What is language for?

Interdisciplinary perspectives on the existence of language

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WHAT IS LANGUAGE FOR? INTERDISCIPLINARY PERSPECTIVES ON THE EXISTENCE OF LANGUAGE

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Les fonctions du langage sont bien connues, mais pourquoi le langage existe-t-il ? L'article est une petite méditation exploratoire, certes un peu spéculative, à la lumière de considérations interdisciplinaires. On est également amené à un réexamen de la théorie du langage et, parallèlement, à des propositions dans le domaine de la recherche empirique.

I. INTRODUCTION: A STRANGE (AND ANNOYING) QUESTION

The question in the title may seem a strange, or unnecessary, one, but the issues involved in answering it turn out to be complex, and the answers are important for our general perspective on language. We tend to take the existence of language for granted. It is central to our lives, and for linguists it is our stock in trade to be analysed and understood, like rocks or the grooming behaviour of chimpanzees. However, language is peculiar to humans – unique in the organic world –, so its existence is surprising and in need of explanation. After all, language does not exist for amoeba or elephants, and might never have existed.

Part of the problem is to understand exactly which question is being asked. The question is not: *what are the functions of language?* – but rather: *why does language (as we know it) exist at all?* It is close to one of Tinbergens (1963) famous "four questions" in ethology – *i.e.* what is the selective advantage

of language behaviour? We will consider why the question needs an answer. To arrive at an answer, some speculation is needed, particularly in considering alternative points of view. The answers lead to a reconsideration of how we think about language and, hence, the questions and approaches of linguistics, and to some empirical questions. So, I have to crave the reader's indulgence for what is largely a meditation prompted by ideas from *outside* linguistics, but in the belief that linguistics must be consistent with other sciences. Mainly, what follows is a matter of interrogating some fundamental notions and bringing to bear ideas drawn from other sciences – things which, I fear, are not strong in linguistics, however much we pay lip service to interdisciplinarity.

As noted above, the question, *what is language for?,* is not the same as asking *what are the functions of language?* The latter question has been extensively addressed, although what we mean by a "function" varies greatly (but that is another matter). I start with an observation about meaning in English. The questions, *what is something used for?* and *what is something for?* are not the same. To take an everyday example, as any gardener will know, you can cut off the base of a (transparent) plastic drinks bottle and place it over seedlings to protect them, so one function of drinks bottles (what they are in fact *used for*) is to protect plants, but it is (obviously) not what bottles are (intended) *for*. Or, as the late Jan Mulder once said to me: "you can use a banana to scratch your back, but that does not mean that a banana is a back-scratching implement." Nor is it for providing us with food. It is for the propagation of banana plants – a fruit containing seeds. We take advantage of bananas for food or back-scratching. Language has a wide range of functions and the centrality and usefulness of language in human life and thinking are abundantly clear; there is no part of our reality which is not to a large extent verbal - that is what we do in speaking. Hjelmslev (1966: 9) expressed it clearly (it comes out beautifully in French!). He says:

> Le langage – la parole humaine – est une inépuisable richesse de multiples valeurs. Le langage est inséparable de l'homme et le suit dans tous ses agissements. Le langage est l'instrument grâce auquel l'homme façonne sa pensée, ses sentiments, ses émotions, ses efforts, sa volonté et ses actes, l'instrument grâce auquel il influence et est influencé, l'ultime et le plus profond

fondement de la société humaine. Mais il est aussi le dernier, l'indispensable recours de l'homme, son refuge aux heures solitaires où l'esprit lutte avec l'existence, et où le conflit se résout dans le monologue du poète et la méditation du penseur.

