

The “political” brain: Marxian presuppositions in Vygotsky’s psychology.

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Abstract Many psychological theories have analyzed cognitive processes such as perception and reasoning, based on the methodological individualism. However those theories have not provided an explanation of the complex social behaviors characterizing the Homo sapiens specie’s life. Vygotsky, differently to other contemporary psychologists, recognized the role of the social relations on explaining the human cognition. My aim is to investigate why Vygotsky was able to provide a psychological theory strongly linked to the social context. The main hypothesis is that Vygotsky founded his theory on the Marxian anthropology, which primarily focused on the economical and political forms of life. This linkage enabled Vygotsky to develop a psychological theory that can explain the complexity of social and political life by theorizing the concept of “political” brain, which is open to incorporate the “political” dimension.

Keywords: Vygotsky, Marx, psychology, political paradigm, brain, culturalism.

0. Introduction.

Psychological and political discourse seem to be interwoven, so that we can find out a psychological model in the background of many political theories. Almost all philosophers from Plato to Aristotle, from Hobbes to Smith, from Hegel to Marx have linked their political theory to a particular conception about the human nature, in which psychology plays a key role. Let’s take for instance Hobbes. *The Leviatan*, the most important political work of Hobbes, starts with an accurate anthropological and psychological analysis about sense, imagination, thought and language.

Even in contemporary philosophy we can find something similar. For instance in Chomsky a cognitive model focused on psychological individualism is connected in some way to anarchist political conception.(CHOMSKY 1970/2003; 2005)

Vygotsky is not an exception. It’s not a case that the founder of the cultural-historical psychology lived in the first years of the Bolshevik revolution, where it was undertaken the political attempt to generate the «new man», the «total communist man»¹. This situation and the influence of authors like Marx, Engels and Hegel played a important role in order to understand Vygotsky’s theory (LANGFORD 2005).

¹ This attempt will fail immediately with the real process in the Russian communism that will degenerate in few years in a dictatorship of one man.

To the relationship between psychology and politics, where psychology seems to represent the foundation and the justification of a political model, so that we could call this vertical relation², corresponds another kind of relationship, that we could define horizontal³, where psychology finds an important field test in what we might call “political” paradigm: how can we explain the complexity of the social organized human life through a psychological individual theory?

With “political” paradigm I mean a set of species-unique behavior that plays a key role in order to explain individual psychology. In this sense the term “political” is referred and used in the Aristotelian perspective of *zoon politikon*, that is, an anthropological determination according to the idea that we can’t understand the individual without reference to the community. Why we use the term “political” rather than “social”? For two main reasons; first, the term “social” is abused, second, the term “political” points rather than to the social nature of species *Homo sapiens*, to the consequence that the recognition of this nature involves (CIMATTI 2011b).

The recognition of the horizontal link between psychology and politics put a question: is a psychological theory, that studies the cognitive systems by which individual operates in the world and stays in relation with the world, able to reconcile itself with the complexity life of the *Homo sapiens* species? The most important psychological models seem to ignore what I call “political” paradigm, focusing exclusively on intrapsychic processes.

Conversely Vygotsky’s psychology seems to have the advantage to explain how an individual brain evolves to the point to incorporate the historical context within which it develops. In this way context is not secondary but central to access the individual mind. How is Vygotskian explanation able to do this?

My answer sends back to the recognition of Marxian heritage in Vygotskian psychology. This heritage is evident with reference to some aspects: i) the cultural context inside which Vygotsky worked, ii) the many references to Marx presented in Vygotsky’s works, iii) the coincidence of many philosophical thesis.

For this reason we will try to understand if there is a relationship between Vygotsky’s psychology and Marx’s political theory and what it involves. My aim is to show how in Vygotsky, even if he did not present *in strictu sensu* a political theory, the psychological theory is interwoven with a political model, that is Marxist communism. This linkage enables Vygotsky to develop a psychological theory that can explain the complexity of social political life so that we could say that in foreground there is not a “psychological” brain, but a “political” one, by which I intend a brain opened to incorporate the “political” dimension.

This model tries not only to explain cognitive presupposes that allow to have a social behavior, but also underlines how these cognitive mechanisms are re-organized starting from a social organization. This perspective is based on a dialectical relation between individual cognition and social processes, that is, if biology allows to operate in a social way, the social operation has a consequence on biology.

I precise immediately that referring to “Communism” I don’t want to intend the Russian model, that could be seen like an anti-Communism model (as Vygotskian model will show), with Communism I refer to the theoretical conception of Marx, a

² With vertical I want mean that a political theory try to justify itself though a recourse to a psychology, in this sense the direction is vertical because one field (the psychology) has to justify and establish another.

