

MESSAGES, MIND AND BRAIN – A RESPONSE TO MULDER’S REVIEW OF *A LINGUISTIC PHILOSOPHY OF LANGUAGE* (EDWIN MELLEN PRESS, LEWISTON – LAMPETER, 2000)^[*]

Paul Rastall (City University of Hong Kong, China)

I wish to start by thanking Jan Mulder for taking such trouble to review my book. Naturally, I am pleased by his generally supportive comments. Nevertheless, Mulder has a few criticisms to which I would like to respond.

Mulder’s remarks are concerned with a small, but relatively important, part of the book. Like all those influenced by Mulder’s axiomatic functionalism, I take the view that linguistic statements, descriptions and explanations are accounts of linguistic phenomena. The constructs they contain are not assumed to be isomorphic with supposed unobservable entities in the mind or anywhere else. They are ways of understanding communication events. However, part of that understanding involves the meanings we create from linguistic and other information and this implies taking a position on the relation of language and mind. For me, it is important in this context to arrive at accounts of how language – or, better, the contents of verbal signals – messages – contribute to overall meanings in our world of understanding. We can take our accounts of linguistic phenomena and see how they help us to understand aspects of our rational, conscious world.

Most of Mulder’s criticisms relate to my supposedly “dualist” approach to brain and mind. By contrast, he advocates a “monist” view in which “mind” is not separate but a function of brain activity. He also has one more technical comment on a syntactic issue. In general, I think Mulder’s views and mine are much closer than the review might suggest, although there are key differences. I will reply mainly on the “mind/brain” issue and briefly on the syntactic one. It is always worth paying attention to the comments of such an original and outstanding thinker as Jan Mulder, to whom I am greatly indebted.

Mulder states that I do not define the term “message” and that my stated view that messages are intangible, and belong to the mind, and not the brain represents a “dualist” position which distinguishes mind from brain. This “dualism” is also related to my general acceptance of a Popperian “3rd world” of intersubjectively and rationally debatable ideas (Popper, 1972, pp. 35-152), which implies the existence of mind, or at least high-level and very complex consciousness, and (for Popper and his follower, Eccles) the bi-lateral interaction of the world of ideas with physical states. Popper (1972a, p. 154) says

[*] Previously unpublished. Mulder’s review article to which this paper is a response was published in *Linguistica* ONLINE: <<http://www.phil.muni.cz/linguistica/art/mulder/mul-001.pdf>>. [Editor’s note]

“the third [world] is the world of intelligibles, or of ideas in the objective sense; it is the world of possible objects of thought: the world of theories in themselves, and their logical relations: of arguments in themselves: and of problem situations in themselves.”

(I think Popper underestimates the effect of non-rational, emotive and aesthetic issues in the 3rd World of ideas. Our emotional and aesthetic responses are also matters of understanding and debate (see Rastall 2006, 2008).)

Mulder takes the view that “mind” cannot be located in space and time and it is not a distinct entity. For Mulder, the “mind” is just the brain’s way of achieving conscious awareness and, thus, any “mind” is entirely a function of brain activity. Mulder’s position implies that any apparent interaction of the “mind” with the brain is illusory. The “will” is, on this view, also just part of the brain’s creation of consciousness – in this case relating to needs and actions for their fulfilment. On this view, there is a unilateral physical effect of brain activity on the creation of consciousness (that we associate with mind). Consciousness would then be an evolutionary strategy in which the illusion of mind is created. Mulder’s position is consistent with that of many neuroscientists such as Dennett (1991), Dawkins (1986), and physicalist philosophers such as Quine (1960). Part of the evidence for the position Mulder describes comes from the well-known fact that brain processing activity precedes conscious awareness and speech processing precedes speech activity. The brain is clearly acting prior to conscious awareness and conscious awareness rests on the activity of the brain in making the subject aware of its processing. This suggests that our “mind” is a function of complex brain activities and not a separate entity. A similar conclusion could come from the deterioration in mental ability associated with brain impairment or disease or from the common experience of waking up to the solution of problems after a night’s sleep “on them”. Mulder also refers to Ryle’s contention in the *Concept of Mind* (1949) that the identification of a world of mind is a category mistake.

