REACTION TO 'LINGUISTIC MEANING MEETS LINGUISTIC FORM IN ACTION'

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Abstract: The enactivist position adopted by Figueiredo and Cuffari is argued to represent a return to a form of behaviorism which denies that mental content is constitutive of the meaning of linguistic signs in favour of the view that language is first and foremost a physical activity based on shared practices of bodily behaviour. This view is shown to be highly problematic, as it is unable to account for the fact that certain mental experiences have characteristic qualia that cannot be reduced to practices of bodily behaviour, nor for the fact that children's linguistic abilities are radically underdetermined by the verbal behaviour to which they are exposed in the short period in which they develop these abilities. The Wittgensteinian view of 'meaning as use' adopted in the paper is subjected to a reductio ad absurdum, as it basically entails that there are no pots, but only uses of pots. The nature of the human mind, as attested to by quantum theory, Gödel's Incompleteness Theorem and natural language itself are argued to demonstrate that it cannot be reduced to the purely material level.

The enactivist position adopted by Figueiredo and Cuffari represents a return to a form ofbehaviorism which denies mental content as being constitutive of the meaning of linguistic signs in favour of the view that "language should be taken first as a practice or activity" that gives rise to "sedimented and objectified norms" (Figueiredo & Cuffari, 2022, p. 68) in the form of shared practices of bodily behaviour.

There are many problems with this type of position, some having to do with language andothers not. A non-linguistic reason for rejecting enactivism is that certain elements of our

conscious mental life have characteristic 'qualia' or phenomenal qualities that cannot be reducedto practices of bodily behaviour. To be in pain, for example, is not merely to enact pain behaviour under the right circumstances but rather to experience a 'like-thisness' with respect tothe pain (as something dull or sharp perhaps). A purely behaviour-driven creature, a 'zombie' asit were, might engage in pain behaviour yet completely lack what is qualitatively distinctive of and proper to pain (i.e. its subjective painfulness) – see Graham (1998) and Graham and Horgan(2000) for more details.

Serious problems with enactivism as regards human language have been raised by Noam Chomsky (1959), who has famously charged that this type of model of language learning cannotaccount for the rapid acquisition of language by young children, sometimes referred to as the phenomenon of "lexical explosion." A child's linguistic abilities appear to be radically underdetermined by the evidence of verbal behaviour offered to the child in the short period in which he or she develops these abilities. By the age of four or five, normal children have an almost limitless capacity to understand and produce sentences that they have never heard before.Consequently, it seems implausible that language learning depends on mere behavioural

reinforcement. Moreover, the problem of behavioural competence outstripping individual learning histories goes beyond the issue of linguistic behaviour in young children, and representsa fundamental fact about human beings, in that our behaviour and behavioural capacities often surpass the limitations of our individual reinforcement histories.

The Wittgensteinian view of 'meaning as use' adopted in the paper ("what matters for themeaning of the sign is the joint/common practice and the abilities of the interlocutors to make sense together," fn 12) has been subjected to a *reductio ad absurdum* by the French linguist Gustave Guillaume, who reformulates it as basically entailing that 'there are no pots, there are only uses of pots' (1995, p. 426). While it may be true that part of human behaviour is based on the imitation of other humans' behavior, it is not possible to reduce language to the level of 'monkey see, monkey do'. As pointed out by Chomsky, even young children have the ability to understand and produce sentences that they had never heard before. The fact that human beings possess intelligence allows them to transcend the level of imitative habits to attain that of the perception of universals. Thus the meaning of the word "dog" is not merely a shared practice of bodily behaviour, but a universal concept applicable to all dogs, whether they belong to the past, to the present or to the future. Moreover, in natural language this word cannot even be reduced toits use to refer to a *canis familiaris*. Thus in (1) below, reference is made to a movie:

(1) That movie was a dog.

The resultant message here is the expression of a pointedly negative opinion about the movie's quality. How is a use like this possible however if the meaning of *dog* is the habit of using it to refer to a real dog? The import of (1) is not at all to refer to an entity belonging to the same set as Fido, Rex

and Molly, but rather to suggest an uncomplimentary comparison between the movie in question and a dog. According to Ricoeur (1978, pp. 229–232), an analogy like this mediates between purely univocal reference, on the one hand, and sheer equivocity on the other, combining a literal 'is not a dog' with a metaphorical 'is a dog'. But if the meaning of "dog" is merely the shared habit of referring to real dogs, how is it that we can apply it to a referent that is not a dog?

Regarding the thought experiment of the linguist's nightmare described on page 65, which is intended to demonstrate that it does not matter what the mental content attached to a linguistic sign is if one cannot rely on a joint practice of its use, this imaginary scenario does not allow one to draw the conclusion drawn from it by the authors. In the proposed thought experiment, the meaning of only two words in the language has been changed, and this only on the lexical level, as both words retain their grammatical category of preposition. Thus it is the unchanged meanings of the other words used in the utterances that occur in the fictional situation imagined by the authors that allow the hearer to infer that the meanings of the prepositions "for" and "to" have been interchanged. If these other signs did not have a stable meaning attached to them, there is no way the hearer could even realize that a switch between the meanings of "for" and "to" had occurred.