³ With horizontal I want mean that a “political” behavior is one of the fields test for a psychology.

political model that didn't propose a determined model to realize, but that have to be understood like a critic of the existent model (MUSTO 2011).

Summarizing, I will start from the recognition of the contamination between political and psychological spheres, and first I will try to describe some psychological models that would be not able to explain the complexity of social life, in this way I will introduce the necessity of the "political paradigm" in psychology; then I will show, on one hand, the Marxists assumptions of Vygostky's psychology, on the other, I will show what I intend with "political brain" and how it could be possible that social relations are part of the mind. At least I will draw conclusion of consequence of the relation between psychology and political theory. My thesis can be so summarized: Vygoskian psychological model would avoid reductionism of other theories because it would presuppose Marx's analysis of society based on a precise anthropology. This linkage allows Vygotsky, on one hand, to explain the relation between social environment and individual organism, on the other, would bring psychology to collide with sociology.

1. Psychological and political theories

The complex relationship between psychology and politics could be analyzed from two different perspectives. How already said, in the first place, we have a vertical relation, where each political model sends back to a psychological theory; in the second place, we find a horizontal relation in which psychology tries to explain human cognitive mechanism without ignoring the social complex behavior, that is, the result of these mechanisms. A kind of behavior that we could define species-unique is the "political behavior" (TOMASELLO 2010:18-19), a behavior that seems to imply also other complex forms, like economical and institutional forms. Recently this link between different orders of discourse, left in the past on background, seems to be actual as the works of Searle and Tomasello showed.

Let us analyze briefly these positions. Searle's intent is to bring in light the relation between philosophy of language, mind and social institutions. His critic is against those political models, in particular the contractualism, that would have not analyzed nature of institutional forms in reference with language (and intentionality) (SEARLE 2010: 80).

This attempt of reconcile philosophy of mind with social ontology has been shared by Tomasello, who is interested to understand the difference between *Homo sapiens* and chimpanzee's cognition.

Searle's (1995) book *The Construction of Social Reality* is one of the great works of the late 20th-century philosophy. Like all great philosophical works, it provides fresh new insights and perspectives on phenomena that lie right before our eyes every minute of every day. After Searle's work, in our view, no right-minded thinker need take seriously philosophical theories that ignore the fundamentally social nature of many of the most important aspects of our daily lives. (TOMASELLO 2007: 113)

Tomasello's conclusion is that: a philosophical thesis that doesn't consider everyday aspects of our life is not a good philosophical thesis. This means, that a cognitive theory that isn't interested to social nature of the major object our life is not a good cognitive theory.

The polemic, like in Searle, seems to be directed against Cognitive Science approach and in particular against the so called computational-representational model and its variants. (SEARLE 1980)

For Cognitivism, to explain how the mind works, means to explain only mechanism like perception and reasoning. This model seems to presuppose that these cognitive mechanisms are separated from the situation within which they occur. Standard model is that of the “modular mind”, according to which, each specific cognitive function is realized by a singular component of the brain. This last is understood like a computer that has the task to elaborate informations coming from the external world. In order to do it, this system has to translate these external data in a particular language, so called *mentalese*, the language of thought. The trouble is to understand if this model is able to explain the complexity of human mind.

Social ontology appears a determined field in this critic, so that we could ask: how can a computational model explain something like arts, money, state?

The objection often made to this critic is that Cognitive Sciences are not interested on these aspects. But it appears not a satisfying answer, and according to Fodor:

(...) what we've found out about global cognition is mainly that it is different from the local kind in all three of these respects; and that, because it is, we deeply do not understand it. Since the mental processes thus afflicted with globality apparently include some of the ones that are most characteristic of human cognition, I'm on balance not inclined to celebrate how much we have so far learned about how our minds work. The bottom line will be that the current situation in cognitive science is light years from being satisfactory. Perhaps somebody will fix it eventually; but not, I should think, in the foreseeable future, and not with the tools that we currently have in hand (FODOR 2001:5)

Moreover the attempt to council a psychological model with some political questions is not foreign in Cognitivism. For instance Chomsky (1988) has proposed an argumentation in defense of the human right in reference to its psychological individualism applied to the ethics.

The environment is relevant, as in the case of language, vision, and so on; thus we can find individual and cultural divergence. But there is surely a common basis, rooted in our nature (...) not long ago, slavery was considered legitimate, even estimable (...) as civilization progressed, it came to be understood that slavery is an infringement on essential human rights. (...)this is a change of moral consciousness, probably irrevocable (...) this is not merely a change but an advance, an advance toward understanding of our own nature and the moral ethical principles that derive from it. (CHOMSKY 1988: p. 153-154).

