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Evaluating Embodied, Imaginative and Metamophorial Reason

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Abstract

A strictly abstract and disembodied reason would definitely not make the kind of wave in today's world as it did in periods preceding ours. In a world such as ours where the recognition of the human experience is gaining ground by the hour, an all-out abstract reason is bound to make a bad press. It is not surprising, then, that proponents of embodied thought are not alone in their clarion call for a reexamination of a few of our traditional claims. Studies demonstrate how the avowed relationship of correspondence between symbols and categories in the external world hardly characterizes meaning. Researchers show that the mathematical properties of the classical theory violet the necessary requirement of meaning, in that changes in the parts of the meaning of a sentence do not effect a change in the meaning of the entire sentence. In this way, the classical account of meaning fails as a theory of meaning, since it violates what it already admits is an indispensable requirement of meaning. At the core of its troubles is the finding that there is no intrinsic correspondence between objects and their symbols.

Keywords: external world, embodied thoughts, meaning, objects, symbols

Introduction

In philosophizing, some say, one needs to bring one's own linguistic repertoire and one's whole being into imagination. One convenes the norms and yardsticks of one's cultural ensemble, so as to confront these with one's words and existence; one juxtaposes one's words and life with the life that the words in one's culture imagines for one. Thus one brings one's cultural repertoire in confrontation with itself, along the lines where one's cultural ensemble converge in one.

Against this backdrop, we intend to level out this paper in three stages. First, we will identify some area in the ideas of proponents of imaginative and embodied reason where, in our judgment, they may deserve some commendation. Second, we shall attempt to pinpoint some of their shortfalls by introducing some of their critics. Third, we hope to bring the essay to a close with few general and concluding remarks.

The Input of the proponents of metaphorical, imaginative and embodied reason

A strictly abstract and disembodied reason would definitely not make the kind of wave in today's world as it did in periods preceding ours. In a world such as ours where the recognition of the human experience is gaining ground by the hour, an all-out abstract reason is bound to make a bad press. It is not surprising, then, that proponents of embodied thought are not alone in their clarion call for a reexamination of a few of our traditional claims. Hilary Putnam, for instance, takes the classical view of meaning to task. He demonstrates that the avowed

relationship of correspondence between symbols (words, mental representations) and categories in the external world, does not actually characterize meaning (Putnam 1981 ,52).

Putnam substantiates this by placing the standard definition of meaning**,** (that sees the meaning of a sentence as a function that allots a truth value to the sentence in every possible situation/world) side-by-side with what is regarded as a requisite condition that every theory of meaning must satisfy, according to which any change in the connotation of the parts of a sentence occasions a change in the connotation of the whole (Johnson, and Mark 1987, 229-230). When these two elements are juxtaposed in this way, the inconsistency of the model theory of semantics becomes glaring, in that it's definition of meaning fails to meet the necessary meaning requirement.

The mathematical properties of the classical theory violet the necessary requirement of meaning, in that changes in the parts of the meaning of a sentence do not effect a change in the meaning of the entire sentence. In this way, the classical account of meaning fails as a theory of meaning, since it violates an indispensable requirement of meaning when combined with its own definition of meaning. In this way Putnam establishes that our efforts at producing meaning for our abstract symbols by having them correspond to the world directly, immediately, and in a way that is not mediated, unavoidably runs counter to what we fundamentally understand meaning to be (Johnson, and Mark 1987, xi).

Worthy of note in Putnam's logic, and of special relevance to our discussion, is his basic premise that there is no intrinsic correspondence between objects and their symbols. We usually do not have any intrinsic correspondence of signs to objects, independently of the way we engage the signs. Our objects exist only in relation to our conceptual framework; they do not have any independent existence outside our conceptual system. Our descriptive schemes break down the world into objects. We are able to say what matches and what doesn't because the signs and objects in our conceptual system are internal to our descriptive scheme (Putnam, 198, 52). This argument lends credence to the position that our concepts are meaningful either directly or indirectly.

It is, therefore, understandable to say that meaningfulness is a matter of structuring experience, rather than a question of more mental structures. (The correspondence theory is also at issue here.) Thus, it could be consistent to see meaningfulness as a question of our cognitive operations synchronizing internally with the preconceptual structures in our experience.

The arguments in favor of image schemata and image-schematic transformations are indeed considerably weighty. It is not an ill-intentioned idea to have a rational process and reason that are natural to our human nature, in the sense of not being beyond ordinary human processes and faculties. We underscore the point that our rational process is native to our human nature. The contention that rationality is anchored in our image-schematic structures and the image-schematic transformations make sense. What if we did away with the notion of rationality that went beyond our normal range of operation as human beings? What if mathematics did not actually prove the existence of such a rationality?

The point is made that, the fact that there are mathematical truths does not point to the existence of any transcendental rationality, as is often claimed. Such a claim is yet another superfluous philosophical assumption. Mathematics emerges from the nature of human rationality. If mathematics is the study of pure form, as it is sometimes defined, then, it is the product of the

structures of our experience of our everydayness and we utilize it to make sense of other experiences. For, given the spatial orientation hypothesis, we have form when we metaphorically project image schemata and further ways of comprehending space onto abstract domains (Johnson & Mark 1987, 354).

A container form could be a pure form, in which there is a metaphorical overlapping of the container schema into another frontier. This in no way transcends any human experience or understanding. Mathematics, for instance, studies the structures we employ in comprehending and reasoning about our everyday experiences. These structures in her in our preconception corporeal experience; and we make them abstract through our metaphorical overlapping's and projections (Putnam, 1981, 355).

This view of reason, does not constrain one to consent to the presence of a certain transcendental rationality, beyond the experience and understanding of any composite beings. It holds, instead, that there is a certain internal structure, ecological sense, or gestalt understanding to our rationality, namely, image-schematic structure, that structures our preconceptual routine experience. This, thanks to our metaphorical overhanging, we frame onto other horizons and frontiers. It is a metaphorical overlapping and projection which has the semblance of what is commonly referred to as transcendental reason. Thus, our logical inference structures have image-schematic foundations. They only find their way in to abstract reason through metaphorical framing onto a container schema, for instance, where metaphorical projections and elaborations preserve their inference-structure (Johnson, and Mark 1987, 40).