We could say, Hjelmslev's lyricism tells us what language (acts of speaking) "*does for us",* but we should avoid such an anthropomorphism – language doesn't *do* anything. *We* do things through verbal behaviour and interactions. Language is a means: it has "powers" in the philosophical sense of the quality of effecting change in thoughts and actions, like a catalyst. Alternatively, we could say Hjelmslev states what language is in fact "*used"* for, but it is hard to accept that language is an independently existing tool or implement which is used by a separately existing "mind"; brain and its representation to us as (what we call) "mind" are parts of the same cognitive activity, as most philosophers and neuroscientists would now say. Furthermore, speakers and their means of interaction are parts of one interconnected totality of existence; they are not isolated from the rest of reality. The danger here is one of slipping into misleading metaphors. Thus, Hjelmslev does not tell us what language (in that sense) is *for* – he describes its manifestations and functions. So, we can still ask what is language for?

We must distinguish actuality from teleology. The fact that one can do all of the things Hjelmslev mentions above as possibilities in *la parole humaine* does not imply that those abilities were, or are, in some way the (intended?) purpose of language, just as a banana did not develop to be a back-scratching implement. Such a teleological view would seem absurd. One might want to sum up Hjelmslev's ideas by saying that language is *for* communication and thought. However, it should be clear that language, as acts of speaking, is **not** *for* communication: it *is* communication, and language and thought are inseparable. Furthermore, objectified language (as qualitative information)[1] serves as one of the inputs to our meaning-making and thinking – along with non-verbal signals, including perceptions, and reasoning processes – *i.e.* the virtual reality of our

1. For the notion of "objectified" or "reified" language, see Strawson (1971), Mulder (1993), or Rastall (2006).

understanding or mental model of reality. But mental models of reality (Johnson-Laird, 2006) are *not* language, but the end product of operating with language (and perceptions). Our mental models, or model-dependent reality (Hawking and Mlodinow, 2010), are partially formed by verbal and other signals and they constantly interact with, or are updated by, new signals (of many sorts). Moreover, our constructions of reality are represented in mental models by (objectified) verbal means and other indices that can be compared with information from other sources (perceptions and memories, for example).

For instance, if I use an electronic blood pressure monitor, sensors detect systolic and diastolic pressure in my arteries (those are natural indices), and calibrate those pressures to numerical readouts (*e.g.* 120/70) by *coded* programming. There is a visual signal in the display using a conventional numerical *symbolism.* That numerical information must be interpreted against a numerically and verbally expressed scale (*sign systems*) from hypotension through a normal range to hypertension. This is, in turn, an *index* of my cardio-vascular health, which can be expressed verbally and added to my previous health model. All this exists in a wider context of how the monitor works and my knowledge of the relation of blood pressure to health as well as any discussion with a health professional. In a less complex case, a sentence such as *the wind has blown down the daffodils in the garden* relates to, and updates, my model of the garden. In both cases, I have a mental model which is both verbally and non-verbally created and updated, and in which there is a search for coherence between the model and the new information. A similar point was made by the philosopher David Hume (1748/1968:182 *ff*) to account for our sense of the constancy of experience.

Our verbally expressed model contains the end products of verbal and non-verbal communication. This end product exists both for the speaker who formulates his or her own meaning and relieves the need to express it, and for the receiver who constructs an interpretation of the verbal signal. The interplay of signals and models is what "we" (that is, our brains) do with speech, and other hermeneutic, acts. We do not "use" language in the sense of operating with a mind by

means of a code, but engage in continuous verbal behaviour interconnected with our experience of reality. So, we might still (and somewhat annoyingly) persist in asking whether that information-processing was what language was *for*. Information processing is just another way of looking at language functions.

II. LANGUAGE AS A BY-PRODUCT WTH POSITIVE FEEDBACK?

Could we say alternatively, for example, that all of those undoubted benefits (functions of language) were the *by-products* of (proto-) language that we exploit (as we exploit bananas)? Many things have accidental, useful by-products. Teflon has a myriad of uses now, but was an accidental discovery in the attempt to find a refrigerant, and found its first uses in the nuclear and space industries. Body hair developed as a means of temperature control, but has become a secondary sexual characteristic. As the ethologists Bateson and Laland (2013: 712 *ff*) have pointed out the current utility of a behaviour may not be the same as an original adaptation. So, if we interpret our question as what is the fundamental role of language in human life and society, *i.e.* why does it exist at all? We may find that language has developed exponentially through a positive feedback process from something more fundamental (Rastall, 2000)[2], as is the case with other biological processes (Dawkins, 2004).

