Perception and Delusionary Concepts in Science

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Abstract

In the present paper I will investigate how language and the concepts we use can delude us when scientific theories suggest that abstraction, as a necessary condition of concepts, is rooted in anatomical structures of the brain, and that language as it expresses meaning is based on embodied cognition, i.e., language is deeply integrated into our physical structure.

First, I will outline the characteristics of language and concepts that might provide ground for delusion. In so doing, I will rely on some ideas from Bergson, Wittgenstein, and Maturana. Then, I will delineate theories suggesting that the capability of abstraction is hardwired as Ramachandran explicates, and the meaning of linguistic expression is rooted in embodied cognition as Merleau-Ponty, and later, cognitive metaphor theory suggest. In conclusion, I will attempt to reconcile the seemingly conflicting views – language is deluding and hardwired at the same time – with the help of Merleau-Ponty's phenomenological account.

1 Deluding Language and Deluding Practice

In the first part of this paper I will attempt to delineate those features of concepts which sometimes entail imprecision and misunderstanding. I will then investigate how language can, in specific cases, lead us astray. Finally, I will relate this to scientific practice.

In his *Introduction to Metaphysics*, Bergson emphasized two important facilities: Concepts are based on generalizations and when we try to get a grip on an object with "concepts, laid side by side" we gain only "an artificial reconstruction of the object", though "it is useless to believe that with them we can seize a reality of which they present to us the shadow" (2007:12). Additionally, "the concept generalizes at the same time as it abstracts. The concept can only symbolize a particular property by making it

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common to an infinity of things. It therefore always more or less deforms the property by the extension it gives to it. . . . Thus the different concepts that we form of the properties of a thing inscribe round so many circles, each much too large and none of them fitting exactly." (*Ibid.*) That is, beyond the illusion of being able to "seize reality" with concepts, a concept's meaning changes in accordance with the subject it is applied to, and since its meaning can be extended on the basis of analogy and/or resemblance, errors and misunderstandings can result. (Consider polymorphism as Aaron Sloman (2010) construed it.)

Wittgenstein does not question the effectiveness and usefulness of language in everyday life, but many times and in many ways he highlighted how language can *bewitch* its users, at least in certain cases. Regarding language, there are puzzling gaps between rule and its application (ALW 1979:90), thought and reality (LWL 1980:37), words and their meaning (*Ibid.*, 23), and unnoticed switching between language games is also possible. Additionally, because "our language is tempting us to draw some misleading analogies" (BBB 1969:48) and because of its loose grammar (AWL 1979:32), it is capable of creating unsolvable puzzles, especially in philosophy. I will not go into detail regarding the kind of difficulties we face due to analogy, but rather focus on the role the first person pronoun, or more precisely subjective vs. objective perspectives, oppresses upon us.

If we take into consideration the effort in recent literature to reconcile the so-called subjective (first person) and objective (third person) access and perspective, this gains special importance. As we will see, scientific rigour can only widen the gap between the phenomenal and objective; *heteropheomenology* as Dennett suggested is not capable of dissolving the difference between being immersed in a situation and being observed (even by oneself) in the same situation.

Wittgenstein proposes, that "the use of the word 'I', particularly when it is used in representing immediate experience" is a "misleading representational technique in our language" (PR 1998:57). He clearly explicated how this representational technique is difficult to reconcile with the physical world described by language. The hardly noticeable trap is that the usage of the pronoun "I" obscures the difference between "'the use of object' and 'the use of subject'" (BBB 1969:66), or in other words, it eliminates the difference between "physical language" and the language of "epistemology or phenomenology"(PR 1998:57). As he put it:

In the ... language of 'objective' –physical– space, visual space is called subjective, or rather, whatever in this language corresponds directly with visual space is called subjective. ...The essential thing is that the representation of visual space is the representation of an object and contains no suggestion of a subject. ...There isn't an eye belonging to me and eyes belonging to others in visual space. Only the space itself is asymmetrical, the objects in it are on a par (PR 1998:71-73).

This may have been in Maturana's mind when he suggested "our language is a language of objects" (Maturana 1983:257). In accordance with perception regarded as dynamic and active, as Maturana suggests, perceiving something is a call for doing something, acting upon or cooperating with the environment. The linguistic set up which suggests having given objects around, strengthens our confidence in an objective world that independently exists from us and our perception. This unnoticed belief is reinforced by scientific practice; however it does not provide evidence. As Wittgenstein proposed, "it belongs to the logic of our scientific investigations that certain things are *in deed* not doubted"(OC 1969:342). Similarly, Maturana noticed that claiming "the existence of an objective world accessible to our perceptions and cognitions, is a necessary condition for the existence of science" (Maturana 1983:257), but only so far as we accept this objectivist view.