The matter is to understand in what kind of sense should be used the term “politic”. If with “political” it is understood only a comparison between political parties or political perspectives then the relationship with psychology seems to refer only to an ideological dimension. If with “political” we intend an anthropological category as in Aristotelian view of the *zoon politikon* or in Heideggerian sense of *Dasein*, that is, a human being situated in a world and so linked to a intersubjective environment, the perspective is different. The question is: is it possible to have a satisfying psychological theory abstracting from the social-historical context within which daily are we situated in?

According to Tomasello, political forms could be found in other animals species too. Some studies show that between animals exist forms of alliance (TOMASELLO 2010, HARCOURT & DE WAAL 1992) or form of policing with the intent to guarantee peace, but the difference compared to *Homo sapiens* species is clear. The difference can be so summarized:

Human culture is clearly different. The challenge from an evolutionary perspective is to specify the nature of this difference. The proposal here is that non-human primate (and other animal) culture is essentially individualistic, or maybe even exploitative. (TOMASELLO 2010: 5)

In Searle institutional forms refer to the cognitive mechanisms in common with the other animal reign, but only *Homo sapiens* species would be able to create institutional forms *in strictu sensu* thanks to a unique-species dispositive: language. Through language humans beings would constitute social entity like money, marriages and states (SERLE 1995; 2010).

At this point we have to underline a problem inside the reflections of the authors we have mentioned, Searle and Tomasello.

Although they have developed an analysis of the institutional forms in their cognitive models, they seem to lack of an aspect that is fundamental. They have analyzed the logical form of the institutional realities in opposition to their real contents. In other words, they have used these concepts but they haven't considered their meanings and their consequence if applied to a psychological theory. To say that institutional reality are unique-species forms bring entities like "money", "power", "ideology" and "work" at the centre of a psychological analyze, but these are not neutral categories and they are the object of the social sciences.

From this point of view psychology that has its focus on the singular brain results insufficient. To recognize the relationship between mind and work, for instance, it is necessary to involve an accurate analysis of a so complex category like that of "work" (SEVE 1969).

Psychology and sociology are interwoven, even if this joint could appear dangerous in order to indentify the object of each singular science.

According to me, the problem is the recognition of a dualism that would seem to characterize human nature and at last the individual, on one hand, like an autonomous subject and, on the other hand, like part of a society. The problem is the fracture between individual and society (ESPOSITO 2006).

The recognition of the influence of the environment on individual's cognitive structures puts in the foreground the problem of what occurs inside human environment in order to understand human psychology.

In summary we could say, that while cognitive models haven't referred to the "political paradigm", other models like the one proposed by Searle and Tomasello, seems to offer more answers. But these two philosophers don't seem to lead their thesis to the extreme consequences, they have focused only on the analysis of institutions like a creation or a result of an agreement between more or less aware individuals in a community. According to me, the analysis of these political institutions sends back into the field of the social relationships, in the meetings-collision between individuals with the consequences that follow.

A model that seems to offer good answer is the Vygotskian model.

2. Marx and Vygotsky.

According to me, Vygotskian model seems to offer an adequate answer because it presupposes the recognition of Marxian sociological analysis. Even if Marx was not interested in psychology he has offered an important key in order to understand the relation between psychology and sociology. It's not our aim to reconstruct the exact relation between Marx and Vygotsky, what Vygotsky has read, Vygotskian use of the citations, the singular references, our aim is restricted to the few points in which Marx's heritage seems to be evident in Vygotsky. An heritage that allows Vygotsky to conciliate the aspects, whose we have discussed in the previous paragraph, and so to offer a psychological model able to explain not only cognitive systems but also the relation between the organism and its environment characterized by individuals that live in a society.

These aspects are so important that we will be forced to restrict the aspects that could interest us.

Marx didn't work on psychology, but his critic of capitalistic society is based on a determined philosophical anthropology, inside which the psychology has a particular connotation.

We see how the history of *industry* and the established *objective* existence of industry are the *open book of man's essential powers*, the perceptibly existing human *psychology*. Hitherto this was not conceived in its connection with man's *essential being*, but only in an external relation of utility (...) A *psychology* for which this book, the part of history existing in the most perceptible and accessible form, remains a closed book, cannot become a genuine, comprehensive and *real* science. (MARX 1844/1975: p. 304)

Marx and Marxists don't reduce psychology to what occur in external world (so how Chomsky criticizes the Marxists 1988: p. 162), but claim that a psychology, that doesn't refer to the environment inside which mind is situated, is not able to explain the real human psychology.

This thesis sends back to a precious gnoseology that is in opposition to the dogmatist contraposition between subject and object presented for instance in the *Critic of pure reason* of Kant, and that has different common aspects with classical Cognitivism.

Cognitivism focuses on the unidirectional relation between input and output, where a central system is able to receive data through the sense organs from the external world re-elaborating which produce a answer (output).

