

CEP 911 Analytical Paper 3:

Vygotsky

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**Describe Vygotsky's theory of the genesis of "higher" psychological processes. How do humans develop these psychological processes? How are they different from "elementary" psychological processes?**

Vygotsky discusses the genesis of higher psychological processes as logical in that the human, from birth, is continually using activity to shape meaning when acting in a system of social interactions (p. 30). Pertaining to the question "what makes humans characteristically human", Vygotsky (1978) depicts two overarching categories of psychological processes, those being elementary and higher. His analysis of work by Guillaume and Meyerson (1930) helped to construct the notion that humans and chimpanzees develop practical intelligence in similar fashions, that is, through physical manipulation of the immediate external world and its objects, independent of speech. To illustrate this level of practical intelligence, which may be associated with elementary psychological processes (EPP), one can imagine a situation in which a creature desires an object out of bodily reach. At the elementary level, a creature, human or animal, may use objects located within their field of visual perception to manipulate the desired object close enough to obtain. Vygotsky argues that elementary forms of psychological processes are biological in nature, meaning they develop independent of social interaction and human speech - a sign system

A tool and sign are described as independently functioning in elementary forms of psychological processing with tools manipulating the external environment and signs manipulating internalizations. Higher psychological processes (HPP) extend beyond the world of the immediate physical external environment, which may account for use of practical intelligence, into development that unifies speech (sign using) and practical activity. From this, it

is discussed that tool use becomes a vehicle for producing new behavior in that speech allows for planning (p. 25) which allows for the organization of signs (associated with objects) that result in unique use of tools or actions. In other words, HPPs are described as sociocultural as they include social interactions and cultured sign systems. Speech as a means of communication and cognitive function acts as an integral concept in the development of HPP in that the nature of what is communicated to others (externally directed or interpersonal in nature) is communicated via signs, thus, influencing how one internalizes their own speech and actions (internally directed or intrapersonal in nature). Because internalization is discussed as a characteristic specific to human development of HPP, Vygotsky argues that all HPPs are derived from human relationships (p. 57). This notion is further supported by the concept of the dialectical process which states development of HPPs are not contrived without or from within, rather as a unique product of qualitative transformations in the use of signs (p. 46).

Vygotsky elaborated upon the significance of the convergence of speech and tool by stating that in situations in which a solution is not made evident by the immediate environment, speech and action are not only both necessary but are also required to be considered as one complex psychological function (p. 25). Speech is described as occurring simultaneously with action when the convergence of the two first develops, with later stage speech separating itself as a preceding function to action, essentially, acting as means to plan (p. 28). Conversely, creatures without speech cannot plan action, meaning their use of tools is limited to the immediate environmental context (constrained by creature's perception of environment). Speech enables freedom of behavior as it relies not solely upon previous experiences, such is the experience of young humans and animals.

Vygotsky placed great emphasis on the concept of learning, particularly the processes in which human learning pulls and is shaped by development. A distinguishing feature of human learning not present in animals is the concept of the Zone of Proximal Development (ZPD) which discusses the development of learning in terms of what the child has learned, called actual developmental level, and potential development or what the child has the potential to learn with the assistance of a more capable other. The ZPD acknowledges that learning is not to be measured by what is known (retrospective) rather by a combination of what concepts have reached full maturity and which are in the process of maturing. In other words, there is a shift from the focus on the past to future learning (prospective) (p. 86). The concept of the ZPD is crucial when understanding Vygotsky's conceptualization of HPP as it illustrates the notion that animals, creatures that only develop EPP, do not experience ZPD and therefore, are not capable of intellectual development. Instead, they are only capable of mechanical mental functions in which their presence is the only object acting upon the environment (p. 88). In contrast, the human ability to experience the ZPD allows for concepts which are not fully developed to be realized to full maturation, thus, allowing for new internalizations of signs as well as use of tools which manipulate the external environment in novel ways.

**Relate his notion of “higher” psychological processes to your own experience and explain how it fits/explains that experience. Where do you stand on the role of mediators in the development of those processes?**

Of great interest to me is the exploration of if, and if so, how, the development of prominent aspects of my identity may be better understood by conversations concerning signs and tools. Particularly, my experiences with learning, playing, and recording music and its theory draw opportunities for displacement into the notion of the development of HPPs. Though the

mediators influencing the specific development and learning of things related to music surely stretch beyond the boundaries of the subject itself into several other facets of my psychological development, I will mostly hone in on music, generally, as a microcosm for understanding the role of mediators in HPP.

As previously mentioned, Vygotsky discussed the convergence of speech and action as pivotal to the development of HPP. Perhaps before words are uttered, a child may produce musical noise through action, but this stands as an elementary process until it realizes the possibility for intellectual development via unique use of tools. In this context, instruments, or even the hand (manipulating instrument, influencing sound, dictating auditory perception), and the internalization of speech which, related to individuals with no experience of the musical alphabet, may differ greatly as language for music players and readers includes one for speech and one for producing sound through instrument. These languages are represented by identical symbols which seems to presume an inevitable relational development between the two regarding how one is internalized by the other. All the while tools, manipulating objects in the external environment, manipulate the human himself as the environment continues to act upon him, affecting his experience with objects, influencing the signs produced as mediators to stimulate responses (behaviors).

