarily quote from Hilary Putnam’s (1981) *Reason, Truth, and History* in this chapter. But you should keep in mind that other philosophers such as John Dewey, Richard Rorty, Michael Dummett, Floyd Merrell (1997), and

(1981: 49) puts it, in the God’s eye view “the world consists of some fixed totality of extra-mental objects [as described in physics]. There is exactly one true and complete description of ‘the way the world is’. Truth involves some sort of correspondence relation between words or thought-signs and external things and sets of things.”

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Insert Figure 1a about here: The God’s eye point of view.  
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The God’s Eye way of reasoning is depicted in Figure 1a. The person behind the desk is a management researcher—Mr. Jones—who is investigating a specific managerial issue, for example, how the performance of quite successful companies sometimes declines. He thinks of himself as a value-neutral observer who studies the real essences of these firms. Arrow (1) represents the so-said correspondence relation between thought signs, symbolized by a researcher standing on the moon, and the phenomena in the extra-mental reality as symbolized by the globe. Arrow (2) stands for the relation between thought-signs and linguistic signs, symbolized by a book. Arrow (3) represents the relation between linguistic signs and extra-mental phenomena<sup>5</sup>.

The God’s Eye view of the world reinforces the idea that we must evaluate our scientific beliefs and texts as if they are approximate photographs of the phenomena under investigation. Plato was one of the first to suggest that human knowledge be treated as a crude and imperfect picture of “Ideal Forms.” The French philosopher, René Descartes, then, gave this view a

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social psychologists such as Bernard Weiner (1992) make similar arguments. For a historical review of arguments against the God’s Eye view see Linsky (1997: 128–32).

<sup>5</sup> As students of Popper may realize, Figure 1a–b, 2a–b, 3a–b, and 5–7 are visual presentations of Karl Popper’s Three World View. The globe symbolizes World 1, the material world as discussed in theories of physics, chemistry and biology. The human figures symbolize World 2, the world of mental states and processes. The book stands for World 3, the emergent world of products of the human mind. For more details see Popper (1979, 1994) and Popper and Eccles (1977).

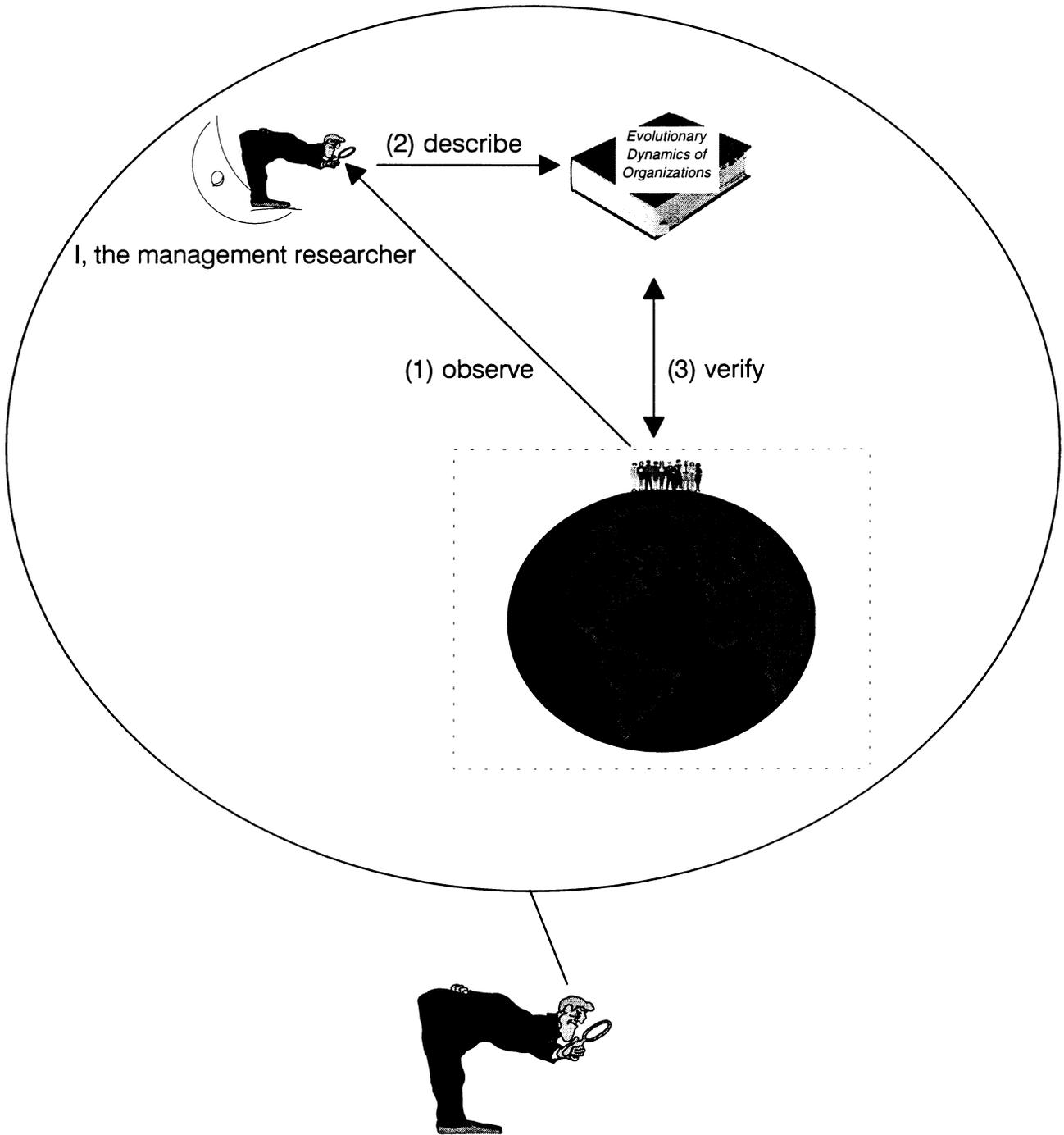


Figure 1a. Mr. Jones in a God's Eye mode of reasoning

“scientific” foundation. He literally interpreted the human eye as a lens of what, today, we call a photo-camera in *Optics* (1637) and his *Treatise on Man* (written in the 1630s and posthumously published in 1664<sup>6</sup>). Pushing this metaphor to the limit suggests that it is fruitful to treat linguistic signs as if they are imprecise pictures of the phenomena in the outside world. Indeed, the philosopher Wittgenstein attempted to articulate such a picture theory of language in his *Tractatus Logico-Philosophicus* (1921).

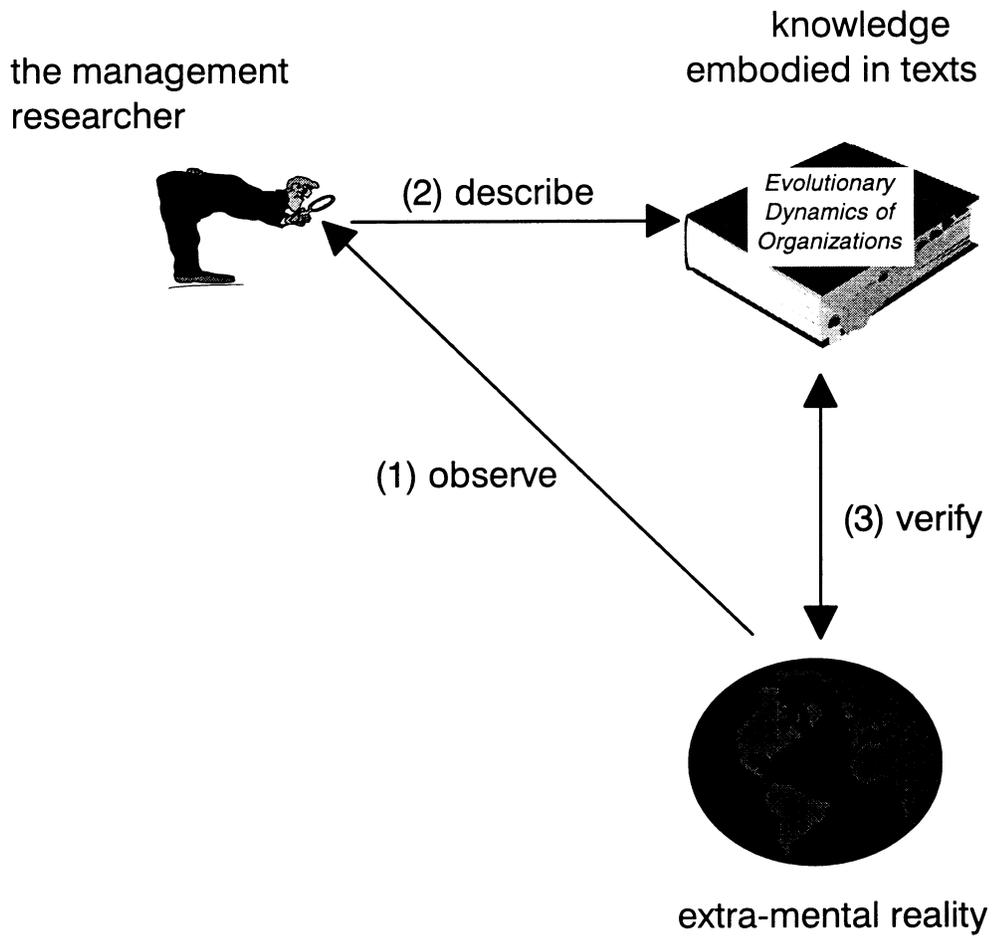
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Insert Figure 1b about here: Schematic presentation of the God’s eye point of view.  
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The God’s eye point of view inspires Mr. Jones to think of his relationship with phenomena under investigation as one of the sides of a triangle (Figure 1b). He functions in this triangle as a (very complicated) mirror. His research activities may be broken down in primarily three tasks, “observing,” “reporting,” and “testing.” First, he *inductively* observes what is happening in the world. The reflected photons fall on his eyes’ retinas and induce an electron cascade which leads to the creation of photograph-like images of the phenomena in his brain. Via a very complex set of biochemical and neurological reactions, these images are translated in patterns of dots on paper or digital signals stored on a computer disk: Mr. Jones describes what he observes in the world. He then generalizes his empirical findings in hypotheses and *deductively* tests (and observes) whether the postulated relations hold true.

This triangular reasoning squeezes Mr. Jones out of the world so to speak. He believes that, with proper training, he is capable of transcending his own subjectivity; as if he is able turn his

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<sup>6</sup> In *Treatise on Man* Descartes developed his now famous machine theory of living creatures. He decided not to publish this work after he heard of the trouble that the Roman Catholic Church had caused Galileo. For a historically-informed discussion of Descartes’ machine view on vision, see Smith (1976: 170–74) and Wolf-Devine (1993).



**Figure 1b. Schematic presentation of a God's Eye frame of reference: triangular reasoning**

personal values and preferences off as easily as he turns his computer on to write up his research findings. It is the job, the duty, of Mr. Jones to publish articles with “true” descriptions of what happens in corporations. He believes that it is possible to obtain the value-neutral state of mind of an outsider and draw an imaginary line—the dotted line in Figure 1a—detaching him from the phenomena under study. He perceives his relationship with these phenomena as independent of time, space, and mind; as if he is like God. Mr. Jones appears capable of mentally stepping outside his own existence and examining organizational phenomena “from above”—like a bird. He believes that what he *sees* is the way the phenomena in the extra-mental world *are*.

The God’s Eye world-view sets up a scientific text as if it is equivalent to a snapshot of a certain area in the world at a certain point in time—the researcher acts like a video-camera. A scientific text has one and only one photograph-like interpretation, as if you are able to freeze it in time and space to bring out its true meaning. When Mr. Jones reads Campbell’s New York essay, he uses the same decision rules he would use to study photographic images. Just like he holds a photograph next to the real phenomenon to determine the photograph’s “truth” or “falsehood,” he treats a text as if he somehow is able to unambiguously determine whether its content is true or false. He tacitly evaluates whether each sentence Campbell wrote is approximately true or false. He wonders whether the ideas communicated by Campbell’s text are mirror-like reflections of the real world. Is the author really thinking what he wrote down? Do the words on paper really correspond to his thoughts (Arrow 2)? Are his thoughts truthful representations of the extra-mental phenomena (Arrow 1)? In other words, the God’s Eye frame of reference misleads us to believe that problems of misinterpretation are not a serious concern; if a researcher is in the correct frame of mind he should be able to discover the one true meaning of a text. Indeed, philosophers in the logical positivist and analytical tradition attempted to

develop a linguistic system that ensured a proper use of analytic (logical) and synthetic (empirical) statements and that would minimize the use of vague terms and ambiguously derived inferences. They hoped this linguistic system would solve the problem of misinterpretation (Abel 1953).

In summary, a God's Eye point of view suggests:

**Proposition 1a.** It is a good idea to evaluate a scholarly publication in the same way that you would evaluate a photograph.

**Proposition 2a.** It is a good idea to give the reading process the same ontological status as the activities of a computer scanner.

**Proposition 3a.** Textual interpretation is not a serious concern; philosophers of language and cognitive scientists eventually will solve this problem.

To summarize, a God's eye view portrays the reading of scientific texts as an automated, mechanical activity like that in a photo-voltaic cell. It downplays the creative and subjective aspects of reading. It removes "Donald Campbell" and "You" from it. It misleadingly gives the impression that the true meaning of a text eventually will emerge as long as enough competent researchers read the same text; the development of intersubjective agreement helps us determine its truth content; while some of us may experience difficulties overcoming their subjective tendencies, these biases do, on average, not create a serious problem. Thus the God's Eye views deceptively suggests that we, management researchers, need not worry about the possibility of misinterpretation as long as we make sure to use accurate and precise language.

### *THE PARTICIPANT VIEW OF READING A TEXT*

A Participant frame of reference sets up a human being as the product of and active participant in the human community he attempts to study and understand<sup>7</sup>. Figure 2a illustrates the

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<sup>7</sup> Philosophy literature offers several terms to denote the Participant world view, such as the internal view (Putnam 1981: 50) and the pragmatists' world view (Putnam 1981: 50; 1995; Rorty 1982: xiii–xlvi). I choose the term

Participant frame. Mr. Jones now thinks of himself as a participant in a discourse about ways to help companies succeed in the long run. He perceives himself as a voice in a universal conversation, in which the various points of view of actual persons reflect their various interests and purposes (Putnam 1981: 49–50). One of these purposes is to find the most clarifying lens with which to discover the degree of effectiveness of managers’ actions and thoughts.

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Insert Figure 2a about here: Mr. Jones in a Participant mode of thinking  
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In the Participant world view, a management researcher explicitly acknowledges that he is the product of a certain history and culture. Thus Mr. Jones realizes that he knows as much as he learned from the books that he read, the experiences he underwent, and the conversations in which he participated. He has come to terms with the subjective nature of what he knows. So, he understand the futility of attempting to reason in a value neutral way. (It is literally inconceivable.) Instead, Mr. Jones talks openly about his research values and investigates whether they make sense after all. Mr. Jones attempts to understand whether or not his espoused values are the values he *actually* uses in his research. He also wants to find out the extent to which his values in use are consistent with values benefiting the human species as a whole<sup>8</sup>

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“Participant”—which Bernstein (1983) also extensively uses—because this term neutralizes the us-vs.-them or insider-vs.-outsider dichotomy that is implicit in the God’s Eye frame.