If something exists which is *for* the achievement of all those communicative ends, it is the linguistic resources which facilitate them – the signs, phonemes etc., the mass of multi-dimensional associations along with the cognitive processing to implement those resources – *la langue*[3]. I do not wish to suggest a rigid dichotomy between *la langue* and *le langage*.

2. Foley (1997:43 *ff*) gives a clear gradualist account of language evolution and Maslin (2017: 181 *ff*) describes recent thinking, which generally rejects the "discontinuity view" of Chomsky and others that language emerged suddenly through a genetic mutation.

3. Here I am referring to the ultimate cognitive reality underlying verbal behaviour (currently unknowable), as opposed to our descriptions of languages, which are themselves mental models for our understanding of that behaviour. Our linguistic analyses of *la langue* are models of real-world models.

It is clear that the whole verbal process is an interconnected totality with complex energy transmissions, but one can focus on different aspects of that process. *La langue* is the point of view of verbal resources in the formation and interpretation of verbal signals. One must note, however, that the billions of connections in the brain which are at the basis of conscious verbal representations develop organically in many dimensions – one can overstate the patterned or systematic nature of language (Rastall, 2016). Furthermore, the mass of verbal resources is connected to perceptions, memories, emotive associations, etc. for meaning-making – language does not exist in isolation. As the brain is a very flexible and adaptive organ, our verbal and non-verbal associations, as well as our models of reality are constantly updated, as we have seen. This dynamic – the construction of reality through the interplay of verbal and non-verbal information with mental models – should be a key area of research. As in the example of the blood pressure monitor, one would identify the initial and end states, the typical processes of change, and the semiotic means to effect constructions of reality.

Thus, one still has the feeling that the attribution of functions of communication and meaning-making to language as a set of associations is rather a description of what language does (or, rather, what we do in verbal behaviour) rather than what it is for. One possibility is that the various functions of language are super-imposed, or are an organic accretion, rather than a purpose. We know that speech is a super-imposed, or overlaid, function on the respiratory system; Braille is overlaid on the tactile system; and increased breast size is a secondary sexual characteristic in humans, not just a means of feeding infants. Language too could be an accretion overlaid on more fundamental interactions with evolutionary advantages. As Foley (1997: 74) points out, language has effectively "colonized" the brain; many parts of the brain have become adapted to language behaviour as language has gradually become the central means in human life, behaviour and survival. If this socio-cultural evolutionary approach is correct, then the functions of language have gradually been developed through positive feedback, and we must find its core feature.

It is important to note, however, that language development has not been purely quantitative. The male lyrebird's tail has simply got bigger in response to sexual selection (and it impedes the bird's flight). The development of language has also been *qualitative*. It is not just a matter having more signs. Most importantly, humans developed symbolisation; *i.e.* the creation of a surrogate means of cooperation and orientation in the world without direct action. Thus, we not only showed how to use a stick to dig for food (as chimpanzees do); we *told* how to do it at a distance and in the absence of a stick or food; we greet with words as well as gestures. As we know, language is doubly articulated and has further complexity related to social factors and value judgements. All of those things are qualitative developments, whose existence requires explanation.

A chicken, so they say, is an egg's way of making another egg. The biologist, Richard Dawkins (1989), put the matter more precisely in his "selfish gene" theory. For him, humans and any other living thing are genes' way of making more genes. Chickens, however, do not have language, accumulated culture, or artefacts beyond the crudest of nests. Their exploration and awareness of the world are very limited. Nevertheless, they serve their genes to create more genes perfectly well. There are very many complex routes from gene to gene via life forms and life cycles – consider the butterfly, for example. So, what is the difference between the chicken and the human that leads to humans having language? Hence, our question – why do we have language at all? The short answer would be, I suppose, that language enhances the survival chances of genes in humans. Language may be an "accidental" by-product, but it is one which is sexually and socially selected for. However, that answer is clearly insufficient. It is precisely why *humans* have language (and chickens do not) that is at issue. What sort of advantage is it (to us but not, apparently, to chickens), when it is so expensive in energy consumption, and it requires such a lot of acquisition and brain "wiring"?