In contrast, Marxian theory of knowledge brings in the foreground the dialectical relation between subject and object. According to this model, there isn't, on one hand, the perceiving subject and, on the other, the object perceived, but the subject acting practically on the object modifies it and he is modified by it. With Marx, Vygotsky criticizes Kantian *a-priori* as an innate cognitive structure.

We discussed the indirect nature of psychological operations as a specific feature of the structure of higher psychological functions. It would be a great mistake, however, to believe that this process appears in a purely logical way, that it is invented and discovered by the child in the form of a lightning-quick guess (a so-called 'aha' reaction) (...) It would be equally wrong to believe that the symbolic attitude to some stimuli is reached intuitively by the child, derived as it were from the depths of the child's own spirit, or that symbolization is the primary and further irreducible Kantian *facultas signatrix*, from the beginning a part of human consciousness capable of creating and comprehending symbols.

Both these points of view – the intellectual and the intuitive – in essence metaphysically dispose of the question of the genesis of symbolic activity since, for one of them, the higher psychological functions are given previous to any experience, as if they were inherent to consciousness and only waiting for an opportunity to manifest themselves upon meeting with the empiric perception of things. This point of view leads inevitably to an *a priori* conception of higher psychological functions (VYGOTSKY 1994, p. 147)

This means that in order to understand how mind operates, we can't reduce our attention only on cognitive intrapsychic processes, that is, on the pre-determined structure of the organism. On the contrary, we have to focus on what occurs around the singular mind and how the environment modifies these processes.

This perspective, that for a long time was not considered by Cognitivism, has represented the central point of Vygotsky's psychology.

This model is not outmoded if we consider the recent works of Andy Clark, that more or less indirectly sends back to the Vygotskian paradigm. In the last years some studies have brought a radical reconsideration inside the Cognitive Sciences, that has involved the difference between the classical Cognitivism and the second generation of Cognitive Sciences (PIATTELLI-PALMARINI 2008). We can find a relation between Vygotsky's psychology and the second generation, but according to me, it is difficult to find a point of union between Vygotsky and the computational theory of mind how has tried to do Frawley, speaking of a socio-computationalism, an hybrid that come to misunderstand both perspectives (1997).

The goal of Clark is to show how we can't leave out of consideration the use of the external instruments in order to explain the functioning of a singular mind. We can use an example: with the introduction of the calculator mind realizes cognitive process of calculating, that before it had to carry out mentally, through an external object. In this sense, we could say, that mind is extended (CLARK 1998), since instruments are part of a singular brain. But let us ask ourselves, as far as arrive these boundaries?

Nevertheless *Theory of Extended Mind* doesn't recognize the real consequence of Vygotsky's assumption, that sends back to the Marxian background. Marxian idea, according to which the history is the «opened book of psychology», underlines the necessity of psychology not to study only the internal mechanisms, but especially the external processes.

In this sense the references to “industry” and to human skill of “producing” through the work the objects of its needs are important, where with “work” we have to understand an activity with a purpose to reach thanks to a project (QUANTE 2009). The problem is a theory of consciousness and intentionality, that is, the way in which human consciousness can be directed on some objects and how human action is organized. Marx doesn't analyze thoroughly this problem, but it's interesting a citation in *The German Ideology*.

Only now, after having considered four moments, four aspects of the primary historical relationships, do we find that man also possesses “consciousness,” but, even so, not inherent, not “pure” consciousness. From the start the “spirit” is afflicted with the curse of being “burdened” with matter, which here makes its appearance in the form of agitated layers of air, sounds, in short, of language. Language is as old as consciousness, language is practical consciousness that exists also for other men, and for that reason alone it really exists for me personally as well; language, like consciousness, only arises from the need, the

necessity, of intercourse with other men. Where there exists a relationship, it exists for me: the animal does not enter into “relations” with anything, it does not enter into any relation at all. For the animal, its relation to others does not exist as a relation. Consciousness is, therefore, from the very beginning a social product, and remains so as long as men exist at all. (MARX 1975: 36)

In this passage some fundamental aspects of Marxian anthropology are expressed: the materialism and the social dimension that would characterize human “brain”.

Moreover we could read this citation in relation to the famous *VI Thesis on Feuerbach* where Marx claims «das menschliche Wesen (...) ist es das ensemble der gesellschaftlichen Verhältnisse», a controversial thesis in reference to the translation of the German «das menschliche Wesen». In the Sixties and Seventies a French debate about how to translate this Marxian German expression has developed; this debate had protagonists like Sevé, Schaff and Althusser.

While Schaff translated the expression «das menschliche Wesen» like «human individual», Sevé defended the translation «human essence», Althusser agreed with Sevé, but he thought that it was a non-sense. (SÈVE, SCHAFF 1975)

VI Thesis should be read in reference to the passage of the *Manuscript* where Marx speaks about psychology, where the accent is not on what happens into singular brain but outside it.