Lastly, certain statements made in the paper imply a materialistic view of human nature which is utterly untenable. For example, the idea taken from Malafouris (2013) that "cognitive processes are extracranial material engagements of our bodies with our surroundings" is very difficult to interpret in any meaningful way. How can a cognitive process, i.e. a process that produces knowledge in a human mind, be extracranial? There would seem to be a confusion here between the stimulus that triggers the

process and the process itself: the trigger is – or can be – a material engagement of our body with our surroundings, but the cognitive process itself must be located inside the knower. Moreover, human cognition transcends the merely material level.

Thomas Nagel (2012) has argued famously that mind is a fundamental datum of nature that thematerialist version of evolutionary biology is unable to account for. Nagel argues that consciousness has an essentially subjective character to it, a 'what it is like for the conscious organism itself' aspect, and that this cannot be reduced to the matter of which the organism is constituted.

In a similar vein in the field of the hard sciences, American physicist Stephen Barr points to two modern scientific developments that refute the contention that the human mind can be reduced to a purely material machine. The first of these is quantum theory:

> (…) for any physical system, however simple or complex, there is a master equation – called the Schrödinger equation – that describes its behavior. And the crucial point on which everything hinges is that the Schrödinger equation yields only probabilities. (…) But this immediately leads to a difficulty: there cannot always remain just probabilities; eventually there must be definite outcomes, for probabilities must be the probabilities of definite outcomes. To say, for example, there is a 60 percent chance that Jane will pass the French

exam is meaningless unless at some point there is going to be a French exam on which Jane will receive a definite grade. Any mere probability musteventually stop being a mere probability and become a certainty or it has no meaning even as a probability. In quantum theory, the point at which this hapens, the moment of truth, so to speak, is traditionally called the collapse of the wave function.

The big question is when this occurs. Consider the thought experiment again, where there was a 5% chance of the box collecting one particle and a 95% chance of it collecting none. When does the definite outcome occur in this case? One can imagine putting a mechanism in the box that registers when a particleof light has been collected by making, say, a red indicator light to go on. The answer would then seem plain: the definite outcome happens when the red lightgoes on (or fails to do so). But this does not really produce a definite outcome, for a simple reason: any mechanism one puts into the light-collecting box is just itself a physical system and is therefore described by a Schrödinger equation. And that equation yields only probabilities. In particular, it would say there is a 5% chance that the box collected a particle and that the red indicatorlight is on, and a 95% chance that it did not collect a particle and that the indicator light is off. No definite outcome has occurred. Both possibilities remain in play. (…)

Of course, it seems that when a person looks at the red light and comes to the knowledge that it is on or off, the probabilities do give way to a definite outcome, for the person knows the

> truth of the matter and can affirm it with certainty. And this leads to the remarkable conclusion of this long train of logic:as long as only physical structures and mechanisms are involved, however complex, their behaviour is described by equations that yield only probabilities
> – and once a mind is involved that can make a rational judgment of fact, and thus come to knowledge, there is certainty. Therefore, such a mind cannot be just a physical structure or mechanism completely describable by the equationsof physics.
> (Barr 2007, pp. 4–5)

The second development is Gödel's Incompleteness Theorem in mathematics, whose import for the irreduceability of the human mind to a computer Barr summarizes as follows:

> What Gödel showed, however, and rocked the mathematical world by showing, was that mathematics could not be so mechanized. In particular, he demonstrated that if one is given any consistent formal mathematical system rich enough to include ordinary arithmetic, then there exist propositions (called "Gödel propositions") that (a) can be properly stated or formulated in the symbolic language of that system, (b) cannot be proven using the mechanical symbolic manipulations of that system, and yet (c) can nevertheless be proven to be true – by going outside the system. Because the human mind can grasp the structure of the formal system and the meaning

> of its symbols, it is able to reason about them in waysthat are not codified within that system's rules. (…)
>
> The relevance of all this to computers is that all computers involve – indeed are – systemsfor the mechanical manipulation of strings of symbols (or "bits") carried out according to mechanical recipes called "programs" or "algorithms." Now suppose that there could be acomputer program that could perform all the mental feats of which a man is capable. (In fact, such a program must be possible if each of us is in fact a computer.) Given sufficienttime to study the structure of that program, a human mathematician (or group of mathematicians) could construct a "Gödel proposition" for it, namely a proposition that could not be proven by the program but that was nevertheless true, and – here is the crux of the matter – which could be seen to be true by the human mathematician using a form of reasoning not allowed for in the program. But this is a contradiction, since thishypothetical program was supposed to be able to do anything that the human mind can do.What follows from all this is that our minds are not just computer programs.
> (Barr 1995, pp. 2–3)

To these considerations can be added evidence from language itself regarding the way inwhich the word "mind" is deployed in ordinary everyday speech. Duffley (2019, pp. 70–71) adduces attested usage showing that the mind is construed in ordinary discourse as having the amazing

capacity of being free to travel beyond the limits of present time and current spatial location. This is illustrated by uses such as (2) and (3) below:

(2) In my mind, I am on a tropical island right now.

(3) The flowers were lovely out-of-season ones, and they took her mind back more than 30 years to the May basket in which Dick had hidden her.

Moreover, the mind can even conceive of things that do not exist in physical reality:

(4) Try to realize that those vast crowds of people who will scream with laughter at the sightof you in a swimsuit, or on seeing you jogging, skipping, enrolling at aerobics classes oreven taking a brisk daily walk, exist only in your mind.

Thus the nature of the mind as attested by natural language itself demonstrates that it cannot bereduced to the purely material level, as no material entity is capable of transcending both spaceand time and of entertaining scenarios that have no physical reality.

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