Part of the strangeness of asking what language is for is that it challenges a strong presumption, *i.e.* that language, like other 'things', *has* an identifiable purpose or function. We assume the analogy with tools, such as flints for scraping or cutting. We assume that the form of the pelvis is adapted *for*

walking upright and that the *foramen magnum* moved towards the centre of the base of the skull *for* the same purpose, as flints were made for cutting and scraping. But language is not a tool, and body parts do not evolve in a purposive manner – advantageous adaptations survive, and thus give the *impression* of a purposive direction. Social behaviour, such as bill-touching in gulls, did not evolve *for* pair-bonding, but *with* it. We must assume that language too emerged as an advantageous social activity in the context of other developments.

Language is, as verbal exchanges between individuals, a means to social outcomes (of many sorts) - and that is, of course, true of other forms of social interaction, facial gestures, grooming or supportive touching. Each exchange is fleeting but significant. It has a value that cannot be "seen" and an effect on actions and understanding that is real, but not exclusively a matter of cause and effect[4]. As a set of verbal associations (*la langue*) it is a resource – real but unobservable –, that can be applied in verbal communication. There is no reason to suppose that this development in humans was any more purposive than changes in the form of the pelvis. Again, we have to reject a teleological view, and thus we do not have to think of the outcomes or benefits of language as purposes.

Alternatively, we could say social entities such as language are a by-product of a 'direction of travel' in human development. Furthermore, it is something which is an acquired characteristic, not just of the individual *but also of the community and species*. Language is an evolutionary adaptation, which has got out of control (but advantageously) through positive feedback, but with qualitative leaps. However, language comes at a cost in energy and cognitive processing (and perhaps in a limited perceptual range for experiencing reality – we cannot hear infra-sound, see in ultra-violet, or feel magnetic fields, for example, and hence cannot make semiotic use of those phenomena without tools).

4. Verbal communication is not a deterministic relation of circumstances to utterance to interpretation, but some causality must be involved. When I tell you about daffodils in the garden, you are directed to a particular area of experience – otherwise there could be no dialogue or relevant response.

III. LANGUAGE AND THE "SOCIAL BRAIN"

It has been suggested that increased brain size and complexity in humans is correlated with the increased size and complexity of human groups, itself a response to survival needs (the social brain hypothesis put forward by the biologist Dunbar (1998), and explained by Maslin (2017: 150 *ff*). Larger communities, brought together to cooperate by survival needs, would imply more social (and more cooperative) interactions and interpersonal relations as well as the greater coordination of group activities. A larger brain would be needed to cope with the additional information processing. Enhanced interaction through *communication* would be an advantageous behavioural adaptation to increased sociality building on simpler interactions. Language could have developed exponentially as a by-product of, and correlated with, sociality, not *for* communication and thought. The view of language as a 'complex adaptive system' developing through the interaction of "agents" in social contexts for ever more purposes (as put forward by Steels, 2011) implies precisely such cultural evolution. This positive feedback has led to the state described by Hjelmslev (above) – language provides the means for our construction of reality at every moment, but it is built on an initial socialisation into cooperative groups, repeated in each individual. One advantage, then, of language as a behavioural adaptation is that it allows ever greater exploration of the world and an expansion of our sense of reality. The chicken – and other animals – exploited different survival routes with different experiences of reality. The qualitative leaps remain – described, but not explained – especially the development of representational symbolism without the immediate presence of the *communicandum* relating to the external world and in addition to emotional expression (*e.g.* cries of alarm or pain), and signalling for social purposes (*e.g.* signals for warning, courtship) found in many animals. The philosopher Popper's suggestion (1972:153 *ff*) that language is "a problem-solving device" can be a useful starting point if "problem-solving" includes both reasoning about the external world and finding means of social orientation and cooperation in large groups.