The anthropological problem on human essence is translated in philosophy of mind through the question about the relation between mind and social environment, between naturalism and culturalism. Is the essence of mind reducible to what is contained in the singular mind? Or an important role should be attributed to the environment into which this mind develops itself? The answer has many psychological implications, for this reason this question could not to be evaded.

If the *essence* refers to what happens into a singular brain, then we will have to focus our attention on what happens inside brain. But the external world is not only a context that could be reduced to a world to perceive, the external world presupposes not only objects but even other subjects and their actions on the world and indirectly on me. In this way the psychological question sends back not only on an individual perspective, but on a pluralistic perspective (CIMATTI 2011a). The human environment is not something that remains independent from us, but it is intrinsically interwoven with our intentionality.

Marxian reference to “industry” is in relation with the production’s relations, that characterize the human work as social work. This last is not only a work realized into a group (otherwise we would have work in other animal species too), but organized work that uses instruments. Instruments, according to Marx, are objects in which it is embodied a tradition, a cultural heritage that explains how to use object in order to make another object.

The fundamental aspects of the citation presented in *The German Ideology* are three: i) the link between the consciousness/ thinking and language, ii) the relation between language and need of communication, iii) social dimension of consciousness.

In 1934 was published posthumous *Thought and language* written by Vygotsky, where it is presented a thesis, according to which, the process of thinking and language has two different origins, but in a moment of the phylogenetic history of human species they meet each other, generating the verbal thought. In an evolutionary perspective the animal thought would become human when it meets the language (CIMATTI 2002). Against Cartesian reductionism, that deny thought to the

animals, Vygotsky recognizes thought in animals, but the difference between the human thought and the animal one is in reference to language. As regards to ii) we can still refer to *Thought and language*.

The primary function of speech is communication, social intercourse.(...) That understanding between minds is impossible without some mediating expression is an axiom for scientific psychology. In the absence of a system of signs, linguistic or other, only the most primitive and limited type of communication is possible.(...) Rational, intentional conveying of experience and thought to others requires a mediating system, the prototype of which is human speech born of the need of intercourse during work. (VYGOTSKY 1962: p. 6).

Even here a very important role for the genesis of language is the need of communication for entering in relation with the others. Marx doesn't speak about a metaphysical relation, but about a practical and concrete one; the necessity of language is determined by the purpose to reproduce the means of subsistence. This need generates communication (TOMASELLO 2008), and for this reason thought would be revolutionized. Language would be not only an instrument in order to communicate our individual and private thoughts but the field into which individual thought will become intrinsically social.

This opens to a new way of thinking mind characterized by the social dimension and where brain is opened to the social relations.

But exactly what does it mean that the brain is social? The term "social" is ambiguous, we could observe, because not only human species is characterized by social behavior forms. Let us analyze the meaning of this term in Vygotskian psychology, from an evolutionary perspective, that allows us to understand how Vygotsky translates Marxian assumptions into a psychological discourse.

The brain of «zoon politikon» between natural and cultural evolution.

Vygotsky recognizes with Marx, on one hand, the role of "work" like the field in which the contraposition between subject and object is avoided, on the other, the role of a complex society beyond the subject that influences its individual cognitive process. Vygotsky claims:

I do not possess only those connections that have been formed in my personal experience between unconditional reflexes and particular elements of the environment, but I also have a multitude of connections that were established in the experience of other people. If I know the Sahara and Mars although I have never travelled outside my country and have never looked into a telescope, obviously the origin of this experience is due to the experience of other people who have travelled to the Sahara and have looked into a telescope. It is just as obvious that animals have no such experience. Let us call this the social component of our behavior. (VYGOTSKY 1999: 68)

In accordance with Marxian analysis, Vygotsky underlines the social component of the behavior. This, in a way, let us to consider the human nature not like something fixed and pre-established but in constant development. This doesn't mean that the human species is not characterized by a specific difference in comparison with other species, but this means that this determination opens to an indetermination (VIRNO 2003). We are in front of the problem of the relation between ontogeny and

phylogeny in relation to language. Vygotskian idea about evolution could help us to better understand the link between the Marxian assumption of the “industry” and the practical-social field into which subject operates, arriving to speak of «a opened book of psychology» (MARX 1844/1975 :304).

In a work of 1939 *The socialist alteration of man* Vygotsky states:

there are strong reasons to suppose that the biological human type has changed remarkably little during the course of the historical development of man. It is not, of course, that biological evolution has come to a stop and that the species ‘man’ is a stable, unchangeable, constant quantity, but rather that the basic laws and the essential factors which direct the process of biological evolution have receded to the background and have either completely fallen away or have become a reduced or sub-dominant part of new and more complex laws governing human social development.