Here is a synecdoche, in that as an example, this illustration of the role mediators in the development of HPPs regarding my experience with music describes more instances than its own. The process of learning musical alphabet may begin by a multitude of fashions, and its trajectory may be guided by expectations of cultural systems of meaning, but one may argue that each instance of learning this alphabet stands completely unique to any previous and future cases. This novelty of learning, and consequently, development, may be explained by the

internalization of HPPs. Let us assume the child has, to a degree, internalized the sign using activity of understanding letters in the alphabet as a means to construct and read words. When first introduced to the musical alphabet, the child may impose the sign system internalized to him because of his experience with manipulating letters, meaning previously existing sign operations are helping/influencing the construction of the skill of learning the sign system of the musical alphabet. I argue that this is not voluntary, rather inevitable, as understanding that the letter “A” holds specific meaning in the linguistic sense (it has influence on the pronunciation of words which is dependent on its relative position to other letters, it is the first letter of the alphabet, it is a vowel) would play great influence when learning a new interpretation (musical language) that uses the same letter “A”.

For example, the letter A’s chronological positioning holds significance in the musical alphabet, but its primary position in the linguistic helps us remember the significance in the musical by the help of signs: In music theory, letters correspond to pitch, each letter one tone different than its antecedent and consequent, ordered low to high by correspondence to the first 7 letters of the alphabet (A-G). Previous internalization of the order of letters may assist in understanding letters relationship to each other and representation of tone based on chronology. Lastly, music is denoted by it’s own system of symbols, meaning that the verbalization of music uses symbols of the linguistic alphabet, but that these symbols’ meaning are transformed when internalized in the sign systems and operations of music. To clarify, I believe the learning of music, especially the reading of its unique symbols, would be fundamentally different if there had not been internalization of the sign system of language. Consequently, the mediating role of different signs across these two contexts is not unilateral, rather dialectical, as my internalization

of the alphabet in terms of its linguistic use is continually influenced by my understanding of symbols in both realms of letters.

**How would Piaget have reacted to and evaluated Vygotsky's theory? Do you see more difference or more commonality in their views of intellectual development?**

In terms of the concepts presented in *Mind in Society* (Vygotsky, 1978) and *The Psychology of the Child* (Piaget & Inhelder, 1950), one may speculate that Vygotsky and Piaget may have reacted favorably to aspects of each other's theories of intellectual development while finding criticisms to other aspects as well. This is to say that the two did not completely oppose the other's theory, rather their research has been interpreted as consisting of some shared key notions, as well as some key concepts discussed exclusively by either psychologists.

Broadly, both Piaget and Vygotsky were concerned about the cognitive structures that afforded intellectual development. The first similarity I shall draw upon both's theories is the discussion of the importance of activity in the construction of external objects (external reality). Piaget discusses the sensorimotor period as a stage in which the child's development is characterized by an initial adualism (Piaget & Inhelder, 1950, p. 22) in which the child is incapable of differentiating the world of external objects from his internal reality. This theory discusses rhythm structures which evolve from spontaneous instances of satisfaction to the search for satisfying stimuli. Groping is mentioned as an activity by the child which helps transition from spontaneity to circular reactions, laying down the foundation for systems of feedback and reversibility. With this in mind, Piaget may very well have agreed with some of the notions concerning action at this age that Vygotsky discusses in *Mind in Society* (1978). For example, Vygotsky discussed EPPs as behaviors capable by animals of which do not possess the capacity to develop intellectually. He discusses the young human similar to an animal in that it

experiences EPPs which are not psychological processes capable of provoking intellectual development on their own. Vygotsky's limitations of EPPs fall in accordance with Piaget's outline of the child's reactions at the sensorimotor period are not conducive to the development of cognitive structures that allow for differentiation until they begin behavior indicative of the searching for specific stimuli.

To that end, one can observe a parallel between Piaget and Vygotsky in their outlines of necessity for intellectual development (HPPs to Vygotsky) that is the presence of a schema (Piaget) or sign (Vygotsky). This is not to state that schema and sign represent the same constructs, but both men seemed to agree that the external world is not constructed until there is meaning developed for objects. For Piaget, schemas are continually accommodated, while experiences may be assimilated into schemas. Vygotsky too mentions the process of assimilation into the internalization of signs, the internal mediators which represent meaning for objects and concepts in the world. It appears that while the nature of terms for each of their respective cognitive structures may differ, both men agree there can be no intellectual development until there is acknowledgement of an external environment, separate from their internal processes. It is here we may begin speculation into how both theories may present conflicting notions with reference to each other. *Mind in Society* often reinforces the notion that intellectual development and HPPs are initiated by, and therefore require, social interactions (Vygotsky, 1978, p. 57). Piaget may find disagreement with this as he discusses that the child may not need human interaction to form schemas and an internal understanding of the external world, rather it may only require the recognition of stimuli that produce a satisfying reaction (such as a smile) to begin the process of differentiating objects in the environment (Piaget & Inhelder, 1950, p. 23). Though humans are eventually differentiated from other non-human objects in Piaget's theory of



cognitive development, his argument that children in the sensorimotor stage do not need to interact with humans (they do not know they are interacting with a human) in order to develop intellectually conflicts with the major premise of Vygotsky's understanding of development.

Lastly, Piaget's work interprets development preceding learning, believing cognitive structures must develop before learning can occur. This notion finds discordance to Vygotsky's theory which argues that learning pulls development as social interaction between the individual and the material world represents the dialectical paradigm in which people develop intellectually. This is perhaps the most significant and fundamental disagreement between the two theories of development.

## References

Piaget, J., & Inhelder, B. (1969). *The psychology of the child*. New York, NY: Basic Books.

Vygotskiĭ, L. S., & Cole, M. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.