One could hardly flaw proponents of imaginative reason for proffering a natural explanation of the sciences of mathematics and logic. What could, after all, be altered in these sciences if they accepted to be operating at levels within ordinary natural human powers, rather than their claiming affinity to realms that go beyond our normal natural processes? Being human activities, could it be that demeaning if they identified with their naturalness? What would, indeed, be wrong if the science of mathematics were, as proponents of imaginative reason claim, the study of the structures humans use in understanding and reasoning about their experiences? Given that these structures are, as he hypothesizes, inherent in our preconceptual bodily experiences, granted also that humans make the structures abstract through conceptual metaphorical operations, would a human-nature-oriented mathematical science not make sense?

Our brief analysis of the structure and the meaning of balance, understood both as an experience and as a concept, is again worth recalling here. We recall at once the example of the toddler attempting to walk for the first time. That example reveals how the hidden but organizing and recurring internal structure of balance, already present in the baby, accompanies the toddler's striving to keep a balanced horizon, as he trudges through the novel experience of walking for the very first time. This balanced horizon, which the kid strives after, the example notes, is the recurrent pattern in the experience of balancing. In this way, image schemata could be said to constitute for us a structure and a pattern according to which we organize our experiences and understanding, as we move and perceive with our bodies. Instances such as that of the toddler make the hypothesis of image-schematic structures, indeed, hard enough to resist.

Again, the meaning-symbol unity which proponents of imaginative reason labour so hard to preserve, which is also part of the purpose served by the mediation of Putnam that we cited

above, could be further strengthened by evidence from the world-object relationship in Indian thought. In a paper titled Are Words and Things Connected by Nature or by Convention? ,Eugenio Coseriu and BimalK. Matilal postulate an **"**undistinguished**"** word-linguistic-meaning relationship. They note the existence of two opposing schools in the Indian thought over the word-meaning relationship**:** the eternalists and the conventionalists.

On the one hand, the Grammarians and the Mimamsakas (the eternalists) hold that words are connected to objects by nature. They argue that people are known to use words to put meaning across**;** they do not busy themselves with creating words. From people's behaviours we come to the knowledge that the word-meaning relations have the character of eternity and non-derivability, that is to say, they are uncreated and unconventional. After all, we see people simply employing words to pass on meanings, without making attempts at manufacturing such words **(**Coseriu and Matilal, 1996, 898). Coseriu and Matilal note further that both Jaimini and Kotyoyana are agreed that the word-meaning relationship is not the creation of our conventions**. (**Coseriu and Matilal, 1996, 898).

On the other hand, the Nyaya-Vaisesika school (the conventionalists) holds that words and things are connected by convention, although God created the convention and taught men the use of language (as some of them would argue) **(**Coseriu and Matilal, 1996, 898).

In the light of these two views, Coseriu and Matilalmake a synthesis that strikes one as important. They hold that words and their meanings belong together in the minds of their users (speakers and hearers). There are elements of truth in the the hypotheses of the two schools. The debate between the Indian externalist-school and the conventionalist-school of thought provides rationale for the position that words and their meanings in language are undistinguished in the consciousness of speakers and listeners with the appropriate competence **(**Coseriu and Matilal, 1996, 898).

The solution to this symbol-objective-world dichotomy would be symbolic structures that are meaningful either directly or indirectly. The hope is that, this symbols-meaning correlation would eliminate, at its roots, the cleavage between words (and mental representations) and their meaning. (Recall the correspondence theory.) The directly meaningful symbolic structures are basic-level concepts and kinesthetic image schemata. The indirectly meaningful structures are those structures put in place by our imaginative capacities, namely, conceptual metaphor, conceptual metonymy etc.

Since meaning could be defined in relation to the structuring of experience, the basic-level and image-schematic structures, because they belong to the preconceptual structures in our experience, are already structured and are, as a result, directly meaningful. Similarly, the indirectly meaningful structures, though lacking clearly perceptible structures of their own, by means of non propositional figuratively elaborated schematic structures, through the operations of the imaginative processes of conceptual metaphor and metonymy, become also meaningful. No one doubts the need to bridge the gulf created in our intellectual enterprise, especially since Descartes' dualistic philosophy. Within this context of an intellectual reconstruction, nay restoration, proponents of imaginative reason such as Lakoff and Johnsondodeserve recognition for proposing one more solution.

Concerning concept formation, the evidence presented seems convincing. Our body-related concepts, such as our motor skills concepts, and our spatial-relations concepts, such as our

concepts of nearness and farness, evolving from our bodily nature and our spatial boundedness, reveal the imprints of their image-schematic structures. When some basic concepts, such as balance, are related to their supposed movement schema, and when spatial-relations concepts (for instance front and back) are traced to their claimed spatial-orientationschema, or when colour concepts are linked to their supposed in-out schema, all seem to fit. It then becomes difficult, given the force of evidence, to deny Lakoff's and Johnson's claim that our image-schematic structures, generated by our bodies, model our conceptualization.

Furthermore, Lakoff and Johnson's hypothesis of the metaphorical elaboration of image schemata scores some points. Here conceptual metaphor together with conceptual metonymy, considered as underlying principles of connection, link our vast networks of interconnected literal meanings. Their postulation of imaginative mechanisms that provide us with image-schematic structures and metonymic and metaphoric patterns which elaborate and extend the image schemata does not sound so strange. With the backing of developments in cognitive science, and the supporting theories of their colleagues, namely, Fauconnier, Fillmore, Sweetser, etc., their positing of the cognitive content of our imaginative faculties and processes become worthy of note.

The various instances of cognitive connections also seem quite forceful. The mental space constructions and cross-domain links of frame organization, roles, blended spaces analogy, polysemy, counterfactuals, and pragmatic functions deserve attention. In frame organization, we structure our understanding of the way aspects of our world do function. Roles define the functions and status of various members of our society, making this definition available for easy use in our thought process. With blended spaces, conceptual configurations in the source-space are used in framing relevant inferences onto the target-space. This space scaffolding is led through space composition, space blending onto generic space projections. In counterfactuality, true statements combine with false premises to form reasoning, generating an extension that follows from a core mapping that lacks truth conditions. And with pragmatic functions, realms are connected to one another by imaginative functions that link them up.

The theory of mental space configurations is indeed an attractive one. If mental spaces are actually linked by our mappings, structured by our frames, and moved from one space to the other in our discourse configurations, then this theory could not but be part of our definition of reason (Vernunft). Most importantly, the cognitive connections of polysemous terms, cognitive schemata, conceptual metaphoric and metonymic projections seem convincing. In the image-schematic transformation of polysemous terms, motivated by the natural relations among image schemata, core senses of words yield extended meanings, giving rise to terms that have intimately related senses.