Of course, the idea that language is a by-product developed through cultural adaptation implies that hominids might have developed differently or without language (as chimpanzees and gorillas did); and then our constructed verbal world, rationality as we know it and all that flows from it (including this article) would not exist. As Hjelmslev implied, language and humanity are inseparable.

IV. COMMUNICATION AS A COLLECTIVE?

However, we have a tendency to see language only in terms of the individual, and of individual exchanges, as in all models of communicational exchange or interaction (Saussure's 'circuit de la parole', 1972: 28, Shannon and Weaver' model, 1975: 7, for example). Can we see language as something else? – for example, as a property linking together an entire community as an organism, but instantiated in each individual so that all are integrated into that wider totality?[5] We can consider a colony of bees or ants as an organism coordinated by patterns of interaction, where each individual acts in collaboration with others to mutual benefit and the benefit of the bees' genes, and where the patterns are instantiated in each individual. From the point of view of an alien space ship, would humans look so very different except in the degree of individual variation (probably less than we think overall) and the relative complexity of interaction (compared to ants[6])? Or should we see language from the point of view of the species (rather than the community), as when we note that features such as the feminisation of masculine facial features and the relative reduction in aggression (at least in social contexts, related to testosterone levels), or the reduction of dimorphism of size between males and females in *homo sapiens* compared to other primates are parts of the general tendency towards

5. This is clearly **not** what Saussure meant by « la langue existe dans la collectivité sous la forme d'une somme d'empreintes déposées dans chaque cerveau » (1972: 38), described as "mumbo-jumbo" by Harris (1973: 158). I am speaking of an immanent and dynamic coordinating property which is a major aspect of culture – not, I hope, mumbo-jumbo.

6. But not compared to advanced aliens?

sociality and cooperation in humans as a species? That would be the perspective of the social brain hypothesis referred to above. Thus, *a* language could be a property of a community – that which links members together and helps to identify their membership –, and "language" would be a species property (*homo loquens*) in providing a means for sociality and the construction of reality.

Communicational exchange models all treat communication analytically, *i.e.* they divide up the process into its parts – sender, signal, receiver, encoding, decoding, system, context/situation, feedback. And they all atomise the community so that communication is a relation only between individuals (pairs or groups) operating in apparent isolation from the rest of society – even networks are multiple pairs of participants. Processes of "encoding" and "decoding" tend to imply the action of a 'mind' using a "code", *i.e.* the kind of dualism rejected above. Can we think more synthetically (or dynamically) about communication? We think of ourselves as individuals with our own communicative acts, but no one could operate without being part of a community and being able to interact verbally with any member of the community. No one could operate in individual exchanges without acquiring the verbal means, behaviour, and associations of the wider community and to a large extent conforming to the norms of that community[7].

For example, the selection of articles, number, tense, word order, the conventional semantic distinctions in pronouns, kinship terms, fixed phrases, and many (all?) other features of languages are not individually determined, but are acquired as the norms of the community of which one is a part – for both the production and interpretation of utterances. In all of those things, speakers have no "choice". In English, there must be some expression of tense in the main verb. That is not a choice of the speaker, but something imposed by the norms of the linguistic community. Any particular tense selection depends on the semantic conventions for speaking about time; again, those conventions are not matters of individual

7. The neuroscientist, David Eagleman (2015:133), points out that 'an enormous amount of brain circuitry has to do with other brains'.