Maturana underscores the importance of how we define perception – when perception is investigated in a scientific manner – because it determines how we relate to a phenomenon. Accordingly, he suggests "to perceive is not to grasp the features of an outside world of objects". When an organism "exhibits perception", it "brings forth a world of actions through sensory motor correlations congruent with the perturbations of the environment in which ... it conserve[s] its adaptation" (Maturana 1983:256). This dynamic and active concept of perception can illuminate the extent to which an examined activity will be modified due to the experimental situation and at the same time reveals how strong an effect linguistic conductance has on implicit beliefs. As he wrote:

Unfortunately we forget that the object that arises in this manner is a coordination of actions in a social domain, and deluded by the effectiveness of our experience in coordinating our conducts in language, we give the object an external preeminence and validate it in our descriptions as if it had an existence independent from us as observers (Maturana 1983:269).

2 Abstraction and Metaphors

In the following section I will attempt to briefly delineate two basically different theories regarding how deeply abstraction among different sense modalities and cross-domain mapping is hardwired in human cognition. First, I will adumbrate V. S. Ramachandran's *synesthetic bootstrapping theory,* which attempts to reconstruct how a proto-language can evolve based on our present knowledge of brain functions and anatomy, and then I will concisely outline the core idea of cognitive metaphor theory.

     Synaesthesia was described by Galton as far back as the 19th century, but until recently there was no established scientific theory that could explain its source and function. Ramachandran and his colleagues tried to find out how it is possible for some people to unintentionally attach colour to numbers, sounds, days of the week, or taste sensation and/or emotion to touching different textures. He suggests "that synesthesia is a concrete sensory process whose neural basis we can uncover, and that the explanation might in turn provide clues for solving the deeper question of how metaphors are represented in the brain and how we evolved the capacity to entertain them in the first place" (Ramachandran 2011:79). The fetus starts its life with "an initial dense overproliferation of connections that get pruned back as development proceeds" (Ramachandran 2011:96). This spacing/pruning is genetically driven. Cases of synaesthesia are anatomically well explicable: the different functional areas are close to each other, hence cross-activations, especially if we take mutation into consideration, are quite possible.

     But, as Ramachandran noted, "at some level we are all 'synesthetes'" (Ramachandran 2011:108). The famous *kiki-bouba* experiments provided evidence that there is a cross-talk between visual and auditory perception when (even illiterate) subjects relate the jagged shaped form to *kiki* and the amoeboid shape to the smooth sound of *bouba*. Additionally, as Ramachandran highlighted, not only the shape and sound, but the motion/formation of the lips when pronouncing these words are similar.

     Based on experiments with synesthetes and with patients with lesions in the relevant areas of the brain, Ramachandran suggests a functionally and anatomically plausible model of how the lexicon (words), its elements' meaning (semantic), and syntactic structure could evolve on the basis of sensory abstraction, which is built upon

synaesthetic cross-talk. Of course, synaesthesia without *synkinaesia* (the motor component as it works among hand, lips, and tongue) could not result in language.

Cognitive metaphor theory does not start with brain anatomy and evolution, rather it tries to anchor meaning in everyday bodily experience. According to Mark Johnson, our conceptual system is based on image-schemas on the one hand, which are able to structure our experience because they are based on perception and motor activity, and metaphor on the other hand, by which we can relate different domains of our experiences. (Johnson 1990) This theory, as Johnson's term *embodied imaginative understandin*g also indicates, reaches back to Merleau-Ponty's phenomenological account of *significance* and the *incarnated mind* (Merleau-Ponty 1964:3), or in more recent terms, *embodied cognition*.

Perception, according to Merleau-Ponty is not a passive subject-object relation, but rather, as we can also see in the case of Maturana, "[w]e experience perception and its horizon 'in action' " (1964:12). Similarly, the perceived world is not a set of given objects, rather perceived things "are open, inexhaustible systems which we recognize through a certain style of development, although we are never able, in principle, to explore them entirely" (Merleau-Ponty 1964:5). Accordingly, our world of perception is in continuous formation in accordance with current and prior perceptual experiences.