<sup>8</sup> The term “human species” is used here for the following reason. One of the core insights of philosophical hermeneutics (and postmodernism) is that we need to give up the quest for certainty: it is humanly impossible to develop an indubitable foundation of rational criteria that can be used to resolve disputes of any kind. We will never obtain certainty: we will never be able to exclude the possibility that *we* (and not the others) are wrong. This raises the question whether it is still meaningful to strive for consensus: if it is impossible to develop a set of timeless criteria of rationality, we cannot use agreement and consensus as a measure of progress towards truth. For all we know, the consenting group may have been brainwashed by a particular theory like the German citizens of the 1930s and 1940s who used evolutionary biology to justify their racial policies and genocide (Lerner 1992). Thus, if consensus in itself cannot be a measure of rational progress towards truth, we cannot exclude the possibility that

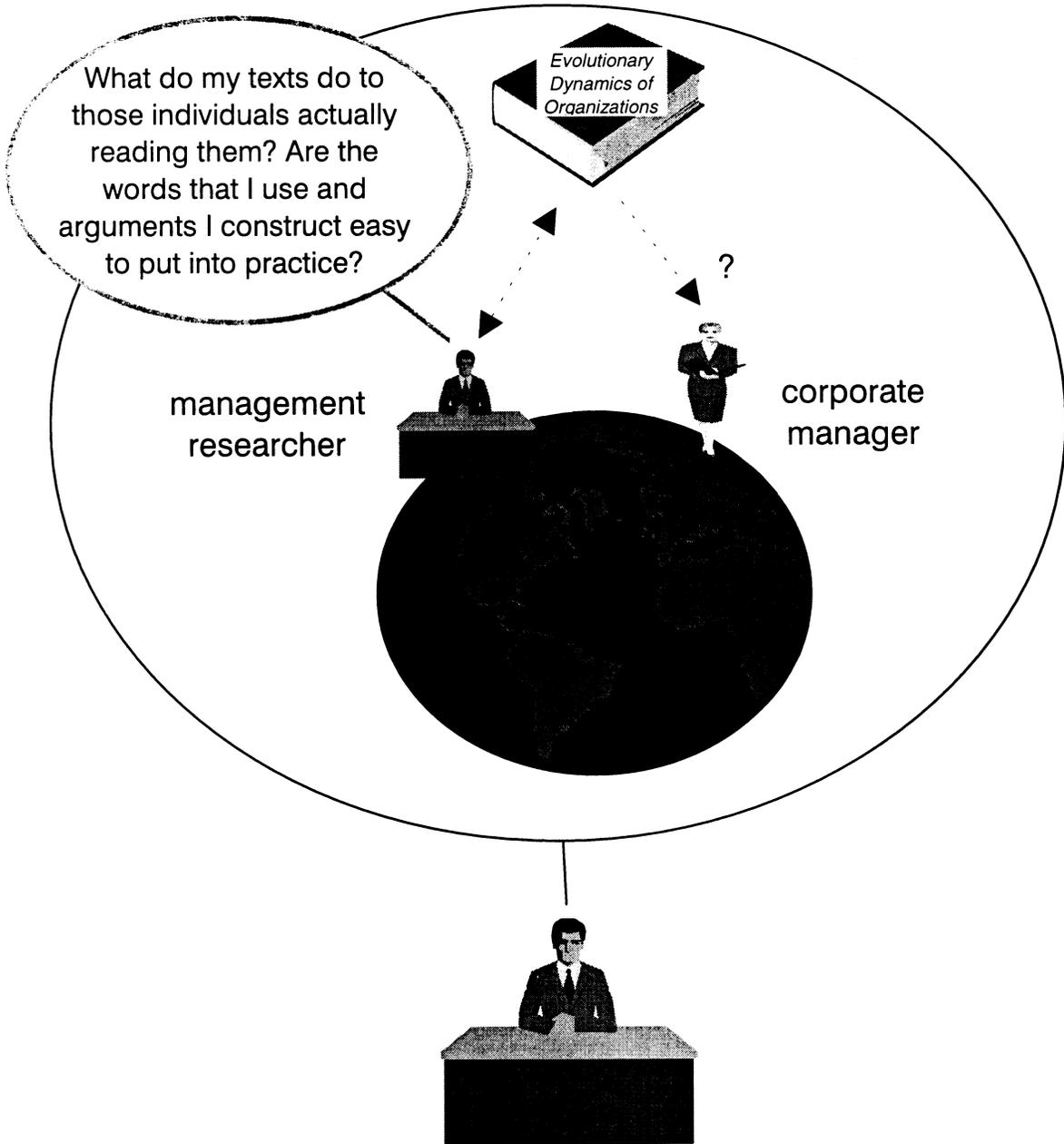


Figure 2a. Mr. Jones in a Participant mode of reasoning

(Campbell 1979: 39; 1982a: 333–34). Mr. Jones’ values motivate him (Campbell 1993b: 36).

He looks upon his research questions as issues with practical consequences for him, his neighbors, and the top management teams he studies.

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Insert Figure 2b about here: Schematic presentation of the Participant point of view.  
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arguments in favor of consensus are part of a political scheme that has nothing to do with getting access to true knowledge in itself. For reasons like these, researchers such as Cannella and Paetzold (1994) and Van Maanen (1994; 1995a, 1995b) argue *against consensus*. In their view, we need to think of academia as consisting of several communities, each developing its own body of theories and text. If the views of these communities conflict, so be it. No community—no matter how many members it has, no matter how much these members agree among one another—has the right to question, judge or condemn the views of other communities.

I believe we do not need to go that far and reject the idea of consensus in its entirety. Biology offers us a justification for consensus. The biological species concept developed by Mayr (1963) stresses that species have a reality and an internal genetic cohesion owing to the historically evolved genetic program that is shared by all members of the species. According to this concept, then, the members of a species constitute a reproductive community. They draw from the same large intercommunicating gene pool. They form a set of groups of interbreeding natural populations that are reproductively isolated from other species (Mayr 1992: 17). In this view, as long as human beings are able to reproductively mix their genes with one another, there is no reason to believe that they can form academic communities with norms of rationality that are incommensurable with one another. Said differently, Cannella, Paetzold and Van Maanen’s position would only make sense if we could establish that the various discourse communities in management are reproductively isolated. As long as we cannot establish this condition, we must accept *a shared rationality*, and hence, the possibility of consensus. Given that I use a biological argument to justify the idea of a shared rationality I use the term “human species” rather than “society” or “culture.”

One could object that, as the human genome sequencing project approaches completion, it should be possible to develop genetic markers for irrationality in the same way as one claims to have developed such genetic markers for schizophrenia. But as Oyama (1985), Lerner (1992), and many others indicate, the implicit assumption in this model is that we can unambiguously separate genetic from environmental influences. Such a model would block the study of how the *interactions* between genes and their cellular context determines what happens to the individual—which is a problematic. A second problem is the role of researchers in such studies. Which criteria would exclude the possibility that researchers rather than their research subjects are irrational? The case of Nazi research practices indicates that this problem is real and not imagined. Therefore, it is more productive to presume that the members of the human species share the same rationality, however defined.

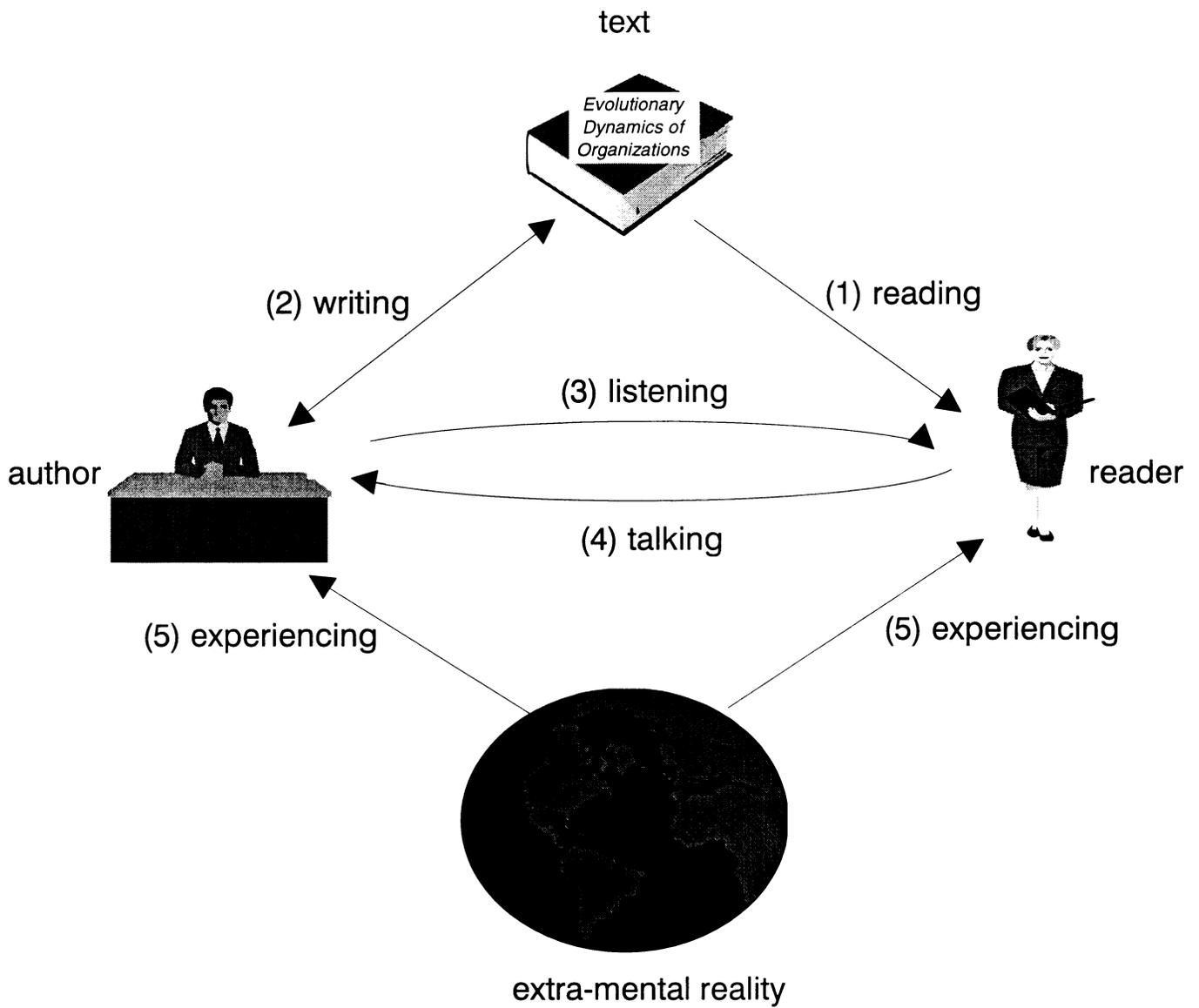


Figure 2b. Schematic presentation of the Participant frame of reference: quadrangular reasoning

To answer questions such as these, Mr. Jones reasons in terms of *a quadrangle* as depicted in Figure 2b. He views himself as a corner of this quadrangle, either as a reader or a writer, with “the Other” in the opposite corner. The text and the extra-mental reality mark the third and fourth connecting points. So, compared to the God’s eye view, where the Other is either an onlooker like Mr. Jones, or, alternatively, someone down there to be observed—Figure 1a—, the Participant frame of reference does not classify readers and writers as a function of whether they know less or more; rather, it implies that they know something different.

The Participant view explicitly sets up a text as a mental lens. It is an instrument we craft (Booth, Colomb and Williams 1995). It fulfills two functions, bridging the space and time separating human minds and providing a focusing device. “Text” is something that stands between us and the outside world. It stands between a writer and his readers. Its purpose is to focus our thoughts and bring the thoughts of the author into focus. The arrows in figure 2a and 2b stand for (1) reading, (2) writing, (3) listening, (4) talking, and (5) experiencing. No arrow links the text with the extra-mental reality because the text is *never* positioned next to the reality. The Participant frame reminds us that we never hold a text next to the phenomena and estimate its truth content in the same way as we would evaluate that type of content in a photograph of—say—the Eiffel Tower. In other words, in a Participant frame of reference it becomes meaningless to evaluate a text as a function of its truth or falsity. As Putnam (1981: 49–50; his emphasis) states, what God’s Eye researchers call “truth” is some sort of warranted acceptability, “some sort of ideal coherence of our beliefs with each other and with our experience *as those experiences are themselves represented in our belief system*—and not correspondence with extra-mental or discourse-independent “states of affairs’.”

The American philosopher John Dewey elaborated the “lens” view of texts and beliefs. I took the words “photograph” and “mental glasses” from his work. Wittgenstein also contributed to making this distinction. As mentioned above, in the earlier part of his life, Wittgenstein attempted to develop a Picture Theory of Language by studying the extent to which the logical form of a linguistic system corresponds with the world it represents. He very publicly abandoned this project in the later part of his philosophical career in favor of a more nominalist view of language in his *Philosophical Investigations* and *Blue and Brown Notebooks* posthumously published in 1953 and 1958 respectively.

Note that there exist two ways in which we may use the lens concept. One way is to think of this concept as the lens of a photcamera. In this view, we are inspired to evaluate our knowledge and beliefs as snap shots taken from a particular angle, as stated in Proposition 2. The second way is to imagine the concept “lens” as denoting a pair of eye glasses an optician is crafting for a person with poor vision, for a microscope to study the bacteria in a drop of saliva, or for a telescope to study the stars in the sky. In this second meaning the mental lens is something that stands between us and the world. As Dewey put it (1916: 198; cited in Morgenbesser 1977: xvii; emphasis added):

The thinking process does not go on endlessly in terms of itself, but seeks outlet through reference to particular experiences. It is tested by this reference; not, however, as if a theory could be tested by directly comparing it with facts—an obvious impossibility—but through use in facilitating commerce with facts. It is tested as *glasses* are tested; things are looked at through the medium of specific meanings to see if thereby they assume a more orderly and clearer aspect, if they are less blurred and obscure.

So, we have a paradigmatic change<sup>9</sup> in the meaning attached to the words, “text,” “belief,” “human mind,” and “knowledge.” Table 1 summarizes this Kuhnian shift in meaning. How you view the knowledge communicated in a text is a function of the interpretive frame you reason in. The God’s Eye frame sets you up in a triangle and makes you more likely to treat a scientific text as a descriptive photograph of that specific area in the world that you are “objectively” observing and describing. It makes you believe there is only “one” correct interpretation of a text (the one that is consistent with *your* knowledge of the fundamental nature of the Universe). To state it in exaggerated terms, the God’s Eye view sets up the researcher as a Cartesian machine. He has the function of a digital photo-camera; his eyes acts like a lens of such a camera. His brain is the mechanism that runs the camera. As such, the text is conceptualized as a crude photograph. It communicates knowledge about the way the world *is* in the same way as a photograph taking by a weather satellite records the development and movement of tropical storms. By continuously comparing the text with the real world, the God’s Eye frame confusingly gives the impression we move towards developing true descriptions of the world. It makes us believe that we must compare our thoughts and actions with these true scientific texts to find out which of our beliefs are true or false; doing so ensures that we eventually approach the Truth. The God’s eye frame

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<sup>9</sup> There are a lot of similarities between Kuhn’s (1962) *Structure of Scientific Revolutions* and philosophical hermeneutics as Kuhn himself acknowledged (e.g., 1977: xiii–xv). However, it should be stated that the field of philosophy (and management) is still divided about the merits and contributions of Kuhn’s work. At the one hand are those who claim that Kuhn promoted mob psychology (Scheffler 1967: 81) and presented a relativistic position that he later recanted when he realized how nonsensical it was (Hunt 1990: 2-5; 1992: 89). At the other side are those who claim that we must first become familiar with existential, phenomenological and hermeneutical philosophy to fully grasp the significance of Kuhn’s work. In the view of this latter groups the claim that Kuhn’s *Structure of Scientific Revolutions* is an argument for relativism (in the pejorative meaning of the word) indicates that the author of that claim is reasoning in a God’s Eye view (Rorty 1987: 41) and is unsure how to act like a charitable interpreter.

misleading implies that uncertainty may be eliminated in the long run. (As I elaborate below in Part 1, this last implication makes the God's Eye frame problematic.)

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Insert Table 1 about here: Comparison between the God's Eye and Participant frame of reference  
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From a Participant point of view, on the other hand, this question about knowledge is a function of the frame of reference we reason in. If you think of yourself as a corner in a quadrangle you are more likely to treat a text as a lens to focus each other's thinking and bring each other's thoughts into focus. The Participant view sets up the researcher as an optician; he crafts lenses/texts to make his customers see better. Beliefs are also evaluated as lenses. We, human beings, have the ability to be self-conscious. We have the capability to take a step backwards and evaluate our thoughts as a function of their effectiveness: We are capable of seeing "through" our own thoughts and investigate whether the world looks more muddled or more clear according to our thoughts and actions.

Appreciating the difference in connotation between these two uses of the term "lens"—and how they imply different meanings for associated words such as "text," "belief" and "mind"—is important, yet the management and organizations literature rarely clarifies the difference between these two meanings of the word lens. For example, Putnam, Phillips, and Chapman (1996: 380; their emphasis) set a lens up as "a screen that *filters*, protects, shields, and guides transmission ... an eye that scans, sifts, and relays;" in summary, something that selects and distorts—like the specialty lenses of a camera; i.e., the Cartesian approach.

Also Poole and Van de Ven (1989) are not clear whether they view a theory as a lens or a photograph. At the one hand they discuss a theory as something standing between the researcher and the phenomena he studies: "Theories always constrain the theorist's field of vision: one of

Table 1. Comparison between the God's Eye and Participant frame of reference with a special emphasis on reading

	God's eye view of the world	Participant view of the world
How researchers conceptualize their relationship with the phenomena under study	A side of a triangle with in the other corners the text and the world	A side in a quadrangle; the other corners are marked by the text, the world, and the imagined human being the researcher is communicating with
Assumptions at the basis of a scientific argument	The author <i>in principle</i> can find out what happened on the First Day of the Universe (foundational reasoning)	Common sense knowledge that we are able corroborated today: human beings read, write, talk, listen, and act
Assumptions about the role of the researcher	Cartesian machine; digital photo camera	Optician; lens crafter
Scientific text, concept	Crude photograph of the extra-mental reality	Mental lens to bring our thoughts about the extra-mental world into focus
Purpose of creating a scientific text	Develop approximately true descriptions of organizational phenomena Ensure that everyone knows the truth	Develop mental lenses to help managers better cope with firm-specific phenomena To solve problems that eventually make a life/death difference
Problem of misinterpretation	May be solved as long as you all use clear and precise language	Is a human characteristic that humans need to learn to cope with
The role of hermeneutics	The study of linguistic principles that help you uncover the true meaning of the text	Speeds up the knowledge construction process. The better we understand where the author comes from the easier it becomes to appreciate how our viewpoints differ from his and how to proceed from there
Reading a scientific text	A quantum-driven mirroring operation. Photons fall on this text and are reflected on your retinas. Your optical nerves send a stream of electric impulses to your brain. There, certain neural circuits allow you to evaluate whether the sentences you read are true or false	Attempt to reconstruct the frame of reference of the author. Understand how his frame of reference is different from ours, and, based on an appreciation of these differences, attempt to understand what the author is attempting to communicate
Choice among competing interpretations of the same text	Choose the one that is most true	Our frame of reference determines the decision rule of choice to cope with competing interpretations. Choose the most charitable
Existence of contradictions in a text	Is not really addressed. Ideally, the meaning of a text should be self-evident	Inherent characteristic of a text. By-product of the negotiation game
Historical Origin	Galileo Galilei (1564-1642), René Descartes (1596-1650), Gottfried Wilhelm Leibniz (1646-1716), Gottlob Frege (1848-1925), Bertrand Russell (1872-1970), Ludwig Wittgenstein (1889-1951) in the earlier part of his life	Charles Darwin (1809-1882), William James (1842-1910), John Dewey (1859-1952), Wittgenstein (1889-1951) in the later part of his life

the canons of good theory construction is to recognize these limitations” (1989: 563). But, at the same time, Poole and Van de Ven use photcamera-like imaginary. They suggest it is better to develop pictures from multiple different angles rather than strive to develop one perfect picture that describes just one facet of the reality: “The researcher develops a “trained incapacity” to appreciate aspects not mentioned in her of his theory. As this progression toward consistency continues, the theory becomes more and more “perfect,” with less and less correspondence to the multifaceted reality it seeks to portray.” Poole and Van de Ven discuss a theory as if it “constrains” the researcher, as if the researcher easily becomes the prisoner of the texts he reads if he does not pay attention—which is a rather peculiar thing to state given that researchers construct their own theories; why would a researcher purposefully develop a theory that makes him incapable to noticing the larger context? In other words, Poole somehow fail to address the possibility that a carefully crafted “perfect” lens may actually bring problems into focus and broaden the reader’s horizon rather than closing it off.