Indeed, the struggle for existence and natural selection, the two driving forces of biological evolution within the animal world, lose their decisive importance as soon as we pass on to the historical development of man. New laws, which regulate the course of human history and which cover the entire process of the material and mental development of human society, now take their place. (VYGOTSKY 1930: p.175)

In this passage Vygotsky refers to some aspects inside the Darwinian theory. In fact, he recognizes the importance of biology in the evolutionistic theory, like Marx, the man represents the ring of a chain and chimpanzees are his closest ancestors. According to Vygotsky, biological evolution with the appearance of historical and social development seems to work under different laws of develop (cultural type), so that the fight for the existence and the natural selection would lose their importance respect to that they had in the animal world.

Into biological evolution would be grafted a social-cultural evolution governed by higher psychological laws. According to Vygotsky, if biological evolution is accepted, this don’t happen for cultural evolutionism. We should do a distinction between two processes:

The basic and all-determining difference between this process and the evolutionary process must be the circumstance that development of higher mental functions occurs with a change in the biological type of man, while change in biological type is the base of the evolutionary type of development. (...) in a wholly different type of adaptation in man, the development of his artificial organs, tools, and not a change in the organs and structure of the body, is of primary importance. (VYGOTSKY 1994: 16)

The difficulty in order to understand the specificity of the higher psychological functions of men compared to animals sends back to the difficulty in understanding the relationship between the neurological and the psychological dimension. The problem could be so summarized: if the organic structure is the same in all men, how is it possible to explain their different behavior?

Two of its main errors are, first, in the attempt to find a base in the laws of individual psychology (lawas of association) in elucidating the historical development of behavior and thinking (ignoring the social nature of this process) and, second, in an unsupported blindness to those deep changes in

higher mental functions that actually create the content of the cultural development of behavior (*Ibidem.*: 17).

Darwinian theory of evolution is read through the theory of another evolutionist, Lamarck. According to Vygotsky, if Darwin underlines the natural selection, Lamarck brought in foreground the transformations happening to the phenotype level, because they could be relevant for survivor of determined individuals. The classical example that Lamarck proposes is that of the giraffe that in order to eat leaves on the highest branches ended with enlarging the length of the neck. This difference or mutation of the phenotype level could be inherited by the genotype level. If the lamarkian model was rejected by scientific progresses in biological evolution, Vygotsky acquires it into cultural evolutionism in order to explain differences form different generations or races, even if it is recognized a common biological determination. The result of this psychological re-interpretation of evolutionism carries a different way to understand human mind:

Culture creates special form of behavior, it modifies the ativity of mental functions, it constructs new superstructures in the developing system of human behavior. (...) in the process of historical development, social man changes the methods and devices of his behavior, transforms natural instincts and functions, and develops and creates new forms of behavior – specially cultural. (*Ibidem.*: 18)

The turn is evident: through individual psychology we arrive to the social man. Vygotskian explanation could be so summarized: if the biological type remains unchanged, that is, if the elementary processes are always the same, what changes and produces an unique-species difference is the use of social instrument that change and transform these elementary processes on social basis «è difficile aspettarsi che l'uso degli strumenti non conduca alla formazione di nuove funzioni» (*Ibidem.* p. 37).

This discourse is in continuity with that of Marx and involves a turn into psychology: in order to understand human mind we do not have to start from the individual dimension, starting from which we could only individuate some differences between animal and human cognition in reference to biological evolutionism, but from a social dimension that characterize the human mind. This does not mean that psychology does not take an interest in the individual mind, but, in order to understand this, it is necessary to refer to the original relationship between the individual mind and social environment. Is not a case that Vygotsky, like Luria, is interested in Psychoanalysis that studies the influence of social relations for the consciousness (VAN DER VEER 1991).

These elements bring us to the analysis of singular mind, because if these are phylogenetics processes, then what we have to reset is the problem of the ontogeny of the psychological forms.

(...) the idea that this new form of adaptation, which lies at the base of all historical human life, would be impossibile without new forms of behavior, without this basic mechanism for equilibrating the organism with the environment.

The new forms of relating to the environment which arise in the presence of certain biological prerequisites, but themeselves grow beyond the limits of

biology, could not bring to life a principally different, qualitatively distinct, differently organized system of behavior (Ibidem: 18-19).

To understand the phylogenetic level, according to Vygotsky, we have not only to resort to a biological dimension, but we have to refer to a dimension that overcomes the limitations of biology and that leads to a new form of behavior and to a new cognitive systems. This new system sends back to a biological basis (and for this reason we remain into an attempt to naturalize mind), but what is created and generated is something that can't be explained only in biological terms.