Merleau-Ponty does not stop at revealing how perception, our body, and consciousness relate, but continues to illuminate how our mind is intertwined with significance and intersubjectivity. Consciousness plays a central role regarding significance. "[W]hat we call nature is already consciousness of nature, what we call life is already consciousness of life and what we call mental is still an object vis-a-vis consciousness." (Merleau-Ponty 1963:184) And because the body has "sensory fields" it is, "so to speak, predestined to model itself on the natural aspects of the world. But as an active body capable of gestures, of expression, and finally of language, it turns back on the world to signify it." (Merleau-Ponty 1964:7) Because the relations between body and perception, and, conscious perception and significance are intertwined, and importantly, because body is capable of expressing itself, it creates an intersubjective (not private) world. Merleau-Ponty concludes that:

> if the words 'enclose' and 'between' have a meaning for us, it is because they
> derive it from our experience as embodied subjects. In space *itself* independently
> of the presence of a psycho-physical subject, there is no direction, no inside and

outside. A space is 'enclosed' between the sides of a cube as we are enclosed between the walls of our room (2008:236).

This is the core idea upon which cognitive metaphor theory provides a frame within which cross-domain mapping and kinaesthetic image-schemas establish both our basic categories and highly abstract concepts.

3 The Hardwired *Dogmatism of Realism*

As we can see, *synesthetic bootstrapping* offers a plausible reconstruction of how abstraction, and on the basis of this abstractive capability expressive faculties and skills, can evolve. Similarly, the phenomenology of perception, as Merleau-Ponty construed it, within the framework of the perceiving body, its environment, and consciousness, bestows a double function upon language: as part of the intersubjective world, it expresses and at the same time it forms significance in the world.

The roots of the curious situation described by Merleau-Ponty as the dogmatism of realism (as philosophy and/or that of science), I suggest, can be found exactly in this multiple function of language. It both describes and it also forms the world we perceive. In the case of science and psychology in particular, consciousness *per se* is hardly accessible. "The psychologist always tends to make consciousness into just… an object of [mere factual] observation" (Merleau-Ponty 1964:58). Additionally, the object of science is "defined by the mutual exteriority of parts and processes" (Merleau-Ponty 1963:9). That is, Merleau-Ponty suggests a built-in mechanism in both philosophical and scientific practice whereby

> the realistic thesis of common sense disappears at the level of reflexive thought, which encounters only significations in front of it. . . . *As philosophy, realism is an error because it transposes into dogmatic thesis an experience which it deforms or renders impossible by that very fact.* But it is a motivated error; it rests on an authentic phenomenon which philosophy has the function of making explicit. (Merleau-Ponty 1963: 216; emphasis mine)

That is, if we attempt to investigate any aspect of human life, in particular perception and consciousness, we face the distortive potential of the investigation itself: we focus on an aspect one-sidedly, analysis entails dissection and division that is extraneous to the investigated phenomenon, we impose additional implicit beliefs based on scientific practice, and sometimes we yield ground for the *bewitchment* of language. Although the

creative power of (linguistic) expression exerts considerable influence on us, the *motivated error* which is committed by scientists and philosophers – as we can see – does not hinder either the birth of new findings or criticism.

References

Bergson, Henry (2007). *An Introduction to Metaphysics*. New York: Palgrave Macmillan.

Dennett Daniel C. (2005) *Sweet Dreams. Philosophical Obstacles to a Science of Consciousness*, Cambridge: The MIT Press.

Johnson, Mark (1990) *The Body in the Mind. The Bodily Basis of Meaning, Imagination, and Reason*, Chicago: The University of Chicago Press.

Maturana, Humberto R. (1983) What is it to see? *Arch. Biol. Med. Exp.* 16, 255-269.

Merleau-Ponty, Maurice (2008) *Phenomenology of Perception*, London: Routledge & Kegan Paul Ltd.

Merleau-Ponty, Maurice (1964) *The Primacy of Perception*. Evanston: Northwestern University Press.

Merleau-Ponty, Maurice (1963) *The Structure of Behavior*, Boston: Beacon Press.

Ramachandran, V. S. (2011) *The Tell-Tale Brain. A Neuroscientist's Quest for What Makes Us Human*, New York: W. W. Norton & Company.

Sloman, A. (2010) Phenomenal and Access Consciousness and the Hard Problem: A View from the Designer Stance. *Journal of Machine Consciousness, 02*(01), 117–169.

Wittgenstein, Ludwig (1958) *The Blue and Brown Books*, Oxford: Basil Blackwell [BBB].

Wittgenstein, Ludwig (1998) *Philosophical Remarks,* Oxford: Basil Blackwell [PR].

Wittgenstein, Ludwig (1980) *Wittgenstein's Lectures. Cambridge, 1930-1932*, Chicago: The University of Chicago Press [LWL].

Wittgenstein, Ludwig (1979) *Wittgenstein's Lectures. Cambridge, 1932-1935*, Oxford: Basil Blackwell [AWL].

Wittgenstein, Ludwig (1969) *On Certainty*, Oxford: Basil Blackwell [OC].