Allison (1963) and Bartlett and Ghoshal (1991), on the other hand, use the term lens according to Dewey (1916). They make a clear distinction between the phenomena under investigation, and the theories or models that stand as a lens between the researcher (or manager) and the phenomena. The theory either distorts or brings the relevant issues into focus. The responsibility of researchers is to continuously investigate the potential for distortions and remove them once discovered.

### *INTERPRETATION AS A NEGOTIATION GAME*

The Participant frame of reference conceives of a text as the product of a language negotiation game (Wittgenstein 1953, 1958; Mauws and Phillips 1995). It highlights thirteen aspects of the

text reading process not really emphasized in the God's Eye view<sup>10</sup>. *First*, the Participant view explicitly stresses that the author is not just writing *about* something, he is also writing *for* a particular audience (Spivey 1995: 316-19). There is always "the Other." Campbell had a reader, or a group of readers, in mind when he penned papers such as the New York essay. He wrote papers to clarify the thought processes of one or another other of his audiences. To understand what Campbell was attempting to communicate in his New York essay, therefore, we first need

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<sup>10</sup> Space limitations prevent me from properly discussing the complete philosophical context of the arguments for a Participant frame of reference and against a God's Eye frame of reference. There exists connections with pragmatism and constructivism. Pragmatism shares with philosophical hermeneutics a concern with practice: we should not cognitively divorce theory development from the situation in which the resultant theories are applied or implemented; a commitment to develop practicable theories should guide our philosophical choices and resultant preferences for management theories. Pragmatism is a primarily American philosophy that was developed about hundred years ago by Charles Peirce, William James, and John Dewey and is now experiencing a revival. See Rorty (1979, 1982) for more details on the link between hermeneutics and pragmatism.

Constructivism is a movement in mathematics and science education, and curriculum design in general which holds that "[k]nowledge is not passively received either through the senses or by way of communication, but is actively built up by the cognising subject" (von Glasersfeld 1988: 83), as a result of an a priori conceived frame of reference interacting with the individual's sensory inputs. Constructivists reject "objectivist" teaching traditions in which it is the teacher's responsibility to map a reality or structure onto the mind of a student by controlling the learning process to progress towards previously determined outcomes. Instead, constructivists argue that students live in a particular mental model which they use to make sense of experiences and the information they are confronted with during the learning process. Individuals more easily learn and change their mental models when the presented information is linked to the their existing mental models. Constructivism and philosophical hermeneutics share an interest in understanding the role of mental models in sense making. While philosophical hermeneutics addresses the relationship between mental models and ontological issues, constructivism focused on developing teaching methods that take into account the mental model a student lives in. See Steffe and Gale (1995) for a collection of essays on the core tenets of constructivism. For a bibliography on constructivism see Selden and Selden (1996).

Many of the arguments presented in this section are also implicit in the arguments for deconstruction in the writings of the French philosopher Jacques Derrida (1967a, 1967b, 1967c). To be sure, Derrida pushes these arguments to the limit and one could argue that his deconstructive project is an exaggeration (Crusius 1991: 45-48). For a collection of essays on how to interpret the work of Derrida, see Madison (1993).

to first figure out which “Other” he had in mind when he wrote that text. *Who* was Campbell negotiating with in his mind as he wrote this essay? *How* did Campbell conceptualize his audience? Was Campbell “talking” to those already agreeing with him, and did he want to rally support for the argument that everyone disagreeing with him was wrong? Or, was Campbell’s target audience everyone interested in the problems he was attempting to understand? (I address these questions, and others posed below, later in this chapter.)

*Second*, the text qua lens is as effective as the vocabularies, grammars and rhetorical sophistication of its readers (diSibio 1982; Spivey 1987). The extent to which a reader is trained and accustomed to pay attention to the historical nature of vocabularies, grammars, and rhetorical styles, determines how likely he is to uncover historical nuances and the socio-cultural context within which an author was writing. Which world view was Campbell working in? What did certain words mean at the time Campbell first used them? Did these words *still* have that same meaning in 1992 at the conference on Evolutionary Organizational Dynamics in New York? When the text was published in 1994? Today? Or, did these words undergo a Kuhnian meaning shift? What happened that these words became associated with a different meaning? Also, which words had negative and positive meanings for Campbell? Have they still the same connotations today?

*Third*, how readers make sense of a text is a function of their own *a priori* framework (Spivey 1995: 315). Just as the author is a member of a discourse community and works within a framework and set of rules that guide his construction of arguments, readers also work within an *a priori* framework that is partially influenced by the interlocking discourse communities to which they belong. This framework acts like a focusing device and tacitly guides readers’ interpretation of the text, down playing certain passages, increasing attention to others, treating

certain passages as “correct” and “important” and others as “ambiguous,” “incorrect” and “unimportant.”

*Fourth*, the text is as good as the discourse rules that mediate the negotiating process between the author and his readers (Spivey 1995: 317). Broadly speaking, authors and readers may negotiate in terms of “true/false” or “problem-solving” rules. Do we need to read Campbell’s text as if he is giving a *description* of the causal forces governing organizational processes? Or, should we first uncover the problem that Campbell decided to investigate? Should we investigate the solution that Campbell offers to cope with this problem and whether that is the best solution after all?

In summary, these four aspects of the Participant frame of reference suggest:

- Proposition 1b.** An author writes not just about a phenomenon but also for an audience.
- Proposition 2b.** An author constructs his text in an *a priori* conceived frame of reference.
- Proposition 3b.** A reader makes sense of a text within the context of his own *a priori* conceived frame of reference.
- Proposition 4b.** A text is as good as the discourse rules that mediate the negotiating process between an author and his readers.

*Fifth*, in a way, academic discourse is like the new product development process. Management researchers design and manufacture knowledge (Knorr-Retina 1981). As authors, they act like the opticians at LensCrafters, crafting and refining mental lenses to help managers organize and focus their thoughts (Spivey 1995: 314-315). For example, consider a Black & Decker chain-saw. Whether or not a chain-saw functions properly is determined by both its producers and users (Von Hippel 1988). For a chain saw to be effective, both manufacturers and users need to have certain levels of specific skills. If design engineers focus only on developing the sharpest saw to cut wood with minimum effort and ignore usage and safety issues, do-it-your-

selfers are likely to cut-off their fingers, hands, or feet. But, with a saw designed to maximize safety features, do-it-your-selfers who are convinced they do not need to read the enclosed instructions to operate the chain saw, may also get into trouble. Similarly, whether or not a management text works properly depends on how *both* management researchers and managers conceive of one another. They need to work together to understand how to create and effectively use texts.

*Sixth*, scientific text production is a problem-coping activity. To continue with the new product development metaphor, the customer has a need, a problem if you like. It is cold; her family needs shelter. The development of chain saws helps her cope with this problem. She is now able to more effectively build houses and cut wood to put it in the fire place. Thus, engineers designed this tool to help users *cope* with a problem. The tool does not make the problem go away; instead, it allows us, human beings, to cope with it successfully. A similar logic applies to text construction. Irrespective of how meticulously authors choose their words and arguments, the problem of misinterpretation remains. Carefully crafted texts help us cope with the problem of misinterpretation, without eliminating it. In other words, the Participant frame of reference sets up the dialogue between management researchers and their readers as a problem-coping activity (Popper 1979: 164, 241–45). A scientific text comes into existence for two reasons. Either the author is attempting to point out a problem and persuade others that this problem is real and may have disastrous consequences if we keep on ignoring it. Or, the author is attempting to communicate a solution, a particular way of coping with a problem.

*Seventh*, just as the design engineers at the chain-saw company need to develop and implement procedures to test the safety of the chain saw models they design, management researchers need to develop heuristics to minimize the unintended effects of the theories they

manufacture for managerial practice. One such heuristic is the metaphor of *a pair of mental spectacles*. Either spectacles are properly designed, so the user notices a speeding car approaching. Or, they are of the inappropriate strength, the user's eyes become irritated. And it is just too late when he realizes the car is actually speeding in his direction. You may conceive of management texts in the same way. It is a tool to bring your thought processes into focus and help you cope with environmental ambiguities. Either the text is of the correct "strength," gradually bringing the issue discussed into focus, and improving your understanding of it. Or, the text is of an incorrect strength (either too strong or too weak), putting the issue discussed out of focus, and confusing and irritating to you. You get a headache reading that text, and the world appears to be more muddled and complicated when you finish reading it.

*Eight*, the metaphor of a scientific text as a pair of mental spectacles suggests that management researchers should think of themselves as opticians. They are in the business to create clear and practicable texts. They need to consider whether the texts they write will ultimately help managers cope more effectively with extra-mental problems, or, alternatively, contains such abstract arguments that most managers will become puzzled when reading them. Management researchers need to insure their texts do not create misleading impressions with possibly disastrous consequences. For example, we would not want to create mental spectacles giving users the impression an approaching car is a mile away when in reality it is much closer. Nor would we want to create the mental equivalent of a pair of spectacles that gives readers (and managers) the illusion a truck is about to hit them, while in reality no such thing is about to happen. We want our texts to bring to the foreground the most important issues while relegating to the background unimportant and irrelevant ones.

Thus the implicit assumption is that management researchers are *not just* writing for other management researchers to help them solve methodological and conceptual problems that will—hopefully—eventually solve managerial problems. To the contrary, they also are writing for interested managers. In other words, researchers need to keep in the back in their mind that the purpose of management research is to construct practical frameworks. They need to directly think about how their theories can be applied like we want chain-saw design engineers to consider how a chain-saw is normally used. When researchers are then faced with a theoretical conundrum, they have a heuristic at their disposition to deal with this conundrum: resolve the conundrum in such a way that the theory becomes more clear and practical. This implicit assumption is at odds with Montgomery, Wernerfelt and Balakrishnan's (1989: 193) assertion that "[I]n the long run, research ... will generate more useful recommendations if direct managerial applicability is not required of all papers." If researchers do not immediately consider and explore how their theories may be applied in practice, they are more likely to resolve conundrums in such a way that their theories become confusing to managers, without necessarily realizing it.

*Ninth*, once we think of a text as if it is a mental lens, we realize that management oriented texts should conceptualize the problem of misinterpretation as something that managers need to learn to cope with rather believe that they can solve it or assume it away. Texts remind managers that they cannot remove the problem of misinterpretation, in the same way that we cannot prevent winter from arriving. Thus, the most general criterion that every text needs to pass is that it should help readers cope with the problem of misinterpretation; at a minimum, a text should present this problem as non-solvable. You better do not adopt a rhetorical style giving the impression the knowledge embedded in your research papers is obvious and self-evident. A

scholarly paper must not contain imagery reinforcing a God's Eye view of the world—that it is acceptable to reason as if we are capable of knowing what happened on the First Day of the Universe, as if our knowledge *is* unquestionable in the limit. Thus a text cannot contain a voice of God rhetorical style, or God's Eye view concepts and arguments; that is, symbolic imagery suggesting that the solutions to problems are obvious. It should not mislead us to believe that the problem of misinterpretation is something we eventually will eradicate in the same way as we controlled small-pox.

In summary, in addition to the foregoing Propositions 1b–4b, the Participant frame suggests:

- Proposition 5b.** The metaphor of new product development is a suitable metaphor to make sense of the relationship between readers and authors.
- Proposition 6b.** Scientific text construction is a problem-coping activity.
- Proposition 7b** Various aspects of text production and usage need to be evaluated in the same way as you would evaluate a pair of glasses and its production process.
- Proposition 8b.** A management researcher needs to think of her job as analogous to that of an optician.
- Proposition 9b.** Every text should, one way or the other, emphasize that the problem of misinterpretation is an issue that we need to learn to cope with *and not* an issue that we can fix.

In contrast with the God's eye view, the Participant frame requires us to give up our *Quest for Certainty* (Dewey 1929b). In the same way as it is impossible to evaluate a pair of glasses as a function of its truth-content—you never ask your optician whether your contact lenses are true—it becomes impossible to evaluate a text as a function of its one and true meaning. At best, we realize that our interpretation of a text is incomplete. But we will never be able to state that we discovered its “true meaning” in the same way that it is meaningless to articulate the absolute use of a pair of contact lenses. Given that we are unable to eliminate the possibility of

misinterpretation, we always have to make a leap of faith when reading a text. We have to believe we share something human with the author—whatever that human element may be. Within the philosophical literature and the literature on practical logic this act of trust is better known as the principle of Charity (Quine 1960:59; Davidson, 1974: 19; Fisher 1988: 17–18, 22). The principle of Charity explicitly presupposes it is impossible to fix problems of misinterpretation. In every text—even in the best of physical science (Campbell 1986, 1991c: 592)—readers may find a set of sentences that are inconsistent with their views, and that they may disagree with. A reader’s opinion of the author, then, determines whether she will treat these inconsistencies as isolated cases, or as an indication that the entire paper is wrong. If a reader is positively predisposed towards the author, she is more likely to conclude that she is dealing with a slip of the pen. If, in contrast, the reader questioned the author’s authority and qualifications before even picking up his paper, she is much more likely to treat these inconsistencies as indications that the author is dumb or confused. Thus, there is an act of faith involved when we make sense of a text. We must have faith in the author’s intelligence and good intentions. This act of faith plays an especially important role when we discover incompatible arguments in the same text.

**Proposition 10b.** Interpreting requires an act of faith in a rationality that the 5.4 billion members of the human species share.

It is more difficult to grasp these issues from a God’s Eye frame. This frame gives us the impression that “truth” is somehow obvious and easily discovered—at least, if we search for it. It does not acknowledge that equally rational people may be reasoning in a different frame of reference. Consequently, from a God’s Eye frame, when an author writes something that conflicts with what we hold to be true, there must be something wrong with that author. The

God's Eye frame of reference makes for less charitable readers.

Given that the Participant frame of reference explicitly brings to the foreground that the framework we reason in guides us while we make sense of a text, it allows us to make sense of this phenomenon. The Participant frame suggests that a reader who classifies authors as a function of their brilliance—or stupidity—may be reasoning in a God's Eye view of the world. At the same time, it reminds us, readers, of the difficulty of negotiating a vocabulary that appeals to multiple audiences. The Participant frame makes us put more effort in understanding where the author is coming from and what he is attempting to communicate.

Thus, with respect to the questions raised in the context of proposition 4b, the negotiation rules that link authors with their readers are a function of the frame of reference the reader is living in when she is reading a text. In a God's eye view a reader is more likely to employ a true/false rule. In a Participant frame, on the other hand, a reader is more likely to adopt a problem-solving rule to make sense of a text. She is more likely to wonder which problem the author is struggling with.

The God's eye frame of reference is problematic because it does not really address issues of interpretation given that it downplays the active negotiation during the reading and writing of a text. It inspires the belief that we, humans, can obtain the know-how to solve problems of misinterpretation and negotiation by developing a formal logical scientific language. The God's Eye frame wants us to believe that, if we all work very hard on this project, we eventually will develop such a timeless language and the hermeneutical problem will go away. As if it is in principle possible to stop time and organize an intercontinental conference among all scientists in the world and decide once and forever the meaning attached to every scientific concept and argument. For example, the 17<sup>th</sup> century mathematician Gottfried Leibnitz believed he could

develop a *Characteristica Universalis* (1679) would help to solve the problem of misinterpretation—and the religious wars that were dividing Europe at that time (Styazhkin 1969: 61–70; Toulmin 1990: 100–103). The ideal candidate language was symbolic logic. This idea was not far-fetched given that, less than fifty years earlier, Galileo Galilei had declared in *The Dialogue Concerning the Two Chief World Systems* (1632) that,

Philosophy is written in this grand book—I mean the universe—which stands continually open to our gaze, but it cannot be understood unless one first learns to comprehend the language and interpret the characters in which it is written. It is written in the language of mathematics, and its characters are triangles, circles, and other geometrical figures, without which it is humanly impossible to understand a single word of it.

