

THE NEED FOR OTHERS

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If we consider the earth's living creatures we are struck by one remarkable similarity between them all and one key difference. For the similarity, we note that all living things are designed on the basis of a highly conserved developmental system (phylotype, by the developmental, or 'Hox' genes) read from a universal language coded in DNA base pairs. In contrast, we note the lack of any universal means of communication between individuals of a given species, or between species. We might note from this fact that the faculty mediating human communication is remarkably different from that of other living creatures, but we should also underline the similarity between the human faculty of language and the organization of the genetic code, i.e. hierarchical, generative, recursive and virtually limitless with regards to its field of expression.

In exploring the apparition of language in the human species, it is important to distinguish between problems concerning computation, including the hardware networks underlying these capacities and problems concerning interpersonal communication at the interface between abstract internal computation and both sensory-motor and conceptual-intentional interfaces.

In order to better understand the relative rarity of the anatomical specialities of the human brain in comparison with other primates, we shall consider separately the constraints from the environment of humans.

In this paper I shall defend the position that the major constraint on the adaptation of pre-humans was social and affective, rather than rational and intellectual. The extraordinary development of one particular sense: *the sense of others*, led to the development of this amazing faculty for language which played such a large role in determining the human state.

This 'sense of others' is composed partly of the motor resonance between the self and the other; but also of the process by which we are able

to take into perspective the subjective point of view of the other. Human social cognition encompasses all cognitive processes relevant to perception/action (a process that I call *representaction*) and to the understanding of conspecifics. It is widely recognized that what distinguishes human social cognition is the human ability to understand the mind of others.

In my approach, affect precedes action/representaction, in contrast with other hypotheses which subordinate feelings, affect, passion or emotion to the action. Affective cognition is basic. The sharing of knowledge of affect is called compassion, and this capacity constitutes the necessary step for the mysterious passage from animal to man.

In the universal figuration of compassion, I identify the mysterious passage from animal to man in the giving way of the exchange of emotions to that of smiles and tears, from the interplay of hormones to that of symbols. The regions of the brain that produce a mirror-activation in response to the gestures we see in others have given us an anatomical substrate, present even in the monkey, for inter-individual communication based on the representation of hand gestures and facial expressions, amplified and extended in the case of man to the dimensions of language. However this neurological basis can only partially account for the sharing of interior processes between two beings. Language can only be addressed usefully to a listener who is already present in the interior of the speaker.

In my presentation I shall rapidly consider the behavioral constraints of the adaptative corporal responses which have led to the development of the communication of affect as it is this latter that gives a profound sense to human language. It is surprising how small the mutations and changes are that have been necessary to lead to such an amazing transformation, in the animal nature of man i.e. from a neurophysiological aspect spindle cells in the frontal cortex versus mirror neurons, and genetically speaking the expression of the gene FoxP2.

In the final part I shall focus my presentation on the functions of language.

Buhler, one of the great psychologists of the Gestalt, attributes three functions to language as a communication instrument: a) *the expressive function* – language serves to express the emotions or the thoughts of the speaker; b) *the injunctive function, signaling or calling attention* – here language serves to provoke certain reactions in the listener; c) *the descriptive function* – language serves here to describe the state of things. According to Buhler, the first two functions are common to both animal and human languages whereas the descriptive function is exclusive to human lan-

guage. Popper attributes a fourth function to human language – *the argumentative function*, which constitutes the basis of critical thought. I would like to add a fifth function: *the compassionate function*, which I shall develop separately.

We can wonder at the specifically human nature of the *descriptive function*, as described by Bühler. The observation of vervet monkeys shows that they react to the sound of calls emitted through loudspeakers just as if they had heard a real predator. For instance if they hear the sound of an alarm call signaling the presence of an eagle, they scrutinize the sky before going to hide in bushes. It looks exactly as if the signal had provoked the representation corresponding to the description of a given type of predator. Is it not possible in this case to talk of words: arbitrary sounds with *a referential content*? According to Hauser, the alarm system of the grivet monkey has at least three properties in common with human words. Firstly the relationship between the sounds and the referential content is arbitrary: the cry signifying ‘eagle’ does not at all resemble the cry of an eagle. Secondly, the brain does not determine the class of objects or events associated with a given signal; it acquires the association from experience. Baby vervets start by giving out imperfect signals and making mistakes; at the same time they react wrongly to the signals of others. Vervets living in Nairobi where leopards don’t exist use the leopard warning call to designate other large terrestrial predators like the dog. Thirdly, the vervet understands what the call is referring to without seeing either the caller or the event: he understands the sense of the call. Is this rudimentary semantics? The question remains.

The argumentative function of language described by Karl Popper belongs to man alone. He excels in convincing the next man, in ‘instrumentalising’ him to make him change his mind and to obtain his subscription to a point of view. I would like to advance the hypothesis that language is in fact a tool that serves to manipulate other human beings. A tool is an object used to act on the world and the physical objects of the world. Animals have been known to use pieces of straw, sticks or stones as a means to an end; man has acquired the capacity to articulate two or three objects in order to make a composite engine for a predetermined use: a flint at the end of a stick to make a lance; feathers at the other end to obtain an arrow to throw at the enemy or prey; a carved stone attached by weaved grasses to the end of a piece of wood to make an axe to shape the woodwork for a dwelling; and so on right up to the so-called weapons of mass destruction whose only use is to be turned against the species.

Human language obeys the same principles. The word is a tool constructed from basic elements. By articulating fragments of sense it can address arguments to another person in order to convince them to act in a coordinated way. But the *compassionate function* is probably the most essential function of human language. By language and the sharing of emotions, man/woman accedes to the 'being' of the other, and thus by a series of mirror reflections to his/her own being, otherwise called self-conscience. This is what confers the statute of human *being*; the second birth of the individual.

In this way human language shows itself for what it fundamentally is: the sharing with others of '*representations*' and the passions that they convey.

Talking is an act of compassion. The Word is the beginning of man in the image of the great Other who was made man.