Again, the experiments preformed by Dedre and Donald Gentner further reveal how our reason is constrained by the imaginative structures of understanding. In the experiment on electricity, we see a water-flow analogy where we understand current metaphorically as water that is flowing through a pipe. The experiment reveals how, in analogical reasoning, features of the source-realm are mapped onto the target-realm through conceptual metaphorical projections. The logic of the experiment is that one is drawn to certain inferences about the target-realm when one attempts to comprehend the behavior of electric circuits by projecting structural relations from the realm of hydraulic systems. This could go for a good example of how analogical and metaphorical thought processes structure our conceptual system.

A single theme unites all the aforementioned forms of mental space constructions and cognitive connections. In so far as they do not imply analogous metaphorical objects, they all belong to our imaginative mechanisms – with their various forms of manifestation. They are, thus, sequel to our embodiment. The identification of this state of affairs is, to my mind, one of the hallmarks of the works on embodied reason especially as research works in cognitive science continue to disclose cognitive constructions and cognitive connections as playing decisive roles in our thought organization.

Added to these is the extent to which proponents of embodied thought struggle to make good of their claims that the **"**basic logics**"** or the internal structures of our image schemata characterize human reason. The instances they cite of the in-out schema, the part-whole schema, negation, the law of extended middle, modals, and modal logic, merit consideration. With the in-out schema we are presented with the basis for our modus ponens and the basis for the Boolean Logic of classes, according to which everything is either in a container or out of it, namely, P or not P. In the link-schema, the linking-up experience of the umbilical cord finds its way into the logic of our interpersonal and social relationships, whereby these are conceived in relation to making connections and breaking social ties. And one notes with interest the internal meaning structure of this schema, namely, if q is connected to p, then p is connected to q.

Again, the argument that rational inferences emerge from our image schemata is further strengthened by our understanding of negation in our reasoning process. Negation is metaphorically understood in our reasoning as placing oneself outside the bounded field of an intellectual position. Explaining negation in terms of being outside an in-out schema does make sense. It makes sense too, to hypothesize that the in-out schematic structure does constrain our reason when we conceive negation as a proposition in terms of being outside some in-out field. The same is true also of the explanation of the law of excluded middle in the light of the in-out schema, wherein – given that everything is either p or not p – categories conceived as containers rule out any chance of a third possibility.

Worthy of commendation too, is Sweetser's experiment on the extensive cognition structure of modality. Here, we learn that following this connecting metaphorical structure, the mental, the epistemic, and the rational realms are comprehended in the light of the physical domain. Sweetser's demonstration of how reasoning could be carried out using metaphorical projections of force images is indeed a landmark. Informed by these force images, we have a rational structure where, in the epistemic senses of modal verbs, the force of the premises of an argument compels us into some conclusion.

Moreover, Lakoff's and Johnson's citing of logical necessity and logical possibility as instances of how modal logic itself could be anchored in the force schemata seems to hold. In logical necessity, the logical force carries one from one location to another. And in logical possibility, there I this experience of absence of any blockage to one's track to some location.

Furthermore, the identification of our power of abstract reason with the human conceptualizing capacity does carry some conviction. Here, we have a threefold human conceptualizing capacity, namely, (i) the power to create symbolic structures corresponding to the preconceptualstructures in our experience, (ii) the power of metaphorical mapping, framing structures in the physical sphere onto structures in the abstract sphere, and (iii) the power to

employ imagine-schematic structures as structuring devices in creating general categories and complex concepts.

What is more, the approach to the issue of human categorization does seem to strike the right note. The analysis proponents of imaginative thought make does appear to fit the general reflexes of the ordinary man in matters relating to classification. And since it is the generality of men that should be our concern here, and not simply a select few, who are privileged by learning and culture, then their analysis seems true. Perhaps we should briefly show once more how this differs from the classical theory account.

In the traditional account, categories are defined in relation to fixed and shared inherent properties which all members of a category are assumed to have. On the other hand, categorization for proponents of imaginative reason is done in relation to prototypes, where the non prototypical members of a category belong either by virtue of their relationship to the prototypical members, or by bearing enough family resemblances to the category prototypes. And family resemblances are determined, among other factors, by the interactional properties of category members. Categories could also be systematically extended in various ways for various purposes. We use certain modifier-phrases to describe this extension. Thus, a thing could belong to a category either par excellence, strictly speaking, loosely speaking, or technically. Categories are also said to be open-ended. They are, however, not randomly classified, because conceptual metaphors help us define or redefine categories systematically.

This view of categorization seems to differ a little from the apparent exactitude and scientific precision, as it were, of the traditional category account. And given that human nature is not known to be always that scientific and exact, the experientialist categorization account seems closer to our natural disposition than the traditional account. This could be the genius of the proponents of imaginative reason.

Concerning the arguments for the embodiment of human reason, one could place these side by side with the evolution of our intellectual history. With the developments in cognition science and the upsurge in the interest of other disciplines in matters formerly considered strictly philosophical, the hypothesis of Lakoff and Johnson could only be anticipated. Given research results in cognitive science, the theories of phenomenological embodiment, functional embodiment, neural embodiment, and conceptual embodiment seem to hold. But if one comes to think of it, given the kind of beings we are, and the kind of bodies we have, is it not only logical to infer that our concepts and reason do reflect these realities? This, to my mind, is what is implied in the entire embodiment hypothesis of the proponents of imaginative reason.

If we do have neural mechanisms, as it is claimed, one would not be surprised if they generated relevant concepts (a neural embodiment). And if we have bodies structured in certain ways, one would not be flabbergasted if some of our concepts were schematized along these lines (a phenomenological embodiment). Also, if men consisted of bodies and minds (in the sense of the two forming a unit), one would hardly be astonished if men understood certain concepts effortlessly or automatically, in their normal functioning. For, this would simply mean functioning too with our bodies (a functional embodiment). Finally, if we had some natural biological capacities, and if we functioned in physical and social environments, who would be shocked to the marrow if the properties of some of our categories were the spin-off of these capacities as well as our physical and social experiences (a conceptual embodiment).

One more prominent author that considers the body-mind relationship from the point of view of discoveries in the field of cognitive science is Edward O. Wilson. Wilson contends that a substantial part of the history of modern philosophy, beginning from Descartes to Kant, and beyond, is made up of brain models that could be described as failed and misleading**.** (Wilson, 1998, 96) He associates this failure of modern philosophy to articulate adequate brain model not with the individual philosophers of the period, but with the biological evolution of the brain itself. He argues that studies in the field of evolution reveal that, as a machine, the mind has a peculiar configuration which has been put in place to enable its survival rather than to facilitate its understanding of itself. For this reason, he maintains, a theory of the mind cannot keep a balanced perspective unless it is assisted by the kind of empirical studies which science provides (Wilson, 1998, 96-97).