In the 17<sup>th</sup> century it was generally believed that “God had infused certain men (such as Adam and Moses) with scientific knowledge, which was passed on to successive generations intact. Even Newton, in his historical musings, employed a static model, maintaining that his *Principia* [1687] was a recovery of wisdom known to the ancients” (Richards 1987: 560). So, this preference for mathematics and logic was consistent with the *Zeitgeist*.

About two century later, then, the mathematician, Gottlieb Frege, who is considered the founding father of modern mathematical logic, gave this project of constructing a universal and timeless language additional impetus when he invented the quantifier and variable construction to formalize general expressions such as “Caesar conquered Gaul” in logic (Veatch 1954: 3–13). Russell and Wittgenstein in the earlier part of his career continued the project of developing a timeless picture language, which would allow us to better understand the logically true nature of the universe, and eventually eradicate disagreement and resultant violence and wars. The first requisite was to develop an unambiguous logical system, free of contradictions. The mathematician-philosopher David Hilbert then claimed that the only foundation necessary for

mathematics was its formalization and the proof that the system produced is consistent. But in 1931 the mathematical logician Kurt Gödel showed that the consistency of arithmetic cannot be proved within the system itself, thus demonstrating the impossibility of achieving part of the Hilbert program. Gradually, more and more problems were discovered in the project of developing a paradox-free, timeless formal language. The emerging consensus among today's philosophers is that W. V. Quine gave the final blow to this project in his 1951 paper, *Two Dogma's of Empiricism*. In 1960, then, Quine published his "indeterminacy of radical translations" thesis: a sentence can always properly be regarded as meaning a multitude of different things. In that same book *Word and Object* he articulated the principle of Charity as discussed in Proposition 10b. The meaning attached to a particular word is continuously renegotiated and never crystal-clear as Wittgenstein also had argued in his later years<sup>11</sup>. *We must learn how to be charitable* (Davidson, 1974: 19).

Thus Putnam and an increasing number of other philosophers question the God's Eye view of the world because it presents a misleading and problematic view of issues of misinterpretation. The God's Eye view inspires us to treat the problem of misinterpretation as something that we are capable of solving; issues of interpretations are not a serious hurdle in research. The neglect of problems of interpretation is not an issue if you study tables and chairs, apples falling from a tree, or humans jumping from the roof of a seven floor building. However, once we deal with metaphysical, invisible concepts such as "evil demon," "egoism," "atom," and "ontologically real groups," we need to be more sensitive to problems of misinterpretation. The insensitivity of researchers to the possibility of misinterpretation may form a more serious problem than how to

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<sup>11</sup> This historically-informed review of the demise of the picture theory of language is taken from Romanos (1983). See also Block (1981) for a more general discussion of the philosophy of Ludwig Wittgenstein.

keep “selfish” researchers honest (Hull 1988). To conclude that researchers are selfish, we first must conclude that neo-Darwinian theories may be unambiguously interpreted and translated into psychology theories. And as the contemporary literature on evolutionary psychology indicates (Nicholson 1997: 1057–59), it is unlikely that this project of perfect translation ever will be completed.

At issue here is the relation between issues of misinterpretation and dogmatic reasoning. (A dogma is defined as “a belief held unquestioningly and with undefended certainty” (Blackburn 1994: 109)). If you believe that the problem of misinterpretation eventually will be fixed, you implicitly accept that the truth about the outside world somehow is self-evident: when rational people with approximately complete information look at the same phenomena they must sooner or later reach similar and converging conclusions. These conclusions do not need to be scrutinized; since these people are rational their conclusion must be valid. In reality, however, we cannot exclude the possibility that our so-called rational conclusion is incorrect. Thus, we must keep our conclusions open for revision; we should continuously question our taken-for-granted assumptions and arguments. If, however, we (misleadingly) believe that the problem of misinterpretation can be fixed we are less likely to take such a critical attitude towards our own conclusions. We are more likely to take them as a given, as if we can safely assume our decision rules are based on unquestionably true principles. As such, we begin treating our beliefs as dogmas: we accept them without question (there is no need for that since they are based on obviously true information that can be easily interpreted). In reality, however, we have arbitrarily taken them as a given<sup>12</sup>. Thus the God’s Eye frame is problematic because it inspires us to treat

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<sup>12</sup> This problem of the arbitrariness of the choice of presuppositions is also known as the problem of infinite regress. The arguments for a Participant way of reasoning are based on the presupposition that it is futile to attempt

arbitrarily constructed dogmas as obvious (and hence unquestionable) truths. Individuals reasoning in a God's Eye frame have more difficulties with revising taken-for-granted beliefs that turn out to be questionable on second thought. (See Booth (1974) for a more elaborate discussion of the problems arising from dogmatic reasoning. For an argument against dogmatism in the context of management research see Mahoney (1993)).

This brings us to the Participant frame of reference. In this frame a scientific language is one of the many, continuously renegotiated languages. There is nothing privileged about the vocabulary of scientists (Rorty 1981). That science is successful has more to do with the extent to which scientists are skilled social negotiators (Campbell 1993a) than with the degree to which the scientific language and associated decision rules are truly timeless and unambiguously accurate and precise. While the God's Eye frame puts its money on the development of a pure paradox-free linguistic system, the Participant frame emphasizes the quality of communicative acts and dialogue.

To ensure arguments of reasonable quality, linguistic signs need to meet the following three criteria. *First*, they need to be constructed in such a way that we can relatively easily relate them to human experiences. Experience is the source of all knowledge (Dewey 1929a). Thus concepts and arguments need to be anchored in the *present*. They need to relate to issues we make sense of today. This is what Popper (1962) attempted to express with his arguments for falsifiability: we better not develop arguments when we know in advance we never will obtain

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to understand what happened during the  $10^{-43}$  Second of the Universe. Aristotle was one of the first to point out that this line of reasoning would lead to an infinite regress problem (Toulmin and Goodfield 1965: 31-32; 42-45): we can always subdivide the First Second further. Or, we could ask what happened the second before it. And we eventually begin to feel like a fly zooming around in a fly-bottle (Wittgenstein 1953). For a discussion of this problem in the context of management research see Collis (1994).

the knowledge needed to test them. For example, we cannot argue that the underlying nature of the universe *is* random, paradoxical, or ambiguous. It is *impossible* to test whether our inability to discern non-paradoxical regularities at the subatomic level is proof of the stochastic nature of the universe (Hacking 1990) or, alternatively, that these difficulties indicate that we are still ignorant in many ways. It is relatively easy to understand what the sign “ignorance” brings into focus; we have to read and think a bit more. It is much more difficult to use the idea that the universe *is* random and paradoxical as a guide for practical decision-making. Does it mean that chance may undermine your decisions? What would you be communicating with such an argument? We need to question the God’s Eye frame of reference because it is built on the same problematic presuppositions. It puts management researchers in a non-human position. It presupposes knowledge of the  $10^{-43}$  Second of the Universe (Ferris 1988: 413)—the First Moment. You would have to think of “science as a transcendental activity, one that could best be conducted by sending teams of observers to hover over Earth” (Cronbach 1986: 83). Such an approach would require you to reason as if we can step outside our skin—something you cannot experience.

*Second*, concepts and arguments must not choke the conversation. They must be set up in a way that does not reinforce dogmatic reasoning. The only way to justify dogmatic argumentation is by arguing that the Others must blindly believe and accept what you say. In the limit, you can always claim that you somehow *know* what happened during the First Second of the Universe. The implicit assumption at the basis of a dogmatic argument is that the Creator designed the world in such a way as to give rise to individuals like you (who somehow are capable of grasping

what the Creator had in Mind when S/he started up the Universe)<sup>13</sup>. And your colleagues just must passively trust that you have good reasons to make arguments like these. At this point your colleagues will terminate the conversation, or question your credentials. In either case the dialogue has been interrupted.

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<sup>13</sup> A reviewer of this paper wondered why I capitalized words such as First Day, First Second, Creator and God given that they are, as he said, just metaphors. The reason I capitalize these terms is the following:

As discussed in the opening section of this chapter hermeneutics came into existence as a discipline attempting to unravel the messages communicated in the Scripture. The question that these hermeneutical philosophers inevitably had to address is whether it is meaningful to reason as if we can imagine what happened on the First Day of the Universe independent of whether we take a religious or scientific approach to answering this question. While the scope of hermeneutics broadened to include many additional interpretive acts that have nothing to do with religion in itself, the hermeneutical enterprise nevertheless remains linked with theology. As Hegel pointed out, when we ask questions about existence we inevitably ask questions about our own ontological status as knowers and relationship with God; that is, our ability to figure out what happened in the beginning of the Universe.

While from a superficial viewpoint it may seem that science promotes atheism, the history of the relation between science and theology is more complicated. Science emerged out of natural theology. Scientists such as Isaac Newton—see Footnote 2—viewed their theories as rational justifications for the existence of God and how He had created the world (Brooke 1996). For example, Newton ascribed the arrangement of the planets to the aesthetic considerations that had weighted with God (Brooke 1996: 8). Thus while science may be secular in practice, from an intellectual and cognitive viewpoint it is not necessarily so. And theologians, philosophers and scientists are exploring the extent to which science and religion may co-exist (e.g., Richardson and Wildman 1996).

In this dialogue it makes more sense to stay away from atheism and take a middle of the road approach such as agnosticism or apophatic theology. Agnosticism is used here in both its weak and strong meaning (Sutherland 1993). In its weak meaning it implies the “belief that we do not have sufficient reason to affirm or deny God’s existence (1993: 15).” In its strong meaning it implies that one “does not believe that there *can be* knowledge of a God who transcends this world. ...[w]e could no more know that God does not exist, than that God does exist” (1993: 15; his emphasis). Apophaticism is a term used to refer to a particular style of theology, which stressed that God cannot be known in terms of human categories (Winters 1998). Apophatic (which derives from the Greek apophasis, “negation” or “denial”) approaches to theology are especially associated with the monastic tradition of the Eastern Orthodox church.

Given that these so-said middle-of-the-road type of viewpoints do not explicitly deny the existence of God, the arguments in this paper about the “Creator,” “God” and “First Day” and so on are not purely metaphorical. Therefore, I capitalize these terms.

*Third*, a reader must be able to put concepts and arguments into practice without having to appeal to an extensive range of additional, and in many cases, unstated and unconnected presuppositions. One of the elements of philosophical hermeneutics is an emphasis on practical judgment--Aristotle's *phronesis* (Gadamer 1960; Bernstein 1983). Arguments and concepts should be such that they readily guide practical decision making. Thus, we should think twice before introducing arguments that appeal to invisible entities since these arguments require additional, often unstated presuppositions. They are not directly applicable. It is impossible to figure out what they mean without invoking additional assumptions. They do not meet the condition of entitativity (Campbell 1973: 1050-51; repeated in Campbell 1989: 154).

**Proposition 11b.** Concepts and arguments need to connect with human experiences.

**Proposition 12b.** Concepts and arguments need to be designed so as to guarantee the continuation of the dialogue; arguments cannot be dogmatic.

**Proposition 13b.** Concepts and arguments need to reinforce practical judgment.

To summarize, by arguing that ontological questions hang together with epistemological ones, philosophical hermeneutics points out that we must address how we view our relationship with the outside world—a side in a triangle? a quadrangle?—before we can decide which entities exist and use texts to justify these decisions. Every individual has to answer this question for him or herself. While it is impossible to force someone to address this issue, nevertheless we still may point out there is something strange and confusing about the God's Eye approach to research. We need to understand Putnam's (1981) arguments in this spirit. Putnam is not arguing that there "exist" individuals reasoning in a God's Eye frame of reference. Instead, he believes that it is a way of reasoning that we easily may slip in, but that nevertheless is problematic. Thus Putnam's arguments need to be treated as lenses. He focuses our thoughts on the issue of framing; it is preferable to reason in a Participant frame as opposed to a God's Eye

frame of reference.

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Insert Figure 3a and 3b about here: Difference between Cartesian and hermeneutic research approach  
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The practical implications of philosophical hermeneutics are illustrated in Figure 3a and 3b. Figure 3a presents research according to traditional Cartesian epistemology. This approach treats epistemological questions independently from ontological ones. Thus a researcher working in this tradition is not specifically trained, required, or inspired to address ontological questions. He will at once take a particular epistemological viewpoint and do research from there. Figure 3b presents research from a philosophical hermeneutics point of view. In this approach we explicitly addresses ontological question at the same time as epistemological ones<sup>14</sup>.

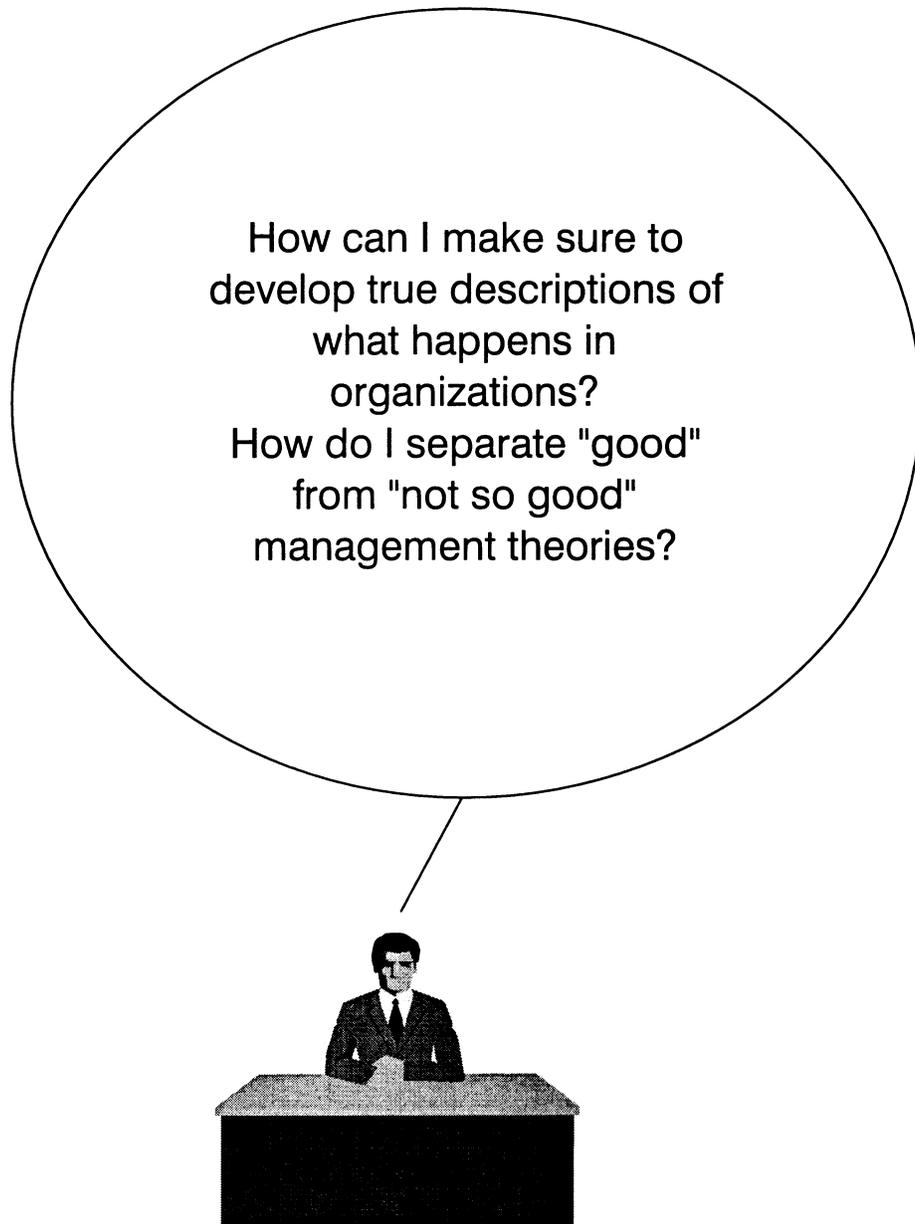
## **PART 2: CAMPBELL AND PHILOSOPHICAL HERMENEUTICS**

Starting in the 1970s, Campbell began developing an active interest in hermeneutics. It was one of his undergraduate students who brought hermeneutics to his attention. As Campbell puts it in his 1977 William James Lectures (1988: 478),