selection. But the selection of tense must also be seen dynamically as a response to perceptions of real-world states and events. Thus, in *Fred has eaten his dinner/ Fred ate his dinner*, it is the unconscious comparison of the semantic conventions of English with real-world circumstances which determines the "selection" of the tense. The speaker's apparent freedom of choice and action here is illusory. It is the language (*la langue*), viewed as a cultural property of the community which contains a range of possibilities ("choices") for talking about time; it is here that we can apply the notion of "function" as "the criterion of linguistic reality", as Martinet put it (1962: 3) – it is the determination of the communicational values of the community. But each utterance takes place in a dynamic process. Furthermore, individual exchanges and any correlated actions or understanding have some effect, however small, on the whole community, just as a change to a Word document changes the state of the hard drive in a computer. We are constantly exposed to speakers of different backgrounds with different utterances and speaking styles, and hence to constant updating of our linguistic associations. In England, for example, it has become common quite recently in cafés and restaurants for employees to say *Enjoy!* to customers when presenting food or drink. This meme[8] has spread from America. It has become part of the active verbal behaviour of some, and associated with progressive americanisation for others. For all, there is a minor change in verbal associations. The same can be said of any linguistic change, cliché, proverb, fixed expression – they are all memes. The point is that we see ourselves and our communication in individual terms (and certainly in communication exchange models), but we are all part of a wider interacting totality in everything, as Adam Smith clearly saw in our economic lives long ago[9]. Each act of communication implies behaviour acquired from, and

8. The concept of a meme was introduced by the biologist, Richard Dawkins, by analogy with the gene to address cultural transmission of ideas, behaviours, or styles that spread or replicate from person to person. He defines it as 'a unit of cultural transmission, or a unit of imitation' (1976:192).

9. It is interesting that the economist Adam Smith, writing in 1776, saw the division of labour in terms of cooperation and interdependence, and as the product of reason and *speech*. He also saw that the division of labour was not an intended outcome, but a by-product arising from more rational means for economic exchange (2008:12-15).

consistent with, the norms of the community. Maybe, we are more ant-like than we care to think.

Our analytical perspective in which the verbal signal is objectified and considered in relation to the sender or receiver is useful in our everyday lives, but rather misleading. Any expression or interpretation involves the linguistic resources we have acquired as part of our socialisation and education. Thus, in Tarski's standard example (e.g. 1944) for experiential truth in natural languages, *"snow is white" if and only if snow is white,* we are misled if we believe that there can be a simple objective comparison of the expression "*snow is white*" with some observed external reality to determine truth. The recognition of what is snow, white, and their relation depends on the verbal conventions we have acquired (as well as on the nature of human cognition for seeing colours or identifying parts of perceptual experience). Our verbal conventions are acquired from, and operate in, the wider totality of the community (as we saw above), just as the interactions of ants by means of pheromones are parts of their wider totality.

This sense of the integrated oneness of life has been emphasised by some western philosophers from Parmenides onwards and by the daoists and zen practitioners in the east. The physicist Carlo Rovelli has made the same point about the oneness of the physical world (2016:224). As the idealist philosopher, Bradley (1897:22) says, "the arrangement of given facts into relations and qualities may be necessary in practice, but it is theoretically unintelligible". The position of "objective analysis" is convenient, but no language observer is disconnected from speech acts. Speech acts are not isolated events, although that fiction might be useful in analysis; in fact, they take place in, and have meaning in, a complex wider totality of individual associations, social and discoursal context, and the wider society which ultimately forms and gives significance to speech acts. The linguist is internal to all that information in analysis. Thus, we can determine the truth of *snow is white* only if we can operate with the acquired semantic conventions for the expressions *snow, is*, and *white* and they come from acquiring the norms of the English-speaking community, not from some objective viewpoint disconnected from communicational reality. So, there is no simple correspondence of

language with fact, because what we take as fact (our mental model) depends to a large extent on linguistic conventions[10] and our knowledge of them - at least in the everyday world of experience[11].