Wilson claims that for generations, men lived and gave birth without the necessity to have knowledge of the mechanisms of their brains. They were, however, able to adapt effectively to the vicissitudes of life, thanks to myths, rituals, self-deception, and tribal affiliations rather than any commitment to truth. Hence, Wilson notes how to date people still tend to have more knowledge about their cars and machines than they do have of the functioning of their own brains and minds (Wilson, 1998, 97).

It is for the above reason, he claims, that the fundamental theory of mind could remain the business of the empirical sciences rather than that of philosophy of religion. This will require our giving up our preconceptions and investigating the deepest recesses of the human brain (Wilson, 1998, 97). On the basis of the analyses of the anatomical structure of the brain, Wilson argues that the human mind has developed to its present state by means of an evolutionary process and progress. He maintains that the level of development in intelligence and culture we have attained is the extent of the giant steps in the overall story of the development of human existence (Wilson, 1998, 98).

Wilson is important and relevant to the discussion of the embodied-reason hypothesis, because he gives the neural theory of mind an eloquent expression. He contends that almost everyone who has competency in embodied reason in modern science and philosophy accepts that the human mind, made up of the operations of consciousness and the activities of our rational apparatus, is no more than the human brain in action (Wilson, 1998, 98). Wilson maintains that informed by the aforementioned considerations, experts in the field have long dropped the mind-brain dualism of Descartes.

In his Meditations of 1641 Descartes had claimed that, thanks to the divine power, the body and mind could exist independently of each other. Descartes had planned to give the world a scientific account of the universe anchored in the laws of mathematics and the principles of mechanics. He, however realized that such an account could not do for the rational process of thought. His solution, then was a nonmaterial soul and a material body (Rene' Descartes, 1996, 17-19).
Thus, Wilson says Descartes had propounded a neurobiological brain model of a kind, according to which a noncorporeal mind reposed in a corporeal body.

Wilson observes that contrary to the speculations of Cartesian philosophy and its extension in Cartesianism, researchers have investigated the human brain together with its glands and have not found any site that could possibly contain a nonphysical mind**.** He contends that until recently the science of mind had been regarded as an exclusive reserve of philosophy.

Conversely, he argues, it is in our day increasingly becoming the preoccupation of the new discipline of cognitive neuroscience. And the efforts in this field are already yielding invaluable dividends. He observes that cognitive neuroscience is constituted by a combined team of cognitive psychologists, neurobiologists, and a group of philosophers whom he says are sometimes called neuro-philosophers.

Wilson cites medical records on brain cases to show how brain injuries alter thought and behavior. One famous case is that of Phineas P. Gage, who was involved in a railroad construction accident in 1848. The accident damaged the pre-frontal lobe of Gage's cerebral cortex. He survived and recovered. But as the records have it, he says, there had been a drastic change in his personality. Hitherto he was known for cheerfulness, high-level sense of responsibility, excellent manners, and for baingan invaluable employee of a Railroad company. Thereafter he became associated with dishonesty, undependable at the duty post, deviant and atypical behavior (Wilson, 100). Wilson indicates that over the years, studies on patients with cases similar to Gage's have corroborated with the general inference drawn from Gage's case. Wilson observes that neurobiologists have used the data collected from **"**localized brain damages**"** to trace and identify the functions of various parts of the brain. The results of these studies, show that these brain injuries have tremendous side-effects for thinking and acting, reason and action, thought and behavior (Wilson, 101).
The same is true of Karen Ann Quinlan, Wilson observes. In April 14,1975, Karen had mistakenly combined a dosage of the tranquilithe, Valium and Darvon, a painkiller drug, with a drink of gin and tonic. She never survived the drug accident. An autopsy revealed that her brain was, in the main, intact, explaining why she could wake and sleep although she never regained consciousness. Wilson likens Quinlan's medicine-accident to causing a power station to burst with a violent release of energy. Her entire body system underwent a power outage of a sort; and she slipped into a slumber that left her no prospects of waking up. Even as her cerebral cortex survived, and awaited reactivation, regaining consciousness ceased to be any longer a possibility (Wilson, 101).

So, where is the place of a disembodied mind in all this, one might ask? Instances such as those stated above, coupled with findings in neurosurgery, make the theory of a disembodied mind have the flavour and texture of a myth. Proponents of an imaginative reason might have, after all, made a case arguing an embodied reason. Studies in neurophysiology also seem to confirm this view of mind. Jerome Shaffer, writing on the mind-body controversy in relation to neurophysiology, observes that to a large extent theories on the mind-body enigma seem to see much correlation between mental activities and certain internal workings in the brain. And Shaffer notes that they have much empirical data on their side (Shaffer, 1967).

One other clarion call for the permanent dismantling of this rift between the mental phenomena and the bodily processes could be found in the book, Western Philosophy, An Ontology, edited by John Cottingham. In part iii, dedicated to the mind-body problem, an essay worthy of note appears. Entitled 'The Myth of the **"**Ghost in the Machine**":** Gilbert Ryle, The Concept of Mind,' the writer proposes a redefinition of mind. This redefinition, is aimed at halting what he calls **"**the dogma of the Ghost in the Machine**."** The essay takes a clue from what it calls the anti-Cartesian thrust of Gilbert Ryles, which is strengthened by the works of Ludwig Wittgenstein, to object to Descartes and Cartesian views such as those of Brentano. (Brentano, like Descartes, had postulated an immediate indubitable access to the mental realm.) The essay regrets the existence of a popular but a supposedly non-corporate view of mind, which it calls the official doctrine. It states that this official doctrine, which comes basically from Descartes,

holds that either every human has a body and a mind or that everyone is body and mind. The tenets of this view of mind implies, then, that one has a two-fold history. The first tells of what happens in and to one`s mind; the second relates what takes place in and around the body (Cottingham, 1996, 177).

The write-up argues that a further fallout of this view of mind is that the bodily phenomenon is a public affair, whereas the mental process is a private and secret matter. For, one's mind is said to be inaccessible to others. It is a situation of bipolar opposition between matter and mind, the essay holds. The essay takes exception to this state of affairs, dismissing it as **"**the dogma of the Ghost in the machine**."** It sets itself to proving that it is, in essence, **"**entirely false,**"** describing it as a **"**category mistake**".** It calls this dogma a **"**philosopher's myth,**"** which needs to be deflated (Shaffer, 1967). It decries this mind-body dichotomy as a category error that generates a double-life theory. It argues that it is a mistake that should never have been made except that men wanted to create an alternative unit that functioned independently, the way the body was believed to function. It was this unnecessary ambition, it says, that gave rise to the mind-body dualism (Shaffer, 1967).