Kirk (1993) in a perceptive review of Dennett’s work expresses the neuroscientist’s position well. He says (p. 340):

“[there is] a growing consensus of scientific theorizing. Mental activity in general consists of vast numbers of parallel processes; perception, in particular, involves sensory inputs being elaborated, modified, and “interpreted” simultaneously, by specialized subsystems, along many parallel tracks in various parts of the brain. There is no headquarters or “inner sanctum” within the brain, arrival at which is the necessary or sufficient condition for conscious experience.”

The two issues Mulder raises are connected in that (verbal) messages are a part of our consciousness. Mulder’s saussurean position that physical signals and their correlated messages are merely aspects of the same thing viewed from different angles is entirely consistent with the view that the brain creates conscious awareness. Messages, for Mulder, are just signals viewed from the angle of consciousness. A signal of a message and a message of a signal are different ways of looking at the same thing. The notion of a conventional linguistic mediation or, as Martinet (1960) called it “l’analyse linguistique de l’expérience” is important here since any message-signal has gone through that unconscious mediation and reflects its properties. Actual “meanings” are partly linguistically formed – as my book discusses in some detail. Viewed as a signal, an instance or actual realisation of a verbal

sign in speech acts has the physical properties needed for transmission, but viewed as a message, it has a significance in relation to the social world and generally the world of experience and understanding which is partly determined by the conventions of the linguistic system being used. (Of course, the actual reference to aspects of the world of experience – the referent or *communicandum* – depends on the practical circumstances of speaking and many other factors.) Although verbal signals provide the vehicles for messages, it is clear that messages are matters of the understanding. They are intangible as part of our conscious awareness, but they are analysable in virtue of the signals that are their other aspect.

Now, I do not wish to deny any of Mulder's points, but I do continue to agree with Popper on the importance of a 3rd World of rationally debatable ideas. On the contrary, a close reading of my text shows that my position is very close to Mulder's, although it could be said in reasonable criticism that some of my points are not prominent enough or detailed enough. In retrospect, I could have distanced myself more from some of Popper's assertions about the (actual) existence of the 3rd World as opposed to its reality as a part of experience. On the other hand, the communicational purpose of messages is very largely to orientate and manipulate our conscious world of understanding. Popper's point is that this world is inter-subjectively shared as we communicate to be understood, to discuss, and to test ideas of all sorts. While I think Popper underestimated the role of linguistic convention, I think the reality of a world of ideas and social understanding is a phenomenon we have to account for. It is unclear where theories or empirical claims would be in a monist approach unless the theory of brain activity is just a brain activity – but that would not account for inter-subjective understanding and debate or for the theory or idea as a common property of two or more brain activities. Of course, the concentration on “mind” may make the text look more “dualist” than it is. Before going on, it is important to note the *caveat* that, in the absence of detailed and small-scale knowledge of the mechanisms of consciousness, all linguists' remarks are speculative.

In fact, I make clear (e.g. p. 89) that I think “mind” arises from the cellular activity of the brain but go on to take the view that the mind is more than the sum of the physical mechanisms involved – this is because of the organisational features of linguistic systems and the integration of information of all sorts – perceptions, non-verbal communication, memories, logical and emotive processing, for example (even if they too have a physical basis). One does not have to accept the existence of a separate mind as part of an acceptance of a 3rd World of ideas. As my text makes clear on pages 106–8, for example, and Mulder mentions, I do not allow for any direct causal interaction of immaterial mind and physical processes in the brain or neural impulses. I do allow for conscious rational activity and the awareness of needs which may be satisfied by actions¹. Of course, it is possible to accept that such rational activity is itself an awareness of unconscious brain processes. This is a kind of default position in which any mental event of any sort can be seen as physically produced. However our 3rd World (and hence “mind”) may arise, it is a *reality* of our experience – perhaps *the* reality of our experience – and it can be changed *by* experience. A large part of that experience is the content of messages. Mulder prefers to see this as the world of “thoughts” in order to avoid the term “mind”. I have no objection to that but, as far as I can see, we are speaking of the same lived experience. That lived experience is a

¹ Of course, one might speculate, perhaps a little impishly, that if the “mind” is physically created by the action of the brain then the reverse connections may allow a conscious state to affect neural activity.

world in which we find humorous remarks, fantasies, imaginary characters, emotional outpourings, as well as Popper's theories and rationally debatable ideas. This lived, conscious experience, as suggested above, is also in need of explanation and, for linguists, the most important part is the role of language in it.