In order to understand these complex forms of behaviors is not enough a study that starts an individual psychology, nor that attributes petrified psychological forms to the child, sending back to an abstract process of maturation developed into botany. In the child the correlation between the biological and cultural dimension is already at the beginning.

At the same time, cultural development acquires a completely unique and incomparable character since it occurs simultaneously and is merged with organic maturation, since its carrier is the growing, changing, maturing organism of the child. The development of the speech in the child way serve as a good example of such a merging of two plans of development – the natural and the cultural. (Ibidem: 20)

It is interesting how in this case we could suppose that Vygotsky would have answered to Chomsky's provocation, according to which, «humans are designed to grow arms and legs, not wings» (CHOMSKY 1998:150); in reality this assumption does not take into account the fact, that if men do not have wings, they could, unlike other species, build them.

Here we have the reference to the artificial prosthesis in order to integrate our organism in relation to Marx' assumption, according to which the inorganic nature become part of the men's body. But this human possibility sends back to a characteristic of human mind, that realized itself not like an intrinsically property, but like a way of operating.

3. From the fight for the existence and the natural selection to the political fight of the historical time.

We have tried to present the Vygotskian thematization about the problem of the evolutionism, where a very important role is played by cultural dimension and then by language. This has allowed us to delimit the term “social” applied to human brain. The human brain is a social brain because it is able to restructure itself starting from the environment in which it operates.

In an evolutionary perspective this means that during the phylogeny the human brain has embodied some external structures, so that in ontogeny the individual brain expects and needs external infrastructure, that is, the relationship with others in order to develop to the full. This aspect has been studied more closely than Vygotsky did by Luria, who attempted to understand how a physical and material structure as the cerebral cortex can include structures of the external world. The explanation, on which we can not dwell further on, is the recognition of the frontal lobes as the so-called social history lobes.

Now we have to try to do another step that brings us to the theory of society and to the political dimension in order to understand the link between these two different fields in Vygotsky's psychology.

The step we made is always under the shadow of Marx:

Going further, we might say that all higher functions were formed not in biology, not in the history of pure phylogenesis, but that the mechanism itself that is the basis of higher functions is a copy from the social. All higher mental functions are the essence of internalized relations of a social order, a basis for the social structure of the individual. Their composition, genetic structure, method of action – in a word, their entire nature – is social; even in being transformed into mental processes, they remain quasisocial. Man as an individual maintains the functions of socializing (Ibidem: 106).

Here there is a direct reference to Marx:

Changing the well-known thesis of Marx, we could say that the mental nature of man represents the totality of social relations internalized and made into functions of the individual and forms of his structure. We do not want to say that this is specially the meaning of the thesis of Marx, but we see in this thesis the most complete expression of everything to which our history of cultural development leads (Ivi).

We could understand this passage like a paraphrase of the Marxian conception of «das menschliche Wesen», where human essence is the totality of the production relations. Even according to Vygotsky, human nature, that is, biology is characterized by the possibility to incorporate the social relations that occur in the external world. But what does here “social” exactly mean?

In biology the use of “social” appears neutral. Human species is a social species like other species, so the unique difference would be in the level of this sociality. In political theory “social” is not a neutral category because it is linked with a conflicting situation that is interwoven with language in different ways like ideology, media's control *et cetera*. According to me, Vygotsky's psychology allows to unify these different aspects of “social”, so that the term should be understood in a stronger way than that which is usually understood in biology, and for this reason we use the term “political”.

Recognition of social nature of human relations has in Marx an evident political connotation. From these relations of production, through which individuals relate to each other in the reproduction of their existence, begins the fight and the attempt to change these relations. Vygotsky takes a psychological perspective, however if we follow his assumptions, we will notice that the conclusion is that to change the productive relations means change psychology, that is, individual mind. It is not a secondary consideration that Vygotsky's psychology is characterized with reference to other kinds of psychologies, following a strong educational perspective.

(...) higher mental functions, for example, the function of the word, were formerly separated and distributed among people and then became functions of the individual himself. In behavior, understood as individual behavior, it would have been impossible to expect anything similar (Ibidem: 106).

This whole constellation of concepts revolve around the central idea, that is expressed in the below assumption «in general, we could say that the relations between higher mental functions were at one time real relations between people. I relate to myself in the same way that people relate to me» (Ibidem: 103).