The essay again, associates the intellectual origins of this category error with Descartes. When Galileo, it argues, proved the competence of his scientific discovery for an all-embracing mechanical theory, Descartes being a man of repute in scientific matters, discovered he faced two conflicting interests. As a reputable scientist, he could not but affirm a mechanical theory**;** and as a religious man, he was compelled not to admit that man was comparable to a mechanical entity (as Hobbes did claim). Thus, he and his followers were edged into a para-mechanical theory of mind, the essay claims. As they sort a way out, however, there remained this problem of how the mind could influence and be influenced by the corporeal (Shaffer, 1967,180).
The essay further argues that the **"**Ghost in the machine**"** view of mind is absurd. This view holds that bodies and mind do exist, that mental process and physical process do take place**;** and that there exists mental causes of bodily movements and mechanical causes of bodily movements. The essay calls for a dissolution of the mind-body contrast. It insists it must be a dissolution where neither matter would be dissolved into mind, nor mind be emptied into matter. (Shaffer, 1967,181)

The write-up then dismisses both idealism and materialism as answers to an inappropriate question. It sees idealism as a reduction of the material world to mental states, and describes materialism as a reduction of mental processes and states. It judges that both approaches constitute a legitimization of a situation of either or rather than one of both and in the body-mind relationship. It sees as improper any view of mind which maintains a position implying that either there exist bodies or there exist minds. An integral view would be one that recognizes bodies and minds as belonging together. This kind of approach suggests a new view of mind. It states that in a revised theory, the mind would no longer be a depository. When we talk of mental states, instead, it must rather be about our capacity, responsibility, and propensity to undertake and experience things in our everyday world (Shaffer, 1967, 181).

Views such as those discussed in the preceding few pages not only show the seriousness of the matters considered by the proponents of embodied reason, but also make their project relevant to the intellectual climate of our day. And should an embodied thought hold, then it would make much sense to talk of a metaphorical and an imaginative reason. With regard to the claim that reason is metaphorical, a lot could be said in favor of Lakoff and Johnson. The

phenomenon of conceptual metaphor infiltrates an amazing range of our intellectual fields. Richard Moran lends credence to this fact when he argues that metaphorical elaborations find their way into modern-day philosophical dialogue in multiple ways. He observes that besides metaphor's roles in poetics, aesthetics, and rhetoric, it also exercises essential functions in the philosophy of mind, epistemology, philosophy of science and cognitive science (Moran, Hale and Wrights 1999, 248).

That thought is metaphorical seems indeed to have the ring of truth. Our acquisition and extensive use of conceptual primary metaphors do attest to this claim. In this regard Johnson's conflation theory, Narayanan's neural metaphor theory, and Fauconnier'sand Turner's conceptual blending theory, all seem persuasive. Metaphorical reasoning in which we employ sensorimotor inferences for our abstract conceptualization and reason seems pervasive. Authors in all fields of the human thought appreciate this role of conceptual metaphor. Joan Cowan and Joyce Feucht-Haviar, in their foreword to the book, On Metaphor, recognize the highly distinctive, determinate, identifiable, classifiable nature of metaphor as a concept., arguing that ithas earneditself a primal place in the way we comprehend the human activity of understanding (Cowan and Feucht-Haviar, 1979).

W. V. Quine lends his voice too to this recognition of metaphorical thinking. He acknowledges that conceptual metaphor does not only feature prominently in the early years of our lives as children, but also dominates our prose, high poetic art, and most importantly plays an influential role in the development of the scientific and philosophical enterprises **(**Quine, 159). He not only acknowledges the cognitive functions of metaphor, but also notes its prominence in the **"**founding language of Christianity**",** pointing out its extensive use by exegetes (Quine, 1979, 160).

It does actually seem that conceptual metaphor has the kind of cognitive function associated with it. A good number of renowned thinkers, as some of the names already mentioned indicate, tend to move in this direction. In an essay entitled 'Metaphor,' Richard Moran considers some of the divergent views held by authors on metaphor. In this write-up, he shows that he is cognizant of the cognitive content of conceptual metaphor and the wealth of evidence backing up this awareness as well as the possible reexamination of our intellectual and learning processes, which studies in conceptual metaphor could generate. Moran argues that in multiple ways the idea of figurative language prompts us to rethink a couple of the fundamental notions in linguistic philosophy (Moran, 1999, 267).

Concerning the argument that reason is imaginative, proponents of embodied rationality have substantial merit. Their discussion of the imaginative models of cognition makes much sense. It is not hard to see how reason could be imaginative, given the evidence of an embodied mind and the arguments for the image-schematic models of cognition, conceptual metaphoric models of cognition, and conceptual metonymic models of cognition. The various dimensions of the conceptual metonymic models of cognition seem also real.

Worthy of note too is the sense in which the word imagination is used here and the senses in which reason is said to be imaginative. We recall that human reason is held to be imaginative, first, whenever those of our concepts that are not directly anchored in experience employ the imaginative processes of conceptual metonymy, imaging, and conceptual metaphor (and this is often the case), second, whenever human categorization is done in a manner short of mirroring literally the realities of the world out there (and most of our classification is known to adopt this pattern).

The question could then be asked whether the world as it appears to us is indeed the world as it is, in itself. Put simply, does the world that finds its way into our category structure have analogous objects in a strictly speaking experiential and objective world? Against this backdrop, Colin Mcginnargues in the preface to his book, The Subjective View, that the idea that the world is not given to us merely as it is in itself is a necessary truth (Mcginn, 1983).
In a conversation, Haeffner seems to share with Colin Mcginn this intellectual premise that the world may not be presented to us just as it is in itself, observing that the world as it is in itself is but a philosophical construct.

It is within the context of the fore going, that an imaginative reason makes much sense. It becomes then surprising that the process of imagination should at all be slighted when matters concerning reason are discussed. D.W. Hamlyn acknowledges this neglect of the imaginative process, observing that in the past couple of years, whatever has been written on imagination has been mainly written by non-philosophers (Hamlyn, 1995, 361). He also points out the existence of two divergent senses of imagination. These two senses could easily be confused with each other when we talk of imagination in the order of thought. The first sense could be described as the understanding of imagination which exists in the popular mind. In this sense, imagination is taken to mean thinking in a novel way. When we discuss imagination as it implies to reason, it is definitely not in this sense that we mean the term. When we talk of imagination, we are not referring to finding new concepts or evolving new manner of employing already established concepts (Hamlyn, 1995, 362).