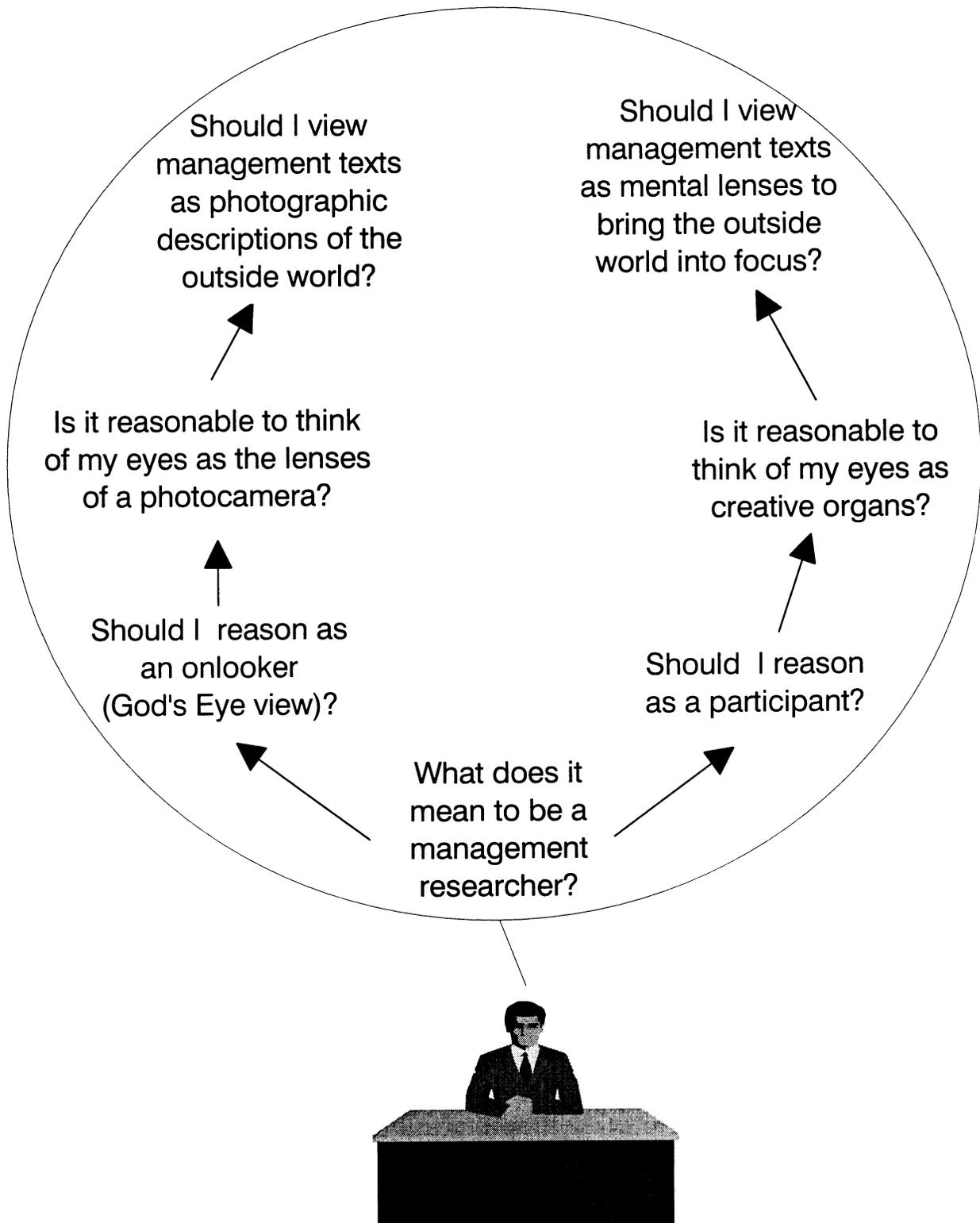
I have been lucky all my teaching career to have students, most often undergraduates, highly concerned for my education, eager both to correct error and to bring me up to date on the intellectual currents that are stimulating them. At Northwestern, their tutorials and reading assignments have exposed me to existentialism, phenomenology, structuralism, dialectics and, most puzzling of all, hermeneutics. How could a doctrine about the exegesis of archaic religious texts provide an epistemology usable in science? Under the guiding rule that where there's smoke there's fire, or that intelligent people are not stupid and therefore must be getting at something (a rule I often reluctantly apply), I've tried to puzzle out how this could be.

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<sup>14</sup> The arguments for a Participant frame of reference and against a God's Eye view of the world address the same issues, I believe, as Argyris and Schön (1974) address with arguments for model II / double loop learning and against model I / single-loop learning and respectively. They are not elaborated in this paper because of space constraints.



**Figure 3a. Research from a Traditional Cartesian Point of View**



**Figure 3b. Research from a Philosophical Hermeneutics Point of View**

One of the hermeneutical issues that particularly caught Campbell's imagination was the extent to which trust in a shared rationality plays a role in textual interpretation (1988: 477) and interpretive acts in general (1978: 187; Campbell and Paller 1989: 234–36). To underline the importance of trust, he invented the slogan “omnifallibilist trust” (Cook and Campbell 1986). Campbell discussed a connection between willingness to “trust” and the principle of Charity as elaborated in the work of W.V. Quine—see Proposition 10b. Thus Campbell viewed the hermeneutical literature as a source of arguments that justify the belief in shared rationality even if we cannot offer a scientific foundation for this belief (Cook and Campbell 1986). He developed a checklist of hermeneutical principles of his own (e.g., 1991c, 1995) which he called “validity-seeking hermeneutics.” He even went so far as to reinterpret his own research on cultural differences in optical illusions as an enactment of the principle of Charity (e.g., 1986: 111, 1991c: 594, 1996).

Campbell never played an active role in the hermeneutical movement at the same level as he did in the philosophical school of thought, evolutionary epistemology (EE). He never cited the work of Heidegger who laid the groundwork for philosophical hermeneutics, emphasizing instead the contributions of Schleiermacher, Dilthey, Habermas, and Weber (see appendix for a brief discussion of the views of these hermeneutical philosophers). He explicitly stated that he was more interested “in hermeneutic methodology rather than assumptions about human nature” (1991c: 594). It is also debatable whether Campbell fully understood philosophical hermeneutics. He explicitly acknowledged that his knowledge of this literature was incomplete (1991c: 589), “I feel sure that in that vast literature there are many other hermeneutic principles, but I do not recollect encountering such a list (This is a request for help).”

Nevertheless, we have reason to believe that Campbell was in the process of taming the idea of philosophical hermeneutics. Initially, he judged Gadamer to be “in net, an ontological nihilist,” a Weberian ideal-type category that he had invented to classify researchers and philosophers believing in nothing (1991c: 588). But he quickly added that the hermeneutical literature had frustrated him<sup>15</sup>, that he was “not prepared to cite chapter and verse” and that perhaps ontological nihilism is an “ideal type with no occupants, not even the “paradigm theorists [Kuhn and his disciples] of education and the social sciences.” Indeed, in 1995 Campbell (1995: 22–23) appropriated Gadamer’s “Interpretive horizon” and dropped his accusations of nihilism altogether. Instead, he proposed hermeneutics as the successor philosophy of positivism.

### **PART 3: AN EXERCISE IN HERMENEUTICS: APPLYING THE PRINCIPLE OF CHARITY<sup>16</sup>**

Given the prominence of the principle of Charity in a hermeneutical world view, I illustrate how this principle works. As Campbell very succinctly explained, the principle of Charity comes

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<sup>15</sup> Campbell expressed here a frustration that probably everyone learning about hermeneutics experiences at some point in time. From a superficial perspective, it is easy to be shocked by the *rejection of certainty* implicit in philosophical hermeneutics, and feel compelled to write articles and books to save science and humanity from the nihilistic implications of this type of philosophizing. For example, when Cambridge University decided to confer an honorary doctorate to Jacques Derrida, one of the intellectual heirs of Gadamer, “some of the most eminent names in academic philosophy, including Sydney’s Professor David Armstrong, Harvard’s Willard van Orman Quine and Yale’s Ruth Barcan Marcus” unsuccessfully campaigned against this decision (Rothwell, 1992a, 1992b). They believed that Derrida’s work represented an anti-philosophical (unprofessional) attack on the values of “reason, truth and scholarship.” Similarly, Donaldson (1992) and Beyer (1992) feel compelled to critique the Wittgensteinian notion of a language game elaborated by Astley and Zammutto (1992). Donaldson (1992: 464) called it a management approach “in which students are told that any problem can be licked by dreaming up a sufficiently ambiguous set of words to bedazzle the stakeholders—Voodoo Management or Management by Mumbo Jumbo.” However, as Campbell himself acknowledged, the more you study hermeneutics the more you come to realize that the accusations of ontological nihilism are misleading.

into play when a reader encounters an argument inconsistent with her own views. It is tempting, then, to put the paper or book down, and conclude that the author was dumb, confused, or, a dilettante. The principle of Charity counters this temptation and instruct us to make an effort to translate the ideas of the author into our own world view and vocabulary. As Quine (1960: 59) puts it,

The maxim of translation underlying all this is that assertions startlingly [sic] false on the face of them are likely to turn on hidden differences of language. The maxim is strong enough in all of us to swerve us even from the homophonic method that is so fundamental to the very acquisition and use of one's mother tongue.

We translate the troubling passage in such a way that we surface the conditions under which we would agree with the arguments of the author: which one of our own taken-for-granted assumptions do we need to alter to align our views with those of the author? While we raise this question, we may find that we disagree with the author because he built his arguments on a different set of, often unstated, taken-for-granted assumption than what we consider acceptable. The author's starting assumptions are different from ours because we never bothered discussing that particular starting assumption in depth *and not* because boundary assumptions are idiosyncratic and, hence, undiscussable.

To illustrate how the Principle of Charity works, I interpret Campbell's arguments for *ontologically real groups*. I primarily focus on Campbell's New York essay. I first read this essay from a superficial perspective without paying attention to Campbell's philosophical work. In that case, this essay looks like an invitation to research the effects of ontologically real groups in corporations. Then I read the New York essay from a philosophical hermeneutics informed perspective. Now, I come to view Campbell as a problem-coper. He is attempting to figure out

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<sup>16</sup> The introduction to Part 3 has benefited from conversations with Martin Evans.

how to make sense of the problem of cooperation in the face of selfish behavior. I discover that Campbell has five different options to deal with this problem, and that the textual evidence does not really indicate which option Campbell prefers. So, as a reader I also must choose: I must decide how to interpret these ambiguities in Campbell's work.

To state it simplistically, I could conclude that the world *is* paradoxical (Rescher, 1985): it is difficult to make sense of Campbell's texts because texts mirror a paradoxical reality: texts *are* ambiguous and *have* multiple meanings. But then I would be making a non-falsifiable dogmatic statement about the extra-mental reality. I would be reasoning in a God's eye frame of reference. As elaborated in Proposition 12b, it is impossible to find out whether the world is really paradoxical or whether I use this argument to cover up our own ignorance. Moreover, this argument acts like a confusing lens. It suggest it is all right to nurture ignorance and accept paradoxes rather than use them as an inducement to reexamine taken-for-granted assumptions (the process that Argyris and Schön (1974) call double-loop learning). I would be not very charitable interpreters in this case. I would be concluding that Campbell gave up on coping with paradoxes. Alternatively, I could conclude that Campbell is struggling with a genuine problem—the Participant frame of reference. In this interpretation, Campbell was searching for words to express his thoughts on the moral implications of neo-Darwinism. He was writing to clarify his own thought processes. It is possible to interpret Campbell's texts in multiple ways because he was experimenting with various words and arguments to articulate his intuition in the clearest way.

As indicated in part I of this chapter I believe that we, as authors, all somehow are working in a Participant frame of reference (at least, I am). If we use concepts and arguments that resonate with a God's Eye view of the world, this is not because we dogmatically believe in such a view,

but rather because we do not reflect enough on how our words reinforce one or the other world view. Thus I choose to interpret Campbell as a problem-coper. I eliminate those interpretations implying that Campbell was working in a God's Eye frame of reference. To summarize, the hermeneutical exercise below illustrates how the meaning of a text is never self-evident. We always have to make a leap of faith. You must choose whether or not to be charitable.

### *SURFACE INTERPRETATION (GOD'S EYE APPROACH)*

"Groups are real!" Campbell wrote in 1992. In the same sentence he cited his own work on this topic published in 1958. At first, Campbell's position seems quite clear. It is worthwhile to study groups and organizations in their own right. Perhaps, one day in the 1950's, Campbell had a flash of insight and said "Eureka!" to himself, "Herbert Spencer was right. Ontologically distinct groups really exist out there in society. And we in social psychology better continue to develop and refine theories to make sense of them. Groups and organizations have properties of their own that cannot be fully grasped by just studying the individuals that make up these groups and organizations. Let's write a paper on how the boundaries of these organizations are formed, and where these boundaries begin and leave off."

The "groups are real" interpretation of the New York essay seems even more justified when we read Campbell's arguments about *downward causation*. Campbell (1990a: 4) contains one of his most concise summaries of this argument:

Where natural selection operates through life and death at a higher level of organization, the laws of the higher level selective system determine in part the distribution of lower level events and substances. Description of intermediate-level phenomena is not completed by describing its possibility and implementation in lower level terms. Its presence, prevalence, or distribution (all needed for the complete explanation of biological phenomena) will often require reference to laws at a higher level of organization as well. Paraphrasing Point 1, for biology, all processes at the lower levels of a hierarchy are restrained by, and act in

conformity to, the laws of the higher levels.

Figure 4 visualizes this argument. One way to grasp the essence of downward causation is to contrast it with the idea of *upward causation*—Point 1 in the above quote. Upward causation implies that all processes at the higher levels of organization are restrained by and act in conformity to the laws of lower levels, including the levels of subatomic physics (Campbell 1990a: 4). This argument is sometimes also called explanatory reductionism (Mayr 1982: 60–62). Broadly speaking, at least nine levels of complex organization are identified (Mohr, 1989: 138): the subatomic particle, the atom, the molecule, the macro-molecule, the unicellular organism or cellular organelle, the cell of the multi-cellular organism, the organ, the individual, and the group. The atomic properties of molecules have an upward effect on the aggregations of molecules, i.e., the higher levels of biological organization. The behavior of the higher level entities must be explained in terms of the behavior of the lower-level entities. While the upward causation argument may seem obvious today and too trivial to mention, we should keep in mind that leading evolutionary biologists such as Mayr (1982: 60–62) question the generality of this argument<sup>17</sup>.

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Insert Figure 4 about here: Visual presentation of the arguments for upward and downward causation  
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As elaborated in the quote above, the *downward causation* argument suggests that the higher-level system also effects the behavior at the lower level of organization, especially in living systems (Pattee 1973). But in spite of the widespread interest in hierarchies, one is still rather uncertain about the classification of hierarchies and their special attributes (Mayr 1982: 64). For

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<sup>17</sup> See Hoyningen-Huene and Wuketits (1989) and Charles and Lennon (1992) for a review of the idea of reductionism and its problems.

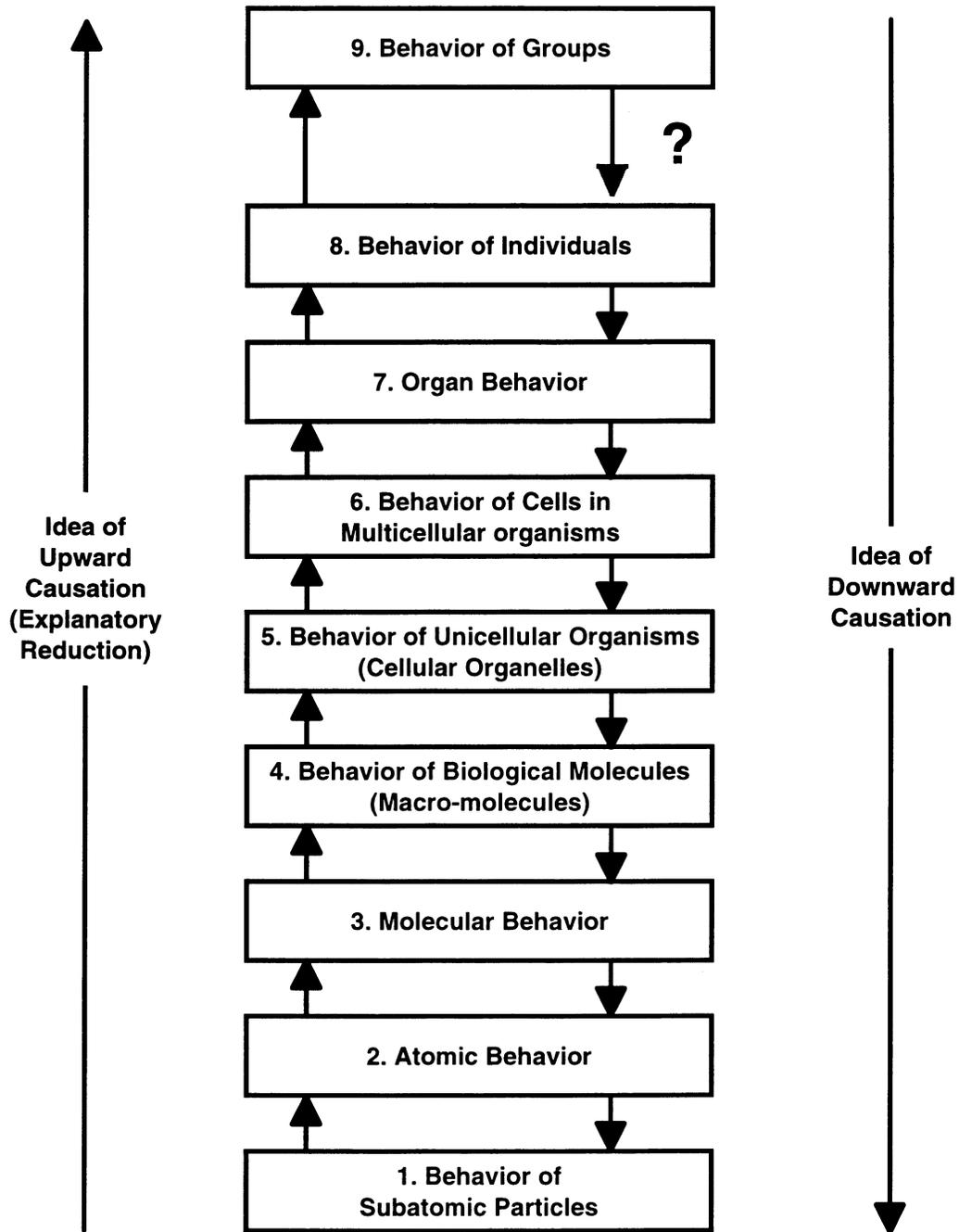


Figure 4. Visual presentation of the arguments for upward and downward causation.

example, while it is generally agreed that level *eight*, the individual level, has a downward causal effect on the lower levels in the hierarchy, it is less certain whether level *nine*, the group, also has downward effects. It is actively debated whether groups and group behavior are qualitatively distinct from individuals and interpersonal behavior, and whether different and additional concepts are required to analyze groups (Hogg 1995a: 270).