This analysis is based on the fundamental psychological process used by Vygotsky in order to understand how a child begins to speak. A model that, instead of referring to the intersubjective model, so fashionable today, radicalizes it. Intersubjectivity is the relation between child and his mother, a relation between *inter* subjects, but when a child acquires language, though a process of sociogenesis, this model is not sufficient, because the intersubjective relations become intra-subjective. This means that now child learn to use a social way in order to direct their own attention. In this way the inner speech, the private speech, is only the result of an intrapsychological interaction, by which the child learn to speak to himself before the other speak to him. (LIU HUA 2011). This aspect that is more linked with the phylogenesis (because the sociogenesis is now part of the biology of *Homo sapiens* species), has an important repercussion in ontogenesis, where the psychological aspects are interwoven with social life, as the interests of Luria and Vygotsky for the psychoanalysis showed.

It's not difficult to suppose the political consequence of this conception, but we have to observe that this psychology allows to analyze how the “political paradigm” is a part of the biology of *Homo sapiens*.

In this model a very important role is played by the category of “work” like the field in which social relations are constituted and structured. Shortly, but in a decisive way, Vygotsky presents a little theory of recognition:

Thus, imitation and separation of functions among people is the basic mechanism of modification and transformation of the function of the individual himself. If we consider the initial forms of work activity, then we see that the function of fulfilling and the function of directing are separated there. An important step in the evolution of work is the following: what the supervisor does and what the underling does is united in one person. This, as we shall see below, is the basic mechanism of volutary attention and work (Ibidem: 104).

The enforcement action that direct goals is the motors of individual action, so that other act in conformity my will. In this context language, arisen by the need of communication and the need to impose our will on the others, forcing them to follow our intentions, become the instrument of liberty through which an individual can direct his attention singularly.

A direction, that is nevertheless always mediated by a social instrument (a object or a word) and so eccentric respect to singular individuality. History is the field of battle of social action, into occur the fight for the recognition, that is, a political fight. In this way the recognition of the role of social relations not only explains the “social” nature of individual psychology, but it underlines the consequence of this sociality, that is, the political dimension.

So we could say, that the difference between human beings and other species is not only sociality, with the problem and the misplaced question to find the right percentage of human “sociality” compared to other species, but the meaning that the term “sociality” takes in the human case, that is, a “political” dimension.

4. Conclusion.

We are in front of a fundamental assumption: the higher psychological functions, that is, unique-species cognitive processes of *Homo sapiens* species, are old social relations that during the time have been introjected. This means not only that these relations are important in order to understand the individual psychology (not only the psychological content, but the mechanism through which this psychology operates too), but that the way in which these social relations are conceived will have an influence on psychology.

Vygotsky's psychology thus develops a psychological theory that is able to account for the complexities of "social" life where "social" means not only a community life among individuals belonging to the same species, but where these relationships are determined in a concrete manner, historically determined. Vygotsky can make this move because he doesn't start from individual psychology in order to explain social behavior, but he starts from "social" behavior in order to explain the individual one. This social behavior derives from Marxian analysis, where social relations are clearly understood from a political perspective.

The horizontal relation between psychology and political theory brings us to the vertical relation where psychology and political theory collides once again. This collision doesn't bring neither to the platonic "communism", where the function of each individual is predetermined and where the welfare of the subject is submitted to that of collectivity, nor to stalinian communism, where the subject is only a part, a gear of a production's system similar to that capitalism. The outcome is the recognition that the total realization of the individual, where the notion of "total" can't be determined once and for all, but which is always to be determined, and involves the possibility to embody in the singular mind the "resources of species" that are fragmented in the capitalistic's era. The communist man, in the Marxian assumption, is not a subjectivity divided between individuality and collectivity, between «I» and «we». It is the result of the recognition and the realization not only theoretically, but historical of the intersubjectivity dimension of the subjectivity. For this reason it is not enough the theoretical recognition of this intersubjectivity, but it has to be realized concretely.

Here we are in presence of a different and new way to treat the subjectivity, a conception of subjectivity that with difficulty is caught in Marx but that, according to me, had an explanation in reference to the current area that is now called philosophy of mind.

In conclusion, we could say that the political paradigm into philosophy of mind represents the point of union between the vertical and horizontal relation between psychology and political theory. Vygotsky's psychology can't be reduced to a psychology that manipulates the anthropogenic process, and that represents the justification of a political model. The main problem in Vygotsky's psychology is the recognition of the anthropogenesis process like the unique-species process of *Homo sapiens* species. A process that requires a full development that, according to Marx and Vygotsky, has never been realized, because in political theory has always dominated a psychological model focused on "individual", biologically determined and characterized by the fight between the subjects.

This model carries within itself a fracture between individual and society, sociology and psychology; on one hand, it is sociological in the way to understand the relation between subject and community and on the other hand psychological in the way to understand how the mind-calculator could explain so complex forms like that expressed by "political paradigm".

Incorporating social relation into individual mind, Vygotsky's psychology seems to overcome this fracture and it offers a psychological model through which the historical-social, or political, dimension doesn't seem to be precluded to a psychological model.

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