The second and proper sense of imagination (proper to our theme) is imagination in its cognitive and connecting functions. This is the sense that is proper to imagination in its discussion in the order of human thought. Thinking imaginatively, in this sense, means viewing the world around us in perspectives that need not be literal. Imaginative thinking is described as discerning and grasping in a way that does not have to be literal**.** What appears decisive to the imagination is the fact that it takes in a lot of aspects and viewpoints; new manners of apprehending things, in a way of perceiving and apprehending that doesn't have to be literal. It includes, in a direct or indirect way, some relationship with perception, but in divergent ways (Hamlyn, 1995, 262).

It is this second sense, in which imagination means a seeing that need not be literal**:** a seeing as, that is implied in our discussion of imagination in this paper. This kind of imagination is a little more technical than what exists in 1995, the popular mind, where imagination is also conceived as fantasizing. Imagination in our context is real and experiential, in the sense of having connection with perception**,** as Hamlyn observes. And our claim is that the proponents of embodied reason have done much to highlight its place in human reason. There is, however, another dimension of imagination which is important to discussions in the philosophy of mind. It is called imaging, which implies picturing something in the mind and it involves images in some way (Hamlyn, 1995, 366).

Aristotle places imagination somewhere in-between perception and thought. What is, thus, most important about the imaginative process as applied to the theme of human reason is that it implies some connecting functions and cognitive contents. It links up perception and thought, a connecting function which is described as a synthesizing one by Kant. Kant in the “Kritik der reinenVernunft” devotes much attention to the themes of imagination (die Vorstellung), schema (das Schema), schematism (der Schematismus), category (die Kategorie) in the

conceptions of human understanding (das Verstehen). These themes form the subject of a chapter titled **"**Von demSchematismus der reinenVerstandesbegriffe**"** (Kant,1956, 176-187).

Hamlynfurther notes a generic sense of imagination. Here imagination comes in handy whenever we require the connection between thinking and perceiving. This includes many imaginative ways of viewing things. There is, therefore, appreciable justification in regarding imagination as the link between the bodily function of perception and the intellectual operation of thought (Hamlyn, 1995, 31).

Shortfalls

One of the major contentions of proponents of embodied reason is that conceptual metaphor has a connecting function and a cognitive content. As it is to be expected, scholars not agreeable with this claim have reacted accordingly. Among them are Donald Davidson, John Dolan, and Laura A. Michaelis. Davidson argues that one should cease talking about the figurative meaning of metaphors. He denies that metaphor has any meaning other than its literary sense. He devotes his essay entitled 'What Metaphors Mean' to proving that metaphors do not have any other meaning other than the ordinary meaning of the words composing them. He states that metaphors do not mean anything more than their literal interpretations (Davidson, 1979, 29-30). He sets himself to disproving anybody whose work on metaphor had ever implied any form of meaning extension for metaphor, ranging from Plato to Aristotle and Lakoff. He holds that it could not be that metaphor has in addition to its literal sense another meaning, although many authors before him held this view.

The idea that metaphor has an extended sense has been expressed in various forms by various thinkers, and in varying degrees of complexity, from Aristotle to Black. Davidson, however, accepts metaphor as a literal device, that could be effectively employed in philosophy, science, the legal practice, literature, prayer, praise and abuse. He disassociates himself from those who regard metaphor as simply emotive and inappropriate for proper philosophic or scientific discourse. He says he simply finds problem with how metaphor is said to work its miracles (Davidson, 31)

Davidson denies any positing of metaphorical meanings in the explanation of metaphors. Postulating metaphorical meanings, he says, does nothing to explain the functions of metaphor in speech. He also argues against the idea that the meaning of a word is extended in any metaphorical context. He argues that such supposed meaning extensions leave out the original meaning of the word, which gives the impression that metaphor is a sort of ambiguity. One would expect meaning extensions, if there were any, he argues, to reflect the original meanings of the terms, in order to make for consistency and not give the impression of ambiguity (which of course should not be associated with metaphor) (Davidson, 1979, 32-33).

One other critic of Lakoff is John Dolan. Taking objection to Lakoff and Turner from the perspective of poetic metaphor, he denies any cognitive approach to metaphor. The context of this objection, is Lakoff and Turner's cognitive reading of the poem, 'More than Cool Reason. 'He denies that such a cognitive reading could account for what he calls the complexities associated with metaphorical thinking. He notes that Lakoff's cognitive approach to poetic metaphoris reflected in the latter's general approach to metaphor in language as one finds in his book, 'Metaphors We Live By, Women Fire and Dangerous Things**:** What Categories

Reveal about the Mind.' He rejects the idea of associating metaphor with any cognitive content, adopted not only by Lakoff, but also by a host of other thinkers (Dolan, 1994, 57).

Dolan objects to the tendency to assume the connecting function and cognitive content of metaphor. He argues that such approaches overlook the possibility of metaphor having what he refers to as an anti-cognitive function. He says a poem might be emerging from a literary circumstance, which may be aiming at a reappraisal or a denial of the status quo (Dolan, 1994, 58). Dolan, then, accuses Lakoff's and Turner's treatment of the poem, **"**To a Solitary Discipline**,"** of a metaphorical reading of strictly anti-metaphorical poem (Dolan, 1994, 65). He notes that an author may be clearing the ground for his ideas rather than aiming at any continuity. He might actually be aiming at the disintegration of an existing structure in order to create some space for one of his own. He cites Wyatt's poem as an instance of a poet putting metaphor to a negative use, to sever rather than to establish links. Dolan also tongue-lashesRicoeur, although he regards him as the leading "sophisticated theorist of metaphor**"** and a better approach to metaphor than the purely cognitive approach of Lakoff and Turn (Dolan, 1994, 70).