To some extent, *for a linguist*, the mechanism of verbal production and reception as well as their processing are not the issue. The linguist operates with a world of linguistic means and their significance. Linguistic means and significance are part of our rational, conscious world. We do not have to see high-level rational consciousness (Beshkar, 2008) as a separate mind, unconnected with brain activity, any more than we have to see high-level consciousness as identical with the 3rd World of ideas or contents of theories. However, that linguistically mediated and created world is our representation or understanding of, and orientation in, experienced reality. However rational processes arise, the world of messages in consciousness is the reality that we have access to and can discuss. In fact, my book is a set of messages, which Mulder and I are debating: readers can assess this debate for themselves through the messages Mulder and I are exchanging.

There are different forms of dualism. I do not wish to assert that mind has a separate existence from the brain, but I do associate mind with the sum of the "awarenesses" that are created by the brain and which are for us our construction of reality. We have simultaneous and ever-changing and coordinated awareness of our physical state, environment, our orientation in that environment, communicative activity of many kinds, memories, priorities, and rationalisation of all of the afore-mentioned. This I take to be Popper's *World 3* (Popper, 1972, p. 35 ff.). We might not be able to locate this world in space and time and we can never escape from the fact that it is created by the brain, but we can reach "intersubjective agreement" on at least some of its contents (as Popper notes, 1972, p. 27) and it has importance as our means to accessing, or better constructing, our reality. That messages and their reflections of linguistic mediation are such an important part of that reality is what leads me to focus on messages as central to mind in the sense described. Thus, I think understanding the virtual world of linguistically mediated messages is of central importance.

My difference from Mulder is perhaps only a difference of emphasis. My emphasis is on messages (verbal or otherwise) as major parts of our lived experience, part of which is our rational manipulation of ideas (Popper's emphasis) but part of which is also our complex awareness of varying social, interpersonal, and aesthetic values in messages. I have called this verbal world "language as information" (Rastall, 2006), but of course non-verbal communication is also part of the totality of construction. The picture of multiple coordinated and integrated mental activities has some similarities with Dennett's theory of "multiple drafts" (Dennett, 1991, p. 106), but I am more concerned with coordination of mental activity than with the competition of brain centres for prominence, which may explain our constantly changing perspectives, interests, and priorities. While I do not wish to go against scientific opinion and suggest the existence of an "inner sanctum", I do think the coherence of our mental activity and the sheer complexity of its organisation at each point in consciousness need to be accounted for as well as the processes of prioritisation and perspective on events which are part of our lived experience. This is related to the clear experience of organising and manipulating our thoughts. In a recent work (Rastall 2006a), I have tried to take a process view of linguistic phenomena as events with "powers", or ef-

fects, to influence the conscious world. I have tried to avoid the usual hypostatisation of linguistic entities. I think the view of speech phenomena as “powers” is consistent with the creation of conscious awareness through (communicational) brain activity. A simple reductionism seems incapable of accounting for the complexity of organisation in linguistic and other processing and conscious awareness of the *significance* of verbal signals. We do not have to accept all of Popper’s views, but it is his merit to have drawn attention to our conscious conceptual world and to have raised the question of the role of language in it.