It is in this context that the “groups are real” movement manifests itself in sociology, social psychology, evolutionary biology, and philosophy of biology. The scholars in this movement argue that we *do* have reason to believe groups have properties that go beyond the individual human beings making up the group; to completely understand the behavior of an individual we first must study the characteristics of the crowd or society to which the individual belongs. Groups make individuals do things they would have never done on their own. In biology Wynne-Edwards (1962) is usually credited with having introduced this argument. In sociology Durkheim is often viewed as the founding father of “groups are real” research given that he introduced the notion of “collective forces” in *Suicide, a Study of Sociology* (1897: 309; cited in Hacking 1990: 177).

Collective tendencies have a reality of their own; they are forces as real as cosmic forces, though of another sort; they, likewise, affect the individual from without, though through other channels. The proof that the reality of collective tendencies is no less than that of cosmic forces is that this reality is demonstrated in the same way, by the uniformity of effects.

When an individual commits suicide, it is *not* because of his individual desires or lack thereof, but because of “suicidogenetic currents” operating at the societal level; different societies produce different rates of suicide<sup>18</sup>. In the same way that we must study groups to identify

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<sup>18</sup> See Hacking (1990:170–79) for a historical introduction to Durkheim’s “collective tendencies are real” arguments.

average characteristics and behaviors of the individuals making them up, “groups are real” scholars, like Durkheim, argue that the study of populations of ontologically *real* groups or societies is required to comprehend the characteristics and behaviors of these supra-individual entities, that is, those causal forces acting on individuals like you and I.

Reading Campbell's New York essay at the surface suggests that he is part of the above discussed movement. His position has the following two characteristics. First, he explicitly rejects the idea of group selection in the biological evolution of vertebrates (1972, 1979, 1982b, 1983). While he used this argument in 1965b to make sense of group conflict and the willingness of males to sacrifice their life for their nations, he changed his mind after reading the 1966 work by the biologist Williams (Campbell 1972: 23): “What I now wish to revise is the source of these dispositions. In greater continuity with the mainstream of social psychological thought, I now believe that these self-sacrificial dispositions, including especially the willingness to risk death in warfare, are in man a product of a social indoctrination, which is counter to rather than supported by genetically transmitted behavioral traits.” Second, he believed that these social forces exist independently from biological forces and actually “can override biological evolution and lead individuals to do things that are biologically stupid in terms of *individual* inclusive fitness.” Social evolution counters “individual selfish tendencies which biological evolution has continued to select as a result of genetic competition among the cooperators” (1975b: 1115). Given that Boyd and Richerson (1985) made a similar argument, Campbell cites them in support of his position (e.g., 1991a: 96, 1994b: 27–29; Campbell and Specht 1986: 38).

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Insert Figure 5 about here: Visualization of Campbell's surface dilemma  
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Figure 5 summarizes Campbell's surface position on the existence of ontologically real

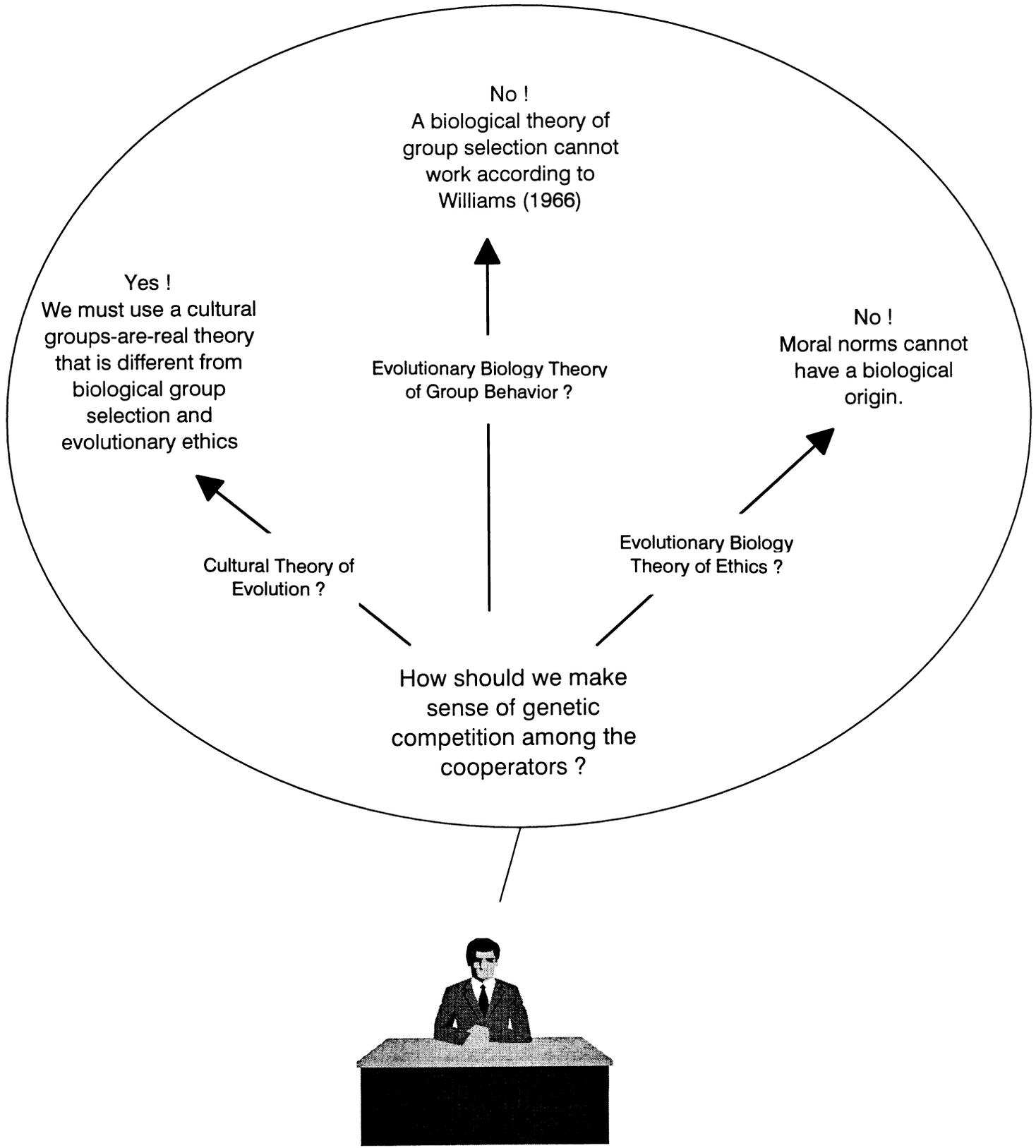


Figure 5. Surface Interpretation of Campbell's "Groups are Real" arguments

groups. A superficial reading of Campbell's New York essay indicates that management researchers better investigate the conditions favoring individual and face-to-face group selection as opposed to firm-level selection especially when the individual and group selection processes tend to erode firm-level innovations: "firm-level adaptations will be under continual undermining pressures from individual and face-to-face group preferences" (1994b: 38).

#### ***HERMENEUTICALLY-INFORMED INTERPRETATION (PARTICIPANT APPROACH)***

Reading the New York essay from a hermeneutic perspective, however, an entirely different interpretation emerges. According to Propositions 5b-8b, we must conceptualize Campbell's text as a mental lens to help in comprehending and coping with problems. Such a "problem-coping view" of his work requires us to identify the problem that Campbell was fascinated by *before* attempting to make sense of his texts. We need not look far to grasp the problem that was puzzling Campbell. In the 4<sup>th</sup> paragraph of his New York essay (1994b: 23–24) he stated:

Methodological individualism dominates our neighboring field of economics, much of sociology, and all of psychology's excursions into organization theory. This is the dogma that all human social group processes are to be explained by laws of individual behavior—that groups and social organizations have no ontological reality—that where used, references to organizations, and so on, are but convenient summaries of individual behavior. So pervasive is this dogma that even in a group of social scientists focused on laws of social organization (such as those represented in this book and in the exciting conference it represents) adhere to it, or at least have not self-consciously rejected it. To get into the issues of this chapter we must reject methodological individualism as an a priori assumption, make the issue an empirical one, and take the position that groups, human social organizations, *might be* ontologically real, with laws not derivable from individual psychology. Indeed, some principles of organizational form cannot be in any sense attributes of individual persons. One of my favorite early papers (Campbell, 1958) explicitly sides with that strident minority of sociologists who assert that "Groups are real!" even though it finds human organizations "fuzzier" than stones or white rats.

It is clear that Campbell did not like methodological individualism, but he does not give us any clues as to why. However, in the above quoted paragraph, he indicated there is a problem with individual psychology. To appreciate what is at fault with methodological individualism we must first discover what is wrong with individual psychology. Campbell gave no references to the literature on individual psychology he has a problem with. We need to read on.

At this point we must choose among two interpretive directions. We could conclude that Campbell implies that there is something wrong with *every* theory of individual psychology that has ever been written. Furthermore, no matter how much effort psychologists put into their work, we may safely conclude that a satisfactory theory of individual psychology will never be achieved. Certain aspects of economic and social reality, such as cooperation, simply cannot be understood by studying how individuals' schemas are constructed and how these schemas are used to make sense of and guide their relationships with the extra-mental world. Therefore, Campbell concluded the only reasonable alternative is to adopt the concept of "ontologically real groups."

Alternatively, we could assume Campbell believed something is wrong with *some* theories of individual psychology, and he was searching for words to expose the weaknesses of these theories to us. In this latter interpretation, an important objective is to discredit problematic theories. If Campbell used strong and dramatic language, it is because he was getting carried away in his zeal to rally support for his ideas and not because he intended to discredit *every* theory of individual psychology.

Indeed, in his earlier work, Campbell made quite clear which theories of individual psychology he had a problem with: those *normatively* grounded in the neo-Darwinian theory of evolutionary biology (1975b; Campbell and Specht, 1984:35–36). Neo-Darwinism implies that

the gene (or groups of genes) is the unit of selection (Dawkins 1976). Certain “selfish” genes induce behavior that makes it more likely that these genes are present in a higher number in the next generation: you exist today because your ancestors had fewer moral hesitations about behaving selfishly than their fellow human beings. If we push this neo-Darwinian argument to the limit, we must conclude that our ancestors were genetically programmed to choose those moral norms that enhanced their own genetic fitness: thus there is no need to feel guilty about behaving selfishly yourself. Campbell had a problem with this line of reasoning that what is biologically is therefore morally good. He called it “ethically unjustified normative biologism.” He considered this type of reasoning “nihilistic”( see especially Campbell 1979).

As a social human being, Campbell believed there is more to being human than acting out a selfish genetic program. But, from a scientific viewpoint, Campbell thought he had to accept neo-Darwinian arguments to avoid rejecting biological evolution. Thus, it appears that Campbell developed his “groups are real” arguments NOT for the “surface” reason that groups exist and therefore deserve study, but rather to neutralize the moral implications of neo-Darwinism which he considered unacceptable. Indeed, according to the New York essay (1994b: 26; his emphasis):

Accepting the dogma of *no biological group selection of human traits*, I (Campbell 1975[b], 1979, 1982[b], 1983, 1991[a]) have attributed the capacity of organized human beings for ultrasociality to cultural evolution. I have argued that the culturally evolved moral norms are predominantly preaching against the very sort of personality that biological individual selection would produce—tendencies for selfish and nepotistic cheating on the social contract, free-riding and freeloading on the altruistic products of others, etc.

The answers to the questions raised in the context of Proposition 1b and 2b—Which audience is Campbell addressing? What meaning do Campbell’s words have? —become now clear.

Campbell's primary audience are those individuals puzzled by normative biologism. Campbell's arguments need to be situated in the dialogue investigating how to deal with the conflict between common-sense ethics and biologically-inspired ethical systems. Campbell is tickling our mind. He wants us to reflect on these issues of egoism and nepotism. He does not want us to blindly accept them as scientific facts. With respect to the question raised in the context of Proposition 2b Campbell used the words of "selfishness" and "self-sacrifice" in the context of violence and warfare (e.g., Levine and Campbell, 1972). These words had a vivid meaning for him. He did not use them as stylized facts that are easy to tract mathematically.

Let us now take a second look at the dilemma facing Campbell—how to make sense of cooperation without having to reject Darwinism. At face-value it may seem the only option available to Campbell was to argue for a (blind) variation-selection-retention analogy of ontologically-real groups—a variation of his 1965a paper<sup>19</sup>. In reality, however, Campbell had three possible research agendas from which to choose, outlined in Figure 6. The first option, research agenda A, was to conclude neo-Darwinian biologists were misusing the word "theory." The word "theory" is usually employed to denote "a statement of relations among concepts within a set of boundary assumptions and constraints" (Bacharach 1989: 496). Thus a theory is

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<sup>19</sup> In his 1965a paper Campbell presented a (blind) variation-selection-retention analogy to make sense of socio-cultural evolution. He applied this analogy also to the study of creative thought (1974b). The three essentials of this analogy are: (1) the occurrence of *variations*: heterogeneous, haphazard, "blind", but in any event variable (the mutation process in organic evolution and the exploratory responses in learning); (2) consistent *selection* criteria: selective elimination, propagation and retention (differential survival of certain mutants in organic evolution, and differential reinforcement of certain responses in learning); and (3) a mechanism for the preservation, duplication, or *propagation* and *retention* of the positively selected variants (the rigid duplication process of the DNA in viruses, prokaryotes, plants, and animals; memory in learning) In management this analogy has been applied to make sense of the emergence of new organizational forms (e.g., Aldrich, 1979), internal corporate venturing in diversified corporations (Burgelman 1983) and the emergence of new strategic initiatives (Burgelman 1991) to give a few

mainly a linguistic construct, consisting of nothing more than words uttered in a conversation or black dots printed on paper. How the theory “connects” with the extra-mental reality is a function of the epistemology a researcher endorses. It is one of the many boundary assumptions constraining a theory. As indicated in the introduction, Campbell was an expert in EE (1974a). Since “evolutionary” epistemology is different from traditional Cartesian epistemology, a theory of Darwinism consistent with EE must be different from one conceived in a traditional epistemological world view.

Traditional epistemology tried to answer the problem of knowledge without presuming any knowledge in the process. It pursued questions of knowledge independent from ontological questions. The end result was skepticism. EE on the other hand deliberately begs questions about the possibility of knowledge. It assumes that knowledge *is* possible. In addition, it brings ontological questions into the epistemological conversation. We make “hypothetically ontological” statements when articulating epistemological viewpoints (Campbell, 1974b: 141, 1987: 165). For example, an individual arguing for EE implicitly makes a statement about himself as a biological knowing creature emerging from an evolutionary process of trial and error elimination *and not* a descendant of Adam and Eve or the designed end-product of an evolutionary process started by the Creator himself. The argument that we somehow *are* addressing ontological questions at the same time as epistemological is also at the basis of philosophical hermeneutics as discussed in Part 1 of this chapter. When we make a statement about the validity of an argument in a text we simultaneously make a statement about our status as beings. We give ourselves the ontology of someone standing outside the universe and outside biological evolution. Or, we discuss knowledge as an insider and a product of and participant in

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examples.

the evolutionary process.