Another important author in the evaluation of the views put forward by Lakoff and Johnson is Laura A. Michaelis. Michaelis represents, to my mind, a remarkable critique of Lakoff, Sweetser and Traugott over their meaning-extension claims. Michaelis studies the adverb 'still' and discovers that the scaffolding of senses associated with it could be investigated without referring to the diachronic meaning extension that generates the senses. The senses, she argues, are connected to each other by means of what she calls a **"**semantic superstructure**"** rather than by resembling any core sense. And you do not have this semantic superstructure until you have all the constitutive senses on hand. A network of polysemy of this sort, she concludes, is in principle not continuous with the long-times dimentation of meaning that produces the specificsenses **(**Michaelis, 1996, 221). Thus, Michaelis questions the assumption that the interconnectedness in polysemous terms reflect the evolutionary track that yields the specific meanings. She denies the **'**presumption**'** that an earlier meaning is the core sense and that the emerging senses within the course of history are the extended senses.

Shortly, we gave some attention to the views of Edward Wilson to strengthen the contention of Lakoff and Johnson that developments in neural science have a place in our thought scheme. We would now like to consider, briefly, an author that has been carefully following the trends in the neurobiological claims of Wilson. In the book, 'The Ethical Primate,' Mary Madgley takes Wilson to task over his project of neurobiologizing the intellectual enterprise. Midgley contests Wilson's desire to make biology a discipline that deconstructs the social sciences**,** one that would constitute their conceptual basis. Wilson regards the structure of the human nature as a **"**biological phenomenon**"** of essence that will constitute social theory's core and the focal point of the humanities (Wilson, 1998, 10).
Following from this, he contends that biology should dictate the subject matter of these sciences.

It is this unqualified claims that Midgley objects to. She wonders why these sciences should allow biology to contribute to their themes whereas there would not be any reciprocal receptivity on the part of biology. A genuine interaction would be one that could make for a give-and-take relationship, she argues. She takes exception to Wilson's proposal that ethics be taken away from the philosophers, neurobiologized, and reshaped. She faults him for mistaking

ethical problems for purely empirical ones, arguing that ethical problems are but practical ones concerning modalities for our actions and thoughts (Midgley, 1994, 73). Besides, Midgley contends, Wilson expects too much of the science of neurobiology. She also accuses him of an academic imperialism that intends to get rid of all other disciplines. She then charges him of a physicalist reductionism that reduces the sciences to the biological science.

Most importantly, Midgleycontends that any intellectual inclination that confines itself to an exclusivist conceptual schema, either runs the danger of a narrow-mindedness that expresses itself by restriction to a single conceptual approach, or a reductionism that reduces all reality to one of its perspectives. She argues that it is as much reductionist to be exclusively pious, historical, or subjective as it is to be exclusively physical. She notes that this is as much the case in the Marxist reduction of man to a victim or a class traitor, and the Freudian reduction of man to a "case of arrested development," as it is in the religious reduction of man to a mere soul. She sees this unwholesome exclusivism and reductionism in today's world, where, as she puts it, the "potent myths" of the west all in some way express the exaltation of machines (Midgley, 1994, 77).

Midgley's observations and her criticisms of Wilson apply also to Lakoff and Johnson to the extent that they give a neuronal explanation of the human mind. But to the extent that Lakoff and Johnson recognize the ethical and spiritual dimensions her critique of a physicalist reductionism that reduces the mind (the mental) and the body (the corporeal) to mere physical particles. Our judgment here is informed by the fact that Lakoff and Johnson advocate an **"**embodied spirituality" that starts somewhat to appreciate what we experience as human beings. In contradistinction to Wilson, who calls on the scientists to take away the business of ethics from philosophers and has no appreciable role for religion, Lakoff and Johnson talk of an **"**embodied spirituality" predicatedon empathy with each and everything there is (Midgley, 1994, 564;567).

Conclusion

Proponents of embodied reason have justifiable reasons to propose we reexamine the motifs upon which the whole structure of our logic and reason are predicated, given the pervasiveness of metaphorical and analogical reasoning, and the use of mental spaces and practical inferences to link ideas in our logical and rational processes.

As we set out to inquire into our theme, what was actually at the back of our minds was to ascertain to what extent, if any, conceptual metaphor, imagination, embodiment, and cognition (including reason) belonged together. In the course of the investigation, we have encountered much more counteracting ideas than we had projected. It is as if Lakoff and Johnson put forward a proposition, Sweetser, Fauconnier, Fillmore and others argued in favor of it, while Davidson, Dolan, Laura and others pitched their camp against it.

Although, for instance, Davidson's sharp criticisms deny that the situations in which words are learned could constitute evidence of the meaning of these words, an argument which runs contrary to the frame-semantics approach of Fillmore, the claims about the cognitive content of our imaginative processes seem to have survived the confluence of ideas that we occasioned. (Recall that Fillmore's frame semantics, explaining the word carpenter, would note its historical development, tracing it back to men in the community who made things out of wood using various tools, and would say that such men are called carpenters.) Max Black has written

to reaffirm the cognitive content and connecting function of the conceptual metaphorical thought. In a write-up entitled 'How Metaphors Work**:** A Reply to Donald Davidson,' he responds to Davidson's criticisms and denial of the cognitive function of metaphor, dismissing them as inconsequential. Though he admits the regrettable absence of requisite accounts of metaphorical reason**,** he contends that Davidson's criticisms do not contain anything that could upset the arguments in favor of the cognitive content of metaphor (Black, 1979, 192).

Paul Ricoeur too, known for his sophistication in theorizing about metaphorical thought, recognizes the cognitive content of metaphorical thinking and affirms its figurative character. A theorist of metaphor, he belongs to a class, a little different from that of Lakoff and Johnson. Bringing feeling and imagination into metaphor, he holds that metaphor could, over and above conveying cognition, usher in some kind of feeling (pathos) and a some-what direct appeal to the emotions. He argues that imagination and feeling are components of the metaphorical process. He observes that feeling rather than being contrary to thought, is thought made ours. And a theory of imagination, he says, must break ties with Hume and feed on Kant.

In this connection, Ricoeur proposes a two-way understanding of the phenomenon of imagination. He says that on the one hand imagination brackets (epoche) a direct or one-to-one relation between thought and the physical world. On the other, he says, metaphor provides us with the devices that enable us to have a novel reading of reality (Ricoeur, 1979, 155). He consents to the transfer of meaning in metaphor (Aristotle's epiphora). It is an epiphora, he explains, which is a shift in a discourse (logos), nay a shift in the logical distance from the remote to the easily-reached. In a nutshell, Ricoeur sees in the metaphorical also the emotional, the imaginative, and the cognitive.

He recognizes the "structural analogy" between our cognition, imagination, and emotions, which are the components of the metaphorical elaboration. The metaphorical extension acquires its concrete features and its comprehensiveness from this "structural analogy" and this correlative operations (Ricoeur, 1979,157).