A very puzzling aspect of our varied reality for the physicalist is the verbal creation of fantasy or imaginary worlds by linguistic means. This includes our extensive use of metaphor. Even if imagination and metaphorical understanding/expression have a physical basis in brain activity, we need to find out why imaginary or metaphorical modelling of our world of experience (and adding to it in those ways) is so important and frequently preferred to a direct representation of states of affairs. (My guess is that imaginary worlds and metaphor overcome deficiencies in direct representation through exploiting indefinitely large verbal resources as a problem-solving device for issues not directly related to the understanding of the physical world or immediate survival. They are useful for exploring and understanding our social worlds and the worlds of personal interest, but that is only a beginning.) Reductionism must account, not just for the physical mechanism of the creation of consciousness but also for the social, moral, intellectual, and aesthetic qualities, needs, and “awarenesses” in it, including our creativity in metaphors, fairy tales, parables, theory-building, and imaginary events.

In my view, this difference in emphasis is inevitable when we come to consider issues of “meaning”. “Meanings”, i.e. actual messages derived from semiotic activity, are partly due to the communicative properties of systems, but they also arise from the coordination and interaction of multiple logical processes and value systems. The “intangibility” of messages is just a consequence of looking at semiotic activity from the “meaning perspective”. This is why I assign messages “to the mind” and not to the brain (p. 120). I agree this may be misleading if taken out of context.

It is important to note that I do not envisage a direct interaction of mind and brain, but an indirect linkage through the awareness of need and monitoring of the fulfilment of needs through actions, although I would now give greater prominence to this point. This I take to be what is called “will” or at least some part of it. There must be processes for choosing between action and inaction in communication as in all other activities leading to neurological impulses to the muscles, even if our apparent will (like decision-making) is just our awareness of the said processes in consciousness. “Will” does not have to be a product of a separate mind entity, but we do have to take will into consideration for any form of voluntary activity.

As far as messages are concerned, one should note that I define them as the content of signals (p. 113). Possibly, this definition is insufficiently prominent and it should be linked to further explanation. However, from the clear saussurean orientation of the book, my acceptance of (a modified form of) Saussure’s view of the sign, and the very extensive discussions of linguistic mediation, it should be clear that my position is the same as that of Mulder (above) on the indivisibility of signifier and signified in the sign and of signals and messages in instances of signs: but the signified cannot be taken to be identical with the

signal. Messages, as the content or signified of signals, arise from a complex set of linguistic relations and external reference to the world of experience.

To sum up, Mulder and I can agree on the following with differences of emphasis.

- 1) Our world of messages arises from the physical activity of the brain and is part of our conscious awareness of brain processes.
- 2) The “mind” is the product of brain activity. It is our awareness or that activity. It is not a separate entity, but it is our lived experience of the world around us and communication as part of that world (so to speak, an “aspect” of the brain).
- 3) Different sources of messages (verbal and non-verbal, conventional signs and natural indices) are coordinated and integrated with our perceptual experience of our selves, our memories, and our environment.
- 4) This totality is manipulated with rational processes and various value systems to produce total complex meanings. (These can of course be seen as our awareness of all these activities.)
- 5) Actual meanings depend in part on linguistic mediation; i.e. a set of conventional analyses of experience.
- 6) When we concentrate on the world of messages and their role in the world of constructed meanings, we inevitably focus on something intangible and we must find ways of establishing inter-subjective agreement (of course this too relies on communicative activity but we do not wish to fall into a form of solipsism here – although the impossibility of escaping the “loop of language” is discussed at length in the *Linguistic Philosophy of Language* (pp. 215–236).)
- 7) What we say about the above issues is somewhat speculative, although alternative views can be excluded, – e.g. that signals do not have signifieds but are purely physical forms or that meanings exist separately from linguistic or other communicational mediation.
- 8) Linguistic analyses are ways of understanding verbal communication which are arbitrary, but which can be argued to be appropriate. We cannot claim direct correspondence of proposed linguistic entities with brain entities or structures and we could not test such claims if we did.

The views of linguists in these matters are speculative (even a little impertinent), although – as Mulder has often said – sometimes speculation is the only way forward, but that speculation must be consistent with the known facts of neuro-science in much the same way as phonology must be consistent with the known facts of phonetics.