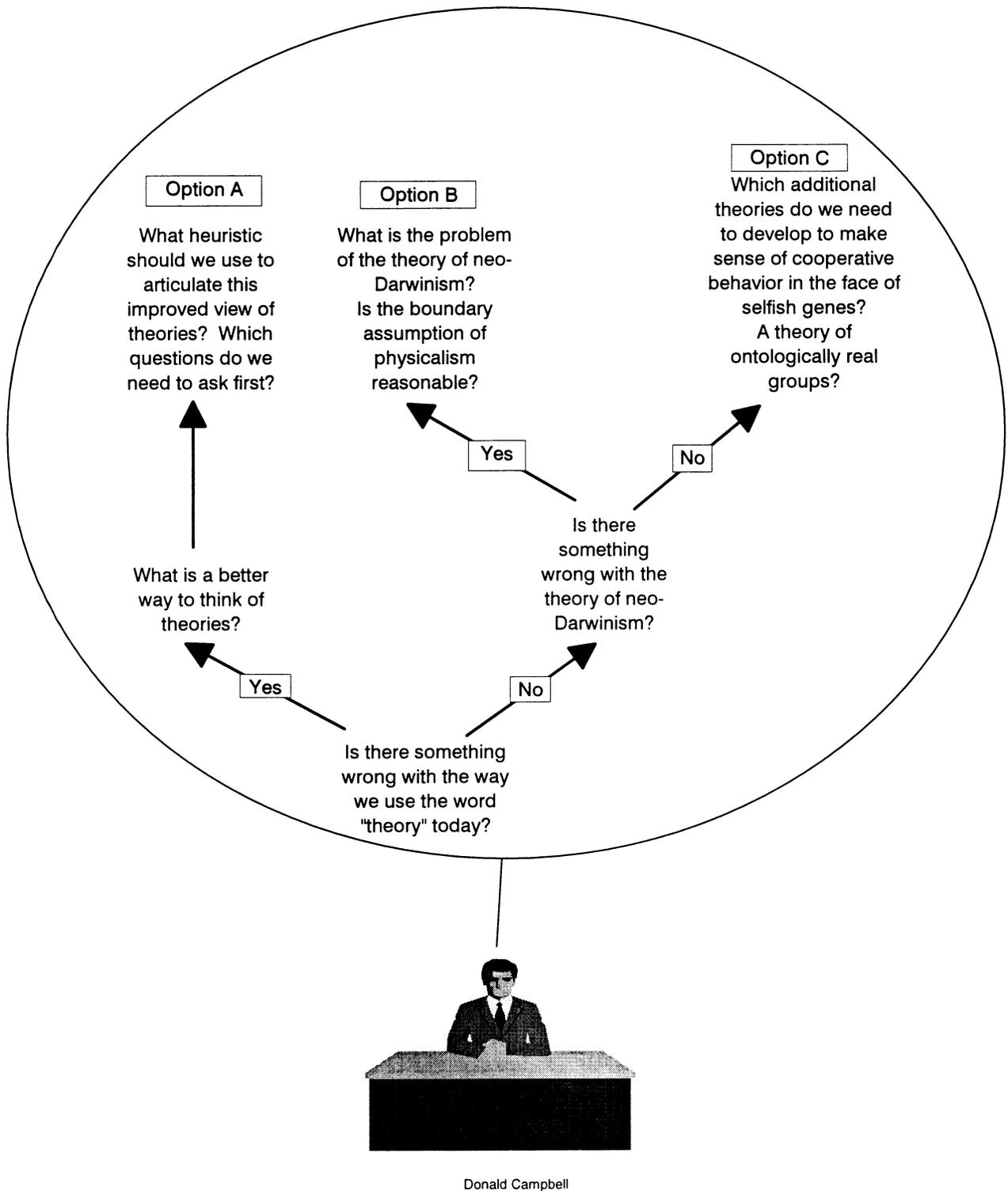
Given that Campbell was one of the founders of EE we would expect him to have been in the process of sketching a new meaning for the concept “theory” that takes this new view of the relation between ontology and epistemology into account—if he had not developed it already.

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Insert Figure 6 about here: Visualization of Campbell’s methodological dilemma  
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Campbell’s second option, research agenda B, was to conclude there was something wrong with the neo-Darwinian theory of natural selection. In this view there would be nothing wrong with the concept of theory in and of itself. But there might be something wrong with certain components of the neo-Darwinism. For example, neo-Darwinism does not explain very well the evolution of cognitive capabilities beyond suggesting they are genetically encoded. So, an “improved” version of neo-Darwinism would remedy that.

The third option available to Campbell, research agenda C, was to conclude that humanity needs a separate theory for the study of cooperation. According to this third option, there would be nothing wrong with the concept “theory” or the neo-Darwinian view of evolution. The theory of neo-Darwinism may be kept in its entirety—the selfish gene *is* the unit of selection; human beings *are* selfish and nepotistic (on average). To cover the full spectrum of human behavior we need to complement the neo-Darwinian theory of evolution with additional theories to make sense of those aspects of human behavior that cannot be explained by neo-Darwinism itself. As discussed above, neo-Darwinism does not adequately explain self-sacrificing and moral behavior. Therefore, the additional theory would have to make sense of this type of actions.

On the “surface,” it appears that Campbell chose Option C. He explicitly accepted a hard-line neo-Darwinism and the principle of downward causation (e.g., 1974c, Campbell and Paller 1989:



**Figure 6. Donald Campbell's dilemma**

232). And he clarified on several occasions that his theory of cultural evolution describes a set of phenomena that act independent from those elaborated in theories of biological evolution (e.g., 1972, 1979, 1982b, 1983).

But just because Campbell tentatively explored Option C does not mean it was his final choice, as the tension in the following paragraph (1994b: 29) reveals:

Even though the primary message of my chapter requires a continual ongoing conflict between behaviors that optimize organized groups and behaviors that optimize an individual's personal and nepotistic interest (which I pose as a conflict between the products of biological and cultural evolution), I do not want to deny that our biological evolutionary history, way back to its prehuman primate roots, has been increasingly social, and that our biological human nature contains innate adaptations furthering some forms of sociality (possibly the products of biological group selection).

Here, it appears that Campbell was not content with the “conflict between the products of biological and cultural evolution.” He reluctantly wondered whether or not it is possible to develop a theory of evolution where the cultural and biological forces are not at odds with one another. For example, one of the newer approaches in evolutionary biology is the study of the evolution and adaptive value of cognitive capabilities in animals (e.g., Bechtel 1993). This research question resonates well with Campbell's (1990a) arguments about the evolution of problem-solving strategies—from non-mnemonic problem solving in blue-green algae, bacteria and protozoa to scientific problem-solving in the higher primates. Thus, possibly, Campbell was contemplating Option B, the development of a theory of biological evolution that explicitly makes sense of the evolution of cognition and behavior in itself. Re-reading Campbell's work reveals indeed that he wrote extensively on the importance of creativity. In the New York essay he stated (1994b: 31):

Not at all do I deny the importance of creative thought. ... Certainly when we come to business firm-level adaptations, creative thought rather than blind chance will most often be the source of the group-level variations upon which selection of firms operates. I have expanded natural-selection analogies into a general selection theory, and from this expanded perspective, the occurrence of intelligent planning as a source of group-level adaptations is not in conflict with our shared evolutionary perspective.

This quote clarifies that Campbell viewed creativity as fundamentally different from stochastic processes—the random tautomerizations of electrons in the DNA molecules controlling gene expression in the brain. That the issue of creativity played an important part in the world view of Campbell can also be derived from his complaint that inadequate attention had been paid to his work on creativity: “Too frequently, I have been misread as *denying* creativity.” (1990b: 9; his emphasis).

We also find passages, albeit not in the New York essay, indicating Campbell pursued Option A, the development of a new conception of the word “theory.” He called his own epistemological position “hypothetical realism” (1959, 1993a: 89). He argued that this position has all along been consistent with an anti-realism *both* for scientific beliefs and ordinary individual perception (Campbell and Paller: 1989: 234; Campbell 1993a: 89). This argument is not surprising given that Campbell, in the earlier part of his career, demonstrated that visual perception is culturally biased (e.g., Segall, Campbell and Herskovitz, 1966).

The curious thing is that, once you take the hypothetical and contingent nature of “groups are real” arguments into account, you will find that Campbell weakened his own arguments about the realness of groups. For example, consider the introductory paragraph in the New York essay. Why did Campbell write “*might* be ontologically real” instead of “are ontologically real”? Why did he bother italicizing “*might*”? Did he have second thoughts about committing himself to this

argument? He did not add an italicized “might” to the other arguments in his New York essay.

The following paragraph in Campbell (1994a: 148) is also intriguing,

In 1958, I published a paper that remains a favorite of mind. It is a contribution to the “groups are real” literature, using the Gestalt principles of perceptual organization to relativize the concepts of thing or entity even for physical-object exemplifications. This relativization allows, and provides imperfect criteria for, positing “real” ontological status for some social organizations.

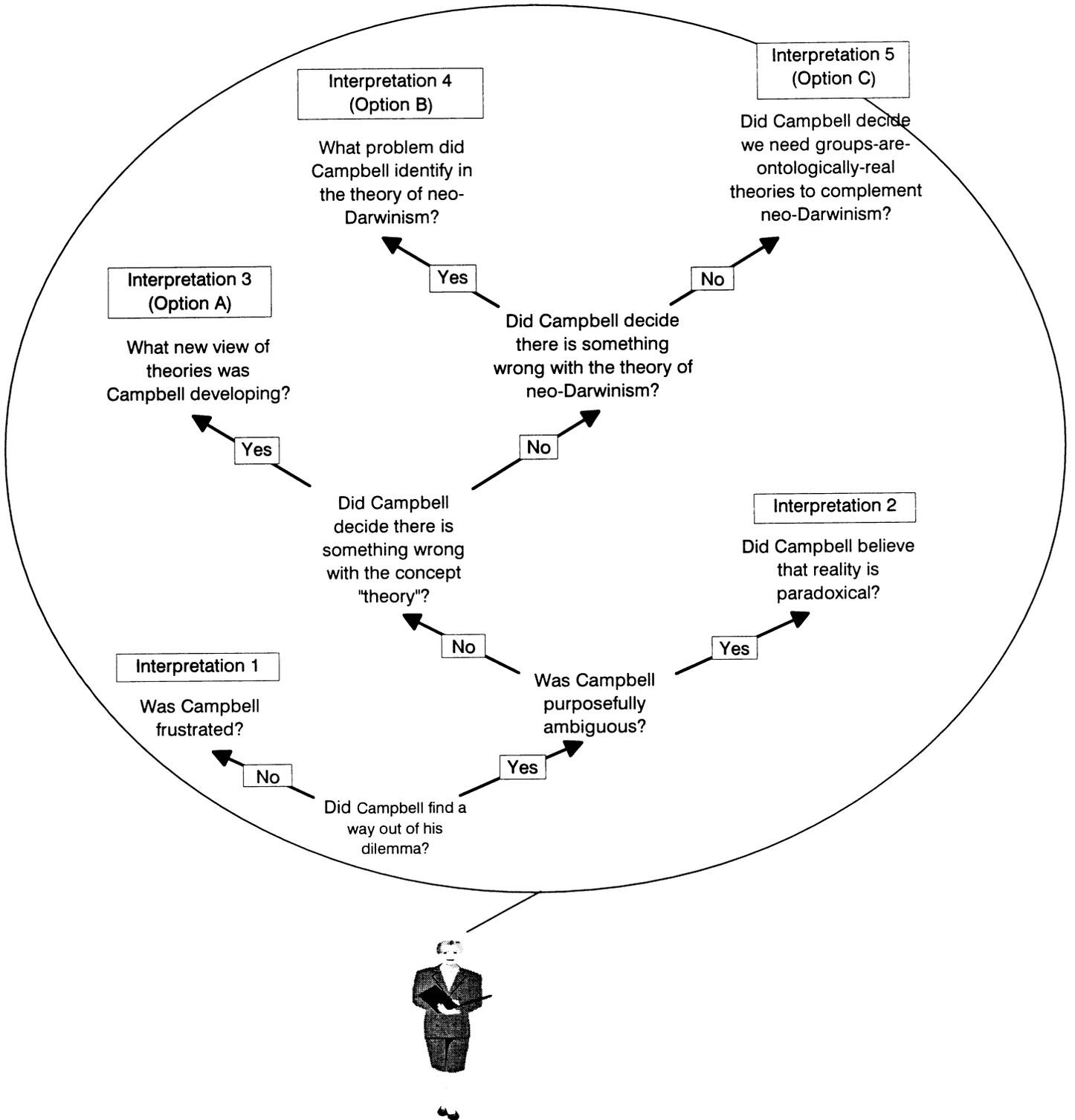
Is Campbell suggesting here we need to interpret the “groups are real” argument as a schema to organize our thought processes about organizational phenomena *and not* a “real” entity some of us are capable of measuring, studying and testing?

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Insert Figure 7: The Dilemma of a Campbell scholar  
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In summary, it is possible to derive the following five interpretations from the foregoing contradictions in Campbell’s New York essay, as outlined in Figure 7:

- (1) Campbell was not really sure which one of the three options A, B, or C he should pursue. He was “frustrated.”
- (2) Campbell was on purpose ambiguous about his viewpoints on neo-Darwinism, selfish/opportunistic conceptions of managers, the ontological reality of groups and the meaning of the word “theory.” He believed contradictions invoke creative thought and prevent the freezing of thinking and premature closing of the minds of his readers (Starbuck 1988; Poole and Van de Ven 1989).
- (3) Campbell was searching for a new way to make sense of the word “theory,” consistent with his arguments for an evolutionary epistemology (Option A).
- (4) Campbell believed we need a better conception of what it means to be human than what neo-Darwinism offers (Option B).
- (5) Campbell believed it is impossible to reject the theory of neo-Darwinism. Therefore, in order to make sense of cooperative behavior, neo-Darwinism needs to be complemented with theories of social behavior, for example, theories that postulate that groups are ontologically real (Option C).

***APPLYING THE PRINCIPLE OF CHARITY TO CAMPBELL’S OWN WORK***



**Figure 7. The dilemma of a Campbell scholar**

How should we interpret Campbell's New York essay? Which one of the five interpretations should we choose? Campbell is not here anymore, so we cannot ask him. And, even if we could ask him and he confirmed our choice, we cannot exclude the possibility that Campbell is just eagerly performing his "duty to the dialectic processes of scholarship," encouraging younger scholars to publish their work (1991b: 166).

At face value it looks like we need to choose Interpretation 1. Our discussion indicates a level of ambiguity in Campbell's work. On the one hand, he seems to be promoting the "groups are real" argument. But at the same time, he downplays his own argument by italicizing "might" in the New York essay and calling it a "relativization" in Campbell (1994a: 149). If we were to choose Interpretation 1, we could find additional evidence that Campbell was flip-flopping between positions. On the one hand Campbell (1991a) rejects the idea that moral intuitions may have a biological origin. But at the same time he himself makes the conceptual leap from selfish genes replicating themselves inside bodies to selfish behavior by the "whole" bodies themselves. He even makes this leap with respect to nepotism. In the New York essay, he writes "I find that I use [the biological] term [inclusive fitness] as a substitute for *self-interest*, as a sociobiological expansion of self-interest to include nepotism" (1994b: 25). How could Campbell question the argument that our morals have a biological origin and at the same time state that he uses biological terms as a substitute for moral concepts such as self-interest and nepotism. Another inconsistency is his treatment of the correspondence *theory* of truth. Campbell explicitly rejects this definition of truth (1991c: 588–89, 1994a: 128). But, at the same time, he argues that we must strive for a correspondence *goal* of truth, that we still may maintain a "correspondence definition of the meaning of "truth" (Campbell and Paller 1989: 252). Now, how can you, as a scientist, claim that the goal of science is to get closer to the truth and, at the same time, argue

that it is impossible to measure whether theories correspond to reality. Either you believe you can measure the extent to which theories correspond to phenomena under investigation, or you believe you cannot. But you cannot make both arguments at the same time.

Unless Campbell on purpose added contradictions to his papers, which brings us to Interpretation 2. Maybe Campbell believed that the reality *is* paradoxical, and he includes a few inconsistent statements in every paper to remind readers of the intrinsic ambiguities in the outside world and its “buzzing, booming confusion”. In this second interpretation Campbell would be working within the postmodern tradition that contradictions and inconsistencies are a sign of our times: we need to learn to accept contradictions rather than worry about them. However, on second thought, this interpretation is not very plausible. Campbell himself never wrote a paper that paradoxes may have pedagogical value (Morgan 1988). In addition, this second interpretation is not very interesting. The outside world is already complex and ambiguous in itself. It is difficult enough to make sense of this world; it is easy enough to articulate paradoxical statements by accident. It would be counter-productive to complicate sense-making processes by adding an additional layers of contradictory statements on purpose. This brings us back to Interpretation 1: Is Campbell frustrated? Has he given up on making sense of genetic competition among the cooperators?

When we investigate the above identified interpretive dilemma through the lenses of hermeneutical philosophy, an entirely different answer unfolds. How you interpret the work of Donald Campbell is a function of your frame of reference. You may choose among two reference frames, a God’s Eye frame or a Participant frame. Are you reading the work of Campbell from the perspective of an onlooker—as if you are standing outside the universe in the Shoes of the Creator? If you are, you would be justified in concluding that the New York essay

gives a muddle-headed impression. It contains indeed several contradictory statements. Or, are you reading Campbell's work as a participant in an ongoing dialogue attempting to understand what it means to be human? The Participant view inspires you to reason as if you are situated in a quadrangle. The text acts as a pair of mental glasses focusing how the author experienced the phenomena. You need to think of Donald Campbell as an optician, a lens crafter. He was in the process of crafting improved mental lenses to focus your thoughts on "hypothetically normative" heuristics to guide social interactions. He was searching for words to communicate his ideas.

If we then apply the principle of Charity and assume that Campbell was on the same track as his favorite philosophers read his work again, we find many passages indicating Interpretation 3 (Option A) is the most valid one. When we make epistemology evolutionary, we must also develop an evolutionary conception of the word "theory." In Campbell's words, we cannot treat the word "theory" as if it is a clairvoyant picture of the reality. For example, we cannot interpret the neo-Darwinian theory of biological evolution in a literal way, as a natural fact: "It is obvious that the direct invocation of biological evolution to justify *scientific* beliefs has to be given up" (Campbell and Paller 1989: 232; their emphasis). While Campbell does not communicate it in exactly my words, it looks like he was in the process of articulating a view of theories as manufactured instruments, mental lenses. He was "looking" through the theories he encountered and investigating whether these theories clarified his thoughts or, alternatively, confused him. For example, when Campbell "looked through" the theory of neo-Darwinian evolution he noticed that it contradicted with many of our common-sense notions of ethics. As he illustrated in his 1975 presidential address at the meeting of the American Psychological Association in Chicago, Campbell was not someone who easily dismissed common sense. Rather, he used the extent to which our theories are consistent with or contradict our common sense "recipes for living" as a

test for the cross-validity of these theories and a stepping-stone to develop new theories (1978: 186–87, 192). In this view his arguments about cultural forces are an attempt to make sense of the contradictions between common sense wisdom and scientific wisdom.