It is important to our discussion that some of the greatest of the philosophers concede the linking-up and cognitive functions of the imaginative process such as Aristotle, Kant, Ricoeur, to name a few. In the Kritik der reinenVernunft, Kant recognizes this connecting activity of the imaginative process. Admittedly in Kant's account, at times, the functions of understanding and those of imagination (die Vorstellung) overlap. However, in some passages, one finds that the work of imagination is to connect, while that of understanding is to streamline the conditions and principles according to which this linking-up activity is to be carried out (Kant, 1956, 103). He also recognizes the **"**procedure**"** of understanding with the image **"**schemata**"** and gives some examples of schemata. Lakoff and Johnson, though, use the term in an elaborated sense (Kant, 1956, 183-184).

It then becomes clear, in the light of the foregoing, that the cognitive import of metaphorical thought and the linking-up activity of the imaginative process have come a long way. But how could one keep a balanced perspective in the face of all that has been considered? Man is astride of two worlds, they say. It may well be that to some extent thought (dianoia) could be metaphorical and imaginative. Our caution ought to be, one would reason, avoiding the danger of running into a form of reductionism, as Midgley has pointed out. Her warning sensitizes us, pointing to the direction of a possible delicate perspective. It does seem that neither the ideological exaggeration of one's own perspective on truth nor the attempt to jump from one's

own perspective into the mutual relativization of all possible perspectives solves our problem (Haeffner, 1989, 37).

An all-out rationalistic orientation rules out the possibility of such a perspective. So does an all-embracing physicalistic bent vitiate itself. A reason that draws on image schemata could be more central than any of the two exclusivist perspectives, to borrow the expression of Midgley. As we have seen, image schemata, despite hinging on our human nature, have a meaning structure that makes sense to us, given the structure of the human body and the manner we interact with one another and with our environments. And when they (image schemata) combine with the abstract activities of reason, one would expect that the result would be something of the much sought-after delicate perspective. An all-out neural explanation of mind may not be necessary here. So does an entirely disembodied mind edge out itself.

Maybe the use of image-schematic structures in reasoning could enrich our definition of the rational process. Perhaps, the Boolean logic of classes, for example, could be understood, as Johnson indicates, as a metaphorical projection of some form of the image schemata. If this does not hurt anywhere, then it would become possible to formulate complex schemata akin to the Boolean logic of classes, employing the part-whole schema, the in-out schema, and metaphorical framing. Classes would then (as already indicated), take up a metaphorical definition, involving a mapping from the in-out schema to the class structure. Reasoning done with such schematic structures would then become image-schematic reasoning.

We might also consider Sweetser's metaphorical projection of force images – which reveals our reasoning with modalities, Fauconnier's revelation of mental spaces configurations and cross-domain mappings in our thought construction, and metonymic framing – in which a typical member of a category stands for the entire category. If such a cognitive machinery could accord us a conceptual leap into abstract thought, would it be a bad idea to allow more inquiries into the field?

References

Hillary Putnam, Reason, Truth, and History. (Cambridge: Cambridge University Press, 1981), 52

Johnson, Mark, The Body In the Mind: The Bodily Basis of Meaning, Imagination, and Reason. Chicago**:** The University of Chicago Press, 1987.

E. Coseriu and B.K Matilal, "Are Words and Things Connected by Nature or by Convention?" in Philosophy of Language. An International Handbook of Contemporary Research, Vol. 2. Marcelo Dascal, DietfriedGerhadus, Kuno Lorenz, George Meggle eds. (Berlin: Walter de Gruyter, 1996), 898.

Edward O. Wilson, Consilience: The Unity of Knowledge (New York: Alfred A. Knopf, 1998), 96

Rene' Descartes, Meditations on First Philosophy [1641]. J. Cattingham trans. (Cambridge: Cambridge University Press, 1986) [revised edition 1996], 17-19

J. Shaffer, “Body-Mind Problem,” in Encyclopedia of Philosophy, vols. 5-6 Paul Edward ed. (London: Collier Macmillan Publishers, 1967)

John Cottingham, ed., “The Myth of the ‘Ghost in the Machine’: Gilbert Ryle, The Concept of the Mind” in Western Philosophy: An Anthology. (USA: Blackwell Publishers,1996,) 177- 180

Richard Moran, “Metaphor,” in A Companion to the Philosophy of Language. Bob Hale and Crispin Wrights eds. (Oxford: Blackwell Publishers, 1999), 248

John Cowan and Joyce Feucht-Haviar. Foreword to Sheldon Sacks, ed., On Metaphor (Chicago: University of Chicago Press, 1979

Quine, W.V., **“**A Postscript on Metaphor**”** in On Metaphor, ed. Sheldon Sacks. Chicago**:** University of Chicago Press, 1979, 159-160

Colin Mcginn, Preface to Colin Mcginn, The Subjective View: Secondary Qualities and Indexical Thoughts. (New York: Oxford University Press, 1983)

D.W. Hamlyn, “Imagination,” in A Companion to the Philosophy of Mind. Samuel Gutenplan ed. (Oxford: Blackwell Publishers Ltd., 1995), 361

Immanuel Kant, Kritik der reinen Vernunft, nach der ersten und zweitenAusgabe – neu herausgegeben von Raymund Schmidt, (Hamburg: Felix Meiner Verlag, 1956), B 176-187

Davidson, Donald**, “**What Metaphors Mean**”** in On Metaphor, ed. Sheldon Sacks. Chicago**:** University of Chicago Press 1979, 29-45

Laura Michaelis, Cross-world Continuityand the Polysemy of Adverbial Still” in Spaces. Worlds and Grammar. Gilles Fauconnier and Eve Sweetser (Chicago: University of Chicago Press, 1997), 221

Wilson, Edward, O., Consillience: The Unity of Knowledge. Nerw York: Alfred A. Knopf, 1998.

Mary Midgley, The Ethical Primate: Humans Freedom, and Morality (New York: Routledge, 1994), 73

Black Max**, “**How Metaphors Work**:** A Reply to Donald Davidson**”** in On Metaphor, ed. Sheldon Sacks**.,** Chicago**:** University of Chicago Press 1979, 181-192

Ricoeur, Paul**, “**The Metaphorical Process as Cognition, Imagination, and Feeling**”** in On Metaphor, ed. Sheldon Sacks. Chicago**:** University of Chicago Press, 1979, 141-157

Haeffner, Gerd**,** Philosophische Anthropologie. Stuttgart**:** Kohlhammer, 1989