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As far as the syntactic issue is concerned, Mulder strongly supports the view that commutation must take into consideration the strict context and criticises me for not doing so in the identification of (what I call) pseudo-prepositions in expressions such as *dote on*, *believe in*, *(in) consideration of*, *respect for*, etc. All of these I regard as simple signs with only apparent complexity. Similarly, I regard *than* in *more important than Fred* as a redundant discontinuous element of *more*. I take *more...than* to be the positive comparative (and *less...than* the negative comparative; the comparative of equality is *as...as*). The ab-

sence of commutation in the prepositions and *than* (or the second *as*) in such cases I take to be an indication of redundancy (100% predictability) and to correspond to the lack of an identifiable signified. As a result I arrive at syntactic analyses such as:

he → (*doted* **on**) ← *his daughter*
he → (*believed* **in**) ← *the theory*
in ← (*consideration* **of**) ← *the circumstances*
he → *had* ← (*respect* **for**) ← *Fred*
 ((*more ...* **than** ← *Fred*) → *important*)

where the items in bold are not separate signs, but only pseudo-signs. Clearly, this means that the syntactic analyses here differ from conventional ones. Semantically, in the last example, we assert that the degree of importance of *John* in *John is more important than Fred* is “more than Fred”.

Mulder makes the point that we can always (or very often) find some context in which a sign may not commute and hence appear redundant. He takes the strict context into account and arrives at structures such as:

he → *doted* ← (**on** ← *his daughter*)
he → *believed* ← (**in** ← *the theory*)
 (*in* ← (*consideration* ← (**of** ← *the circumstances*)))
he → *had* ← (*respect* ← (**for** ← *Fred*))
 ((*more* → *important*) ← (**than** ← *Fred*))

While I take Mulder’s point about being careful over the context of commutation, I think his solution involves presupposing the complexity of the expressions in question and fitting them to a preconceived syntactic framework. The bolded items, on Mulder’s account are given a false status. His view looks rather like “once a preposition, always a preposition” to adapt a phrase. It is unclear, on Mulder’s account, how we could distinguish a clearly meaningful (and commutable) preposition expressing location as in:

she played in the garden

from a non-meaningful and non-commutable one as in

she delighted in the garden.

However we look at the matter the “prepositions” in bold do not have any commutants and thus have no information value. The same is true of *than*. It would be inconsistent to assign a *signifié* to such units. Furthermore, it would invite the establishment of other meaningless units (such as the so-called “third person ‘s’”) as grammatical functives, and call into question the distinction between the first and second articulations. It is hard to see how *than Fred* could be assigned an interpretation if *than* is not a sign.

The positive (and negative) comparison (*more* or ... *er* / *less* ... *than*...) is interesting as a structure because it commutes with (actually, is mutually exclusive) with other adverbs,

such as *very*, *surprisingly*, as well as the positive and negative superlatives (*most* / ... *est* or *least*). The same is true of the comparison of equality, *as* ... *as*. *Very* does not commute with *more* alone. We cannot have **very important than Fred*. This also suggests that *more ... than Fred* has integrity as a grammatical and semantic unit commuting with *very*, and *more ... than ...* should not be distributed over two structures, as Mulder's solution has it. Furthermore, if we accepted Mulder's solution, we should have to say that the occurrence of *than Fred* depended on the occurrence of the dependent *more* in *more important*, because we cannot have **important than Fred* without *more*, but in Mulder's solution *more* and *than Fred* would not even contract a direct constructional relation. That would conflict with definition 12a of Mulder's Postulates for Axiomatic Functionalism (Mulder, 1989).

For all those reasons, Mulder's solution seems to me to be grammatically and semantically implausible.

It is possible that our disagreement on this point stems from what we are prepared to allow as "grammatical entities", but I take the view that grammar is concerned with the constructional, dependency, and realisational relations of meaningful entities (of whatever sort – verbal or non-verbal signs or symbols) but not of non-meaningful ones (Rastall, 1995, 1999, 2004). However, Mulder's definition (2a4) of 'plerological or 'grammatical entity' as "entity in systemology corresponding to a signum" (Mulder and Hervey, 2009) seems also to preclude non-meaningful units in grammar (plerotactics), so we appear to take the same view, although the expression "corresponding to" is rather unclear.

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