At the same time that Campbell was attempting to make sense of the contradictions between our moral norms in use and the norms predicted by neo-Darwinism, he was also in the process of constructing an epistemology that would overcome the contradictions between science and common sense without completely rejecting one or the other view point—evolutionary epistemology (EE). In the 1970s he discovered philosophical hermeneutics—validity-seeking hermeneutics as he called it. He realized that both hermeneutics and EE reject the separation of ontological from epistemological questions. We all make ontological statements about humans as knowers when we argue for a particular epistemological position. EE sets up researchers as members of a biological community—an intercommunicating gene pool—emerging in an evolutionary process of trial and error elimination. Hermeneutics inspires us to think of researchers as individuals having faith in the rationality they share with the other members of their human community. By 1992 Campbell had four publications on the importance of validity-seeking hermeneutics. Two more would follow. So, it looks like he was working through the hermeneutical literature at the time he was preparing the New York essay; he was in the middle of sorting out his thoughts on how to use hermeneutics as a guide for practicable research.

In this interpretation it would be unfair to interpret Campbell as dogmatically defending the “groups are ontologically real” argument—Interpretation 5 (Option C). Even though some still may consider this argument a valid explanation (e.g., Walsh 1995: 286), it is hard to ignore the problematic nature of this argument. Perhaps, the immediate problem is the difficulty, if not impossibility, of connecting this argument to human experiences—Proposition 11b. It is *by*

*definition* impossible to test whether a causal group force or a supernatural force is making an individual act in a particular way. If group forces are really out there, they are also acting on us, the researchers. What we retrospectively call “free will” (Bourgeois 1984), in reality is a group-force guiding our behavior. In order to test this argument, we would have to step outside our own existence, hang in outer-space, and then look down to observe the group forces in action to become inspired on how to test them—which is impossible.

A second problem is that, to make this research approach credible, we need to prove in a non-human way that cultural group forces really operate out there. For example, you could claim that the Creator revealed in a dream that some of the choices of researchers are guided by a still to be identified transcendental force. (Descartes used a “dream” argument to make his materialistic philosophy more palatable.) But how can an argument appealing to the supernatural guide practical decision making? How can arguments like these promote informed discussion—Proposition 12b? Would it not be simpler to study schemas (Fiske and Morling 1995: 489–94) and how they influence the social identity of an individual (Hogg 1995b: 555–60)? Third, most of us learned about “groups are real” forces from the literature; that is, by reading “texts.” In this view we need to evaluate “groups are real” arguments as a function of their textual qualities—we could evaluate them as if they were mental lenses crafted by researchers/opticians. This brings to the foreground that, as far as we know, human beings created this argument. The interesting and puzzling question then is why we would construct arguments that *a priori* state there must be limits to what we, researchers, are able to comprehend and do; and at the same time state that it is impossible to know these limits? Arguments like these are not very practicable—Proposition 13b. Might it not be better to just consider these arguments artifacts, abandoned thought-experiments inherited from the past?

Given Campbell's continued emphasis that "all theories are potentially open to revision" the more charitable interpretation is that Campbell himself was in the process of revising his position in the "groups are real" movement. Campbell formulated his "groups are ontologically" real arguments in the earlier part of his career—his first publication on this issue was in 1958. He wrote most of his papers on hermeneutics later in life—he mentioned hermeneutics for the first time in his 1977 William James lectures. So, it is reasonable to surmise that Campbell was in the process of switching to a world view informed by philosophical hermeneutics at the time he wrote the New York essay. In this view, the inconsistencies in Campbell's texts surface as accidental by-products of his struggle to find the right words to articulate a new conception of the word theory and, based on that, a new conception of what it means to be human that moves beyond neo-Darwinian explanations of selfish behavior. The interpretation that Campbell was about to abandon the "groups are real" position seems even more credible given that a large number of today's social psychologists decided to opt out of the formal controversy about the need for supra-individual constructs (Hogg 1995a: 269–70).

#### **DISCUSSION, CONCLUSION, AND IMPLICATIONS**

With this chapter, I present an exercise in philosophical hermeneutics and, at the same time, make a call to add it to the tool kit of management researchers. I analyze the paper Campbell presented at the 1992 New York conference on organizational evolution—the "New York essay"—to illustrate the need to pay more attention to philosophical hermeneutics. Although Campbell did not discuss hermeneutics specifically in that essay, he wrote it at the same time he reiterated elsewhere (1995: 19, 1996) that hermeneutics is a promising philosophical approach to develop "a new consensus on the theory of science." Somehow, the researchers attending the 1992 conference did not take up this call for more serious research on the value of hermeneutics

for management studies—none of the chapters in *Evolutionary Dynamics of Organizations* (Baum and Singh 1994), or this volume for that matter, mention the role hermeneutics plays in Campbell's work. The editors' introduction and McKelvey's chapter on “Campbellian Realism” are exceptions.

There are at least two things we can learn from studying Campbell the philosopher. The first lesson is to develop a more sophisticated understanding of hermeneutics. Campbell was explicit in his excitement about this stream in philosophy. He even requested help to come up with a better check list than the one he developed (1991c: 589). Once you take Campbell's interest in hermeneutics seriously, you discover that there is indeed an “Interpretive Turn” taking place in philosophy (Hiley, Bohman and Shusterman 1991). As discussed in the Part 1 of this chapter, the core idea of philosophical hermeneutics is that we all must ask ontological questions together with epistemological ones. At face-value it may seem that ontological questions are questions about the objects in the outside world. In reality, they are questions about how we make sense of our own existence and our relationship with the entities that make up the environment. Our perception of these entities is a function of how we perceive our own position in the world. We may choose from at least two frames of reference to make sense of our existence and relationships, a God's Eye and a Participant frame. Each of these frames gives a different meaning to the process of studying a scholar's work—the environmental entities called “text.” In the God's Eye frame, we become inspired to treat the text as a crude photograph of the content of the mind of the author which itself contains a set of digitalized photo negatives of the outside reality. This frame downplays our own subjective input in the reading process. In the Participant frame, we engage in an imaginary dialogue with the author. The text acts as a lens bringing into focus what the author is attempting to communicate as well as our own thoughts.

Philosophical hermeneutics foregrounds the continuous imaginary negotiation taking place between readers and authors. These linguistic negotiations—Campbell (1993a: 89) called them social negotiations—determine the meanings we attach to words and arguments. For these negotiations to take place, however, we first must assume that authors possess the same type of rationality as we do. This is expressed in Proposition 10b. It is in our best interest—assuming we want the conversation to continue—to view the authors we read and people we carry on discourse with as equally rational. We cannot assume *a priori* that authors lack the capability, or background knowledge, to communicate something substantive. If we search for it, we will always find a passage that, at face-value, sounds rather preposterous or illogical. But that cannot in itself give grounds to completely dismiss a viewpoint. If we do not include *every* voice in the conversation, we run the risk of leaving out those that turn out to make a significant difference after all. Given that in many cases the authors are dead, or too busy to spend time with you to explain what they mean by word so-and-so—alternatively, you may not have that kind of time—every text will contain a residual level of ambiguity. When you encounter opaque passages, you never will be able to prove beyond reasonable doubt that the author was not confused or “stupid,” to use Campbell’s favorite word. Instead, you first must believe in a shared rationality. You must have faith that the Other is as rational as you.

The growing recognition of the value of philosophical hermeneutics emerges out of the realization that it is impossible to construct timeless criteria to decide in advance that a viewpoint is so unimportant that you should not bother reading about it and attempting to understand it, or that you may officially label it “irrelevant” (Rorty 1987: 36). We never can exclude the possibility that our ignorance makes us misinterpret the words of an author. Alternatively, getting a better understanding of dissenting viewpoints allows us to notice weaknesses in our

own educational systems. Said differently, we need to think of these arguments as lenses *and not* as statements of facts. What is the most interesting lens? Is it one which *a priori* assumes that it is acceptable to categorize authors as a function of whether or not they are too muddle-headed to be communicating something substantive? Or, is it one that assumes a shared rationality and that inspires you to treat the ambiguities you encounter in a text as opportunities for furthering the dialogue? Which lens does allow you to develop a better connection with an author?

This brings us to the second lesson: what it means to practice philosophical hermeneutics. While constructing this interpretation of Campbell's later philosophical work we go twice through a hermeneutical exercise; that is, how to be charitable interpreters. The first hermeneutical exercise is Campbell's New York essay. How should you interpret this essay? Did Campbell want to convince you to continue the study of ontologically real groups— Interpretation 5 (Option C)? Or, was Campbell trying to persuade you to develop a more sophisticated understanding of the linguistic signs, "epistemology" and "theory", a process that may lead to an interpretation of biological evolution not requiring the assumption of selfishness and nepotism— Interpretation 3 (Option A)? Stated differently, did Campbell think that the chapter on human egoism is closed: evolutionary biology has *proven* that human beings *are* selfish and nepotistic (on average) and the most honest act is to accept that and develop social institutions to control the selfish activities of humans? Or, was Campbell in the process of figuring out that this argument about egoism is a cultural artifact that we inherited from the religious literature on original sin? Given the opportunity, would he rewrite the New York essay and encourage management researchers to investigate the connection between scientific and religious practices and use the thus generated insights to study the factors promoting firm-longevity? While Campbell did not state the latter conclusion explicitly, nevertheless it looks

like it would just have been a matter of time for him to have published such an argument. For example, in Campbell (1975b) he argued that traditional religious moral teaching may act as better sources of common sense recipes for living than psychology and psychiatry. In (1991a: 93) Campbell stated,

One way of achieving that epistemic humility would be to try to translate religious truths into modern metaphors. It seems desirable that sympathetic social scientists study those religious scriptures, parables, commandments, prayers, affirmations, sermons, etc. that are suspected of having a message worth preserving, and attempt to restate them in metaphors consistent with the scientific world image. Many will deal with human nature, and these should be relatively easy to translate. Other will present supra-individual social system truths, and for these we as yet have no generally accepted social science concepts.

If we combine this statement with Campbell's arguments about the subjective element in knowledge construction (1984: 28), that theories are underdetermined (1978: 188, 1991c: 589), and his many references to Knorr-Retina's *The Manufacture of Knowledge* (e.g., 1982a: 327, 1984: 31, 1986: 118, 1993a: 89; Holzner, Campbell, and Shahidullah, 1985: 309), it looks like it would have been just a matter of time for Campbell to have pointed out that religious truths are also manufactured and that, unfortunately, a few of them are not very enlightening. In that view the arguments for biological selfishness/opportunism possibly are inspired by the theological fascination for the notions of evil and sin. And they are, just like these theological arguments, fabrications of the mind.

Which interpretation of Campbell's work you choose depends on your frame of reference and how you apply the principle of Charity. If you believe that people are selfish on average and that the idea of sin is historically real, then you are more likely to interpret Campbell's (1975a, 1975b, 1991a) as evidence that Campbell believed in some form of sin and evil himself. In that view you probably do accept the various arguments about nepotism and selfishness in the New York

essay as universal truths. You probably agree with Campbell that we must warn “firms” that there exist “selfish groups” that vicariously undermine firm-level implementations. If, on the other hand, you view these arguments about sin as fiction that even some of the early Christians found puzzling—if God is Good and Omnipotent why would He send a serpent to tempt Adam and Eve; why would He make us pay for their missteps? (Pagels 1988)—then you may be more likely to choose Interpretation 3 (Option A), or possibly also Interpretation 4 (Option B). In that case you would view the New York essay as a crude call for a better understanding of how human beings relate to one another—the study of face-to-face groups.

The second hermeneutical exercise then is Campbell’s appropriation of philosophical hermeneutics. Campbell took a first stab at articulating for what this philosophy stands. He was explicit about the incompleteness of his own understanding. Thus, if you want to dismiss philosophical hermeneutics it is easy to do so. You could conclude that hermeneutics deals with minor interpretive details that serious management researchers do not need to concern themselves with and that Campbell’s excitement about hermeneutics was exaggerated. Alternatively, you may interpret Campbell’s work on validity-seeking hermeneutics as a signal of an important turn in Campbell’s own philosophical thinking. As discussed in the above paragraph, the interpretation you favor is a function of the extent you apply the principle of Charity. Once you appropriate this principle you may find that many others express their excitement about having discovered hermeneutics. Perhaps the following quote, taken from Kuhn (1977: xii; cited in Rorty (1979: 323) and Bernstein (1983: 31)), most clearly summarizes the maxim of hermeneutically informed research,

When reading the works of an important thinker, look first for the apparent absurdities in the text and ask yourself how a sensible person could have written them. When you find an answer, I continue, when those passages make sense, then you may find that more central

passages, ones you previously thought you understood, have changed their meaning.

Adding philosophical hermeneutics to our tool kit and paying it the same level of attention that we give to statistical and mathematical techniques offers the prospect of developing improved understanding of who we are, and who and what we are studying. We interpret the texts in our field in different ways because we come from different backgrounds, and, hence, have different levels of ignorance. Disagreement about how to make sense of a management paper or book brings this ignorance in focus. A better understanding of what it means to be human may help us better cope with ignorance. It will lead to improved communication among authors and readers and a speedier process of moving ideas from their early academic origins into enlightened managerial practice.

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## **Appendix. What is philosophical hermeneutics?**

Given that the term, hermeneutics, has several different meanings and that, to my knowledge, these variations in hermeneutics have not been discussed in the context of management studies, I briefly clarify what *philosophical hermeneutics* stands for and how it is different from other approaches to hermeneutics. The following discussion of hermeneutics is adapted from part I of Palmer (1969) and Chapter 1 of Crusius (1991).

From a historical perspective, philosophical hermeneutics is primarily a European, and to some extent, even a German philosophical school of thought. It was practiced independently from analytical and logical empiricist philosophy. However, over the last ten years post-analytical and post-logical empiricist philosophers have rediscovered hermeneutics as a unique philosophical approach that may help address their conundrums. This development is sometimes referenced as the “Interpretive Turn” (e.g., Hiley, Bohman, and Shusterman 1991).

The core of philosophical hermeneutics is that it questions a traditional epistemology and philosophy of science approach. Since René Descartes, philosophy (of science) was preoccupied with epistemological problems. Its basic questions were “How do we come to know anything?” and “How can be sure of what we claim to know?” So conceived, Cartesian epistemology sets up management research as a search for knowledge of what happens in companies and markets. However, it ignores the question we must raise prior to studying knowledge: “What does it mean to be a being?” which is an ontological question. There is nothing to know and hence no problem of knowledge without “beings”—someone capable of knowledge, something to know about. Therefore, ontological questions must be asked at the same time as epistemological questions. Said differently, we can address ontological questions in two ways. We can assume that the questions about the ontology of the environment can be asked independent of questions

about our own ontology—the God’s Eye view of ontology. Or, we can assume that our answers to questions about the ontology of the outside world are a function of how we address the question of our own ontology—the Participant view of ontology. The arguments about frame of reference are introduced in the conversation for this purpose: to allow people to understand that their views of their own existence affect how they interpret the phenomena in the outside world. Martin Heidegger—in *Being and Time* (1927)—is generally recognized as having pointed out the importance of ontological questions about our selves. He also provided the impetus for Hans Georg Gadamer’s extensive development of philosophical hermeneutics in *Truth and Method* (1960).

To fully grasp what philosophical hermeneutics stands for, it is necessary to realize there are at least four *other* ways in which the term “hermeneutics” has been used (Palmer 1969: 33-45; Crusius 1991:3-6). In its *first* meaning, hermeneutics is biblical interpretation, a theory of biblical exegesis. For example, how should a Minister interpret those passages where Luke, Mathias and John talk about Jesus’ confrontation with the devil? In its *second* meaning, it is philological methodology. What is the philological origin of the words “devil” and “satan?” What other meanings have these words independent of the Scripture? In its *third* meaning, it becomes the science of all linguistic understanding. The German Schleiermacher believed it would be possible to develop a set of universally applicable rules to uncover the true meaning of any text—not just the Scripture. In the *fourth* meaning, then, it is a methodological foundation for the social sciences. William Dilthey, a biographer of Schleiermacher, argued that, since human beings are different from the entities studied in physics, we need a special “historical” methodology to study human actions. This fourth usage of the term hermeneutics is similar to Weber’s *Verstehen*.

Philosophical hermeneutics differs from biblical, philological, scientific, and social science methodology hermeneutics in its view of the status of interpretation. It holds that interpretation is not primarily a science—or art, if your prefer—the special discipline of priests, constitutional lawyers, or linguistics professors. Rather, it is human “being,” our mode of existence in the world. That is, hermeneutics does not come into play only when intersubjective understanding fails as in the case of the Protestant and Roman Catholic Church Fathers. It is not only an instrument for overcoming or preventing misunderstanding, as it was for Schleiermacher. It is not just the enabling discipline of the human sciences, as it was for Dilthey. Rather, *interpretation* constitutes the world in which we exist. We always find ourselves in the midst of interpretations carried by sounds traveling in the air, texts in books sitting on book shelves, and habits we have inherited from the past. Therefore, we need to become more conscious of the interpretive heuristics we use.

Of course, this brief discussion of hermeneutics hardly does justice to the growing literature on interpretive issues. For example, I did not discuss Paul Ricoeur’s contribution to hermeneutical philosophy or the widely publicized Habermas-Gadamer controversy (Ingram 1980). I also did not situate Derrida’s position that texts do not project stable linguistic meaning, but operate as fluidly changing networks in conjunction with shifting intertextual relations with other texts, in ways which mirror shifting social convention and disguises.

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