V. TO SUM UP

To ask what language is for seems to be to ask for its purpose or purposes. However, if we reject the idea of a teleological purpose or purposes, we are left with organically developed purposeful applications arising from more primitive social communication within a community, and for the community. That is, we assume that language was not designed to fulfil given functions like a thermometer or a snowshoe. Rather, one assumes, the purposes of language emerged and developed incrementally with qualitative leaps through positive feedback - the successful use of verbal exchange led to increased use, which led to more benefits, which led to more use - and more brain adaptations to serve the development. The same was presumably true of the forms and resources of language. The developments of sign combinations and more efficient combinatory patterns of sounds were successful adaptations in achieving communicational purposes and so were used more, and working memory became more adapted to complex verbal input. Social early humans no doubt exploited and "played with" the possibilities. One group could distinguish itself from another by its verbal behaviour used as a kind of badge. At any rate, the development was organic, unplanned. Any system or regularity emerged as a by-product, which then became useful and fed back into further development; others became fixed as "anomalies". As we know, some historical developments can

10. This is consistent with Donald Davidson's notion of 'truth in a language' (Davidson, 2003:220 *ff*), but I think he underestimates the extent to which linguistic conventionality undermines a correspondence theory of truth.

11. We here touch on the question of 'scientific objectivity' in linguistics. Can we be so 'objective' when we need language with all its conventionality to explain language? Perhaps, rather, we should think in terms of the 'rational coherence' of analytical models with constructs of verbal behaviour- but that is beyond the scope of this article.

be explained as analogical ('regular'), but different analogies apply to different parts of a language, and many 'anomalies' are found where analogy has *not* applied. One may think of the variety of verb declensions (in French, Russian, or Latin) with different analogical patterns and the "anomalous" verbs which are outside the "normal" patterns.

Of course, there is a lot of speculation in those ideas, but we know that early hominids were social animals; that early humans developed genetic mutations (such as the $FOXP_2$ gene) allowing the evolution of the brain pathways needed to support language; and we know that human natural language is massively more complex than the communication of our nearest living relatives, the chimpanzees, which share all but 1.2% of our genetic make-up. So, the story is at least plausible as an explanation of why humans have language and chickens do not. Of course, we do not know the role of homo erectus, neanderthals, denisovans and others in the development, but they were also social animals. We also know that humans share genes (on the X chromosome) with neanderthals and denisovans through interbreeding. Presumably, mutual communication was possible between closely related hominin groups. It is unlikely that there could have been interbreeding where there was *no* communication. And, of course, the neanderthals were social creatures and around for a long time before modern humans appeared (approximately 600,000 years[12]). It seems they too had a form of the $FOXP_2$ gene.

The obvious answer to our question is that language is a cultural phenomenon for the development and maintenance of sociality, both in origin and in each individual. It exists to bind together communities for cooperation and to bind the individual into the community. Effective action and interaction in the community implies acquiring the socio-cultural norms of the community. For example, *Give me your phone number* and *I'll be there by six o'clock* respectively have the "powers" of requesting and promising because those are the norms of the English-speaking community. Communication, in all its dimensions, arises from that cultural evolution, and has

12. Or 500,000, if modern humans appeared before 200,000 years ago, as some recent finds in Morocco have suggested (Hublin *et al.* 2017).

become the major means for exploration and for constructing our sense of reality and actions in it. Despite the proliferation of language functions, are we still at the stage of early man?

Can we draw any conclusions from this "meditation"? I think we must modify our conception of language to allow for the above ideas. In particular, it is necessary to investigate individual speech acts as parts of complex interacting factors and not as isolated events involving only a speaker and a receiver. The language "system" of the individual also should not be isolated from the constant updating of verbal associations through communicational interactions or from the moment-to-moment construction of reality as we experience it. In particular, in various forms of linguistics, there has been over-emphasis on syntax isolated from other verbal associations and functions. We should consider how verbal and non-verbal communication (including signification) play a role in the construction of our sense of reality, and the processes by which our sense of reality is constantly updated. Understanding that dynamic is a research goal in which the integration of functional analyses plays a large part. We should consider the ways in which verbal means and functions develop memetically in each language, and we should put less emphasis on the individual communicator. We need to see verbal exchange as a dynamic process, rather than in its analytic/isolated parts. For each community of speakers, language is a supra-individual cultural entity which integrates individuals into a cooperative collective and to distinguish it from other communities. For the species, language is now our way of experiencing and creating reality. Communicative interactions and objectified communications are the means to that end. But that is only a starting point.

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