

Vygotsky's General Genetic Law of Cultural Development

“Sociogenesis”, Vygotsky affirmed, “is the key to higher behavior” (1929/1989, p. 63). All that is internal in the higher functions was of necessity external at some point; it was social, a relation that was between two people, before it became an individual function. This idea achieved its fullest expression in Vygotsky’s *general genetic law of cultural development*. Vygotski (1934/1963) expressed the law as follows:

All higher mental functions make their appearance in the course of child development twice: first, in collective activity, social activity, i.e. as interpsychic functions, second in individual activity, as internal properties of the child’s thinking, i.e. as intrapsychic functions. (p. 31, emphasis in original)

The natural, lower, biologically based, psychological functions are transformed into higher mental processes as a result of *interpsychic functions* undergoing *interiorization* wherein they are wedded to the lower functions and transform them into the higher *intrapsychic functions*. In other words, the higher psychological functions were first external, social, involving interpersonal relations before becoming internal psychological processes (Vygotsky, 1929/1989). As Luria (1979) put it, “It is through the interiorization of historically determined and culturally organized ways of operating on information that the social nature of people comes to be their psychological nature as well” (p. 45). Social relations were, and are, the basis of all higher psychological functions and, as such, they develop in accordance with historical law (cultural development). To understand such functions, therefore, requires an appreciation of how the migration from outer to inner transpires and that is reflected in the phenomenon of *interiorization*.

In child development, Vygotsky (1962) was of the view that thought and speech were two separate functions that had independent developmental histories, but which became interpenetrating and mutually transforming over the course of their development. Language appears well after the first signs of intelligent behavior in children and, when it does appear, speech appears to be unintelligent in its initial production. Coing, for example, a repetition of vowel sounds, appears around one to two months (Bee, 1997). While separate, thought and speech, in time, do unite to form the new functions of “intelligent speech” and “verbal thought” in humans.

The initial manifestations of speech in children—crying and babbling—are the pre-intellectual roots of speech, and do not, at first, play a part in the thinking of the child. Just as apes do, children too, while without speech, have been found to engage in natural forms of thought. With the procedure called *habituation/dishabituation* young infants have displayed emerging cognitive functions (Berk, 1994). By presenting an initially novel stimulus repeatedly a child’s interest eventually declines (habituation) at which point a new, unfamiliar stimulus is presented which may elicit a renewal of interest (dishabituation.) With such a procedure the cognitive functions of abstraction, generalization, and memory in newborns have been revealed. To habituate, for instance, something must be recognized as the same as, or similar to, what has been encountered previously (Feldman, 1997). To dishabituate is to recognize difference and novelty. The cognitive function of generalization, which has been found with habituation research, is common to both humans and animals.

In these cognitive performances there is no sign of language use. Language, or at least the production of the first words does not happen until around twelve months (Bee, 1997). So there is considerable evidence of thought without language during infancy. While young children may be bereft of linguistic capabilities, it has been found that preverbal children are more than capable of expressing their wishes and of effecting, thereby, helping behavior in others—in other words communicating. Even though no intent can be ascribed to it, in crying babies are signaling some need (Bee, 1997). Infants have been found to have three cry repertoires, signaling hunger, pain, and anger. At four months babies gaze in the direction that adults are looking, establishing *joint attention* (Berk, 1993). Parents use the child's gaze as a clue for labeling objects that are within the child's view; that contributes to subsequent language acquisition. By 9–10 months babies are using gestures to make requests and demands (Bee, 1997). This is period when they engage in intentional nonverbal communications to influence the actions of others (Berk, 1993). Adults in turn respond to the child's gestures and, labeling the gesture as some request or demand, e.g., “You want your banana” (Bee, 1997). The child is thus encouraged to attach words to functional gestures. A little later, the ten-month-old is able to play gestural games involving back and forth interaction, e.g., patty-cake, or waving goodbye. Babies not only send information to others (communicate) they are also capable of interpreting incoming information from others. Around two to three months of age, infants respond to specific emotional expressions with appropriate responses, e.g., differentiating states of sadness or happiness in others as expressed vocally or facially. Finally, around ten months, infants begin to draw upon others' emotional expressions as signals regarding their relative safety. With this phenomenon of *social referencing* infants observe the expressions of their caregiver for clues about how to conduct themselves in unfamiliar situations and when in the midst of strangers. From their first year, infants seek information through social interaction and attending to an adults pointing and gazing as a directive (Rogoff, 2003). Infants can communicate by both sending and receiving nonverbal messages. The incorporation of language into thought greatly expands the power of that natural function; natural thought becomes verbal and rational.

Children also, despite their inability to verbalize, can clearly communicate and are very much involved in the social realm. Involvement in the social realm was one that formed the basis of a scientific dispute around the issue of the relation of thought and speech and of their development, and of the changes that account for said development. That children were social from the start, as Vygotsky suggested, was a theoretical proposition that was in contrast to the formulation of Piaget. Piaget contended that children do not become social until some seven years after birth. It was in response to Piaget that Vygotsky developed his theory on the interiorization of language, so we need to examine Piaget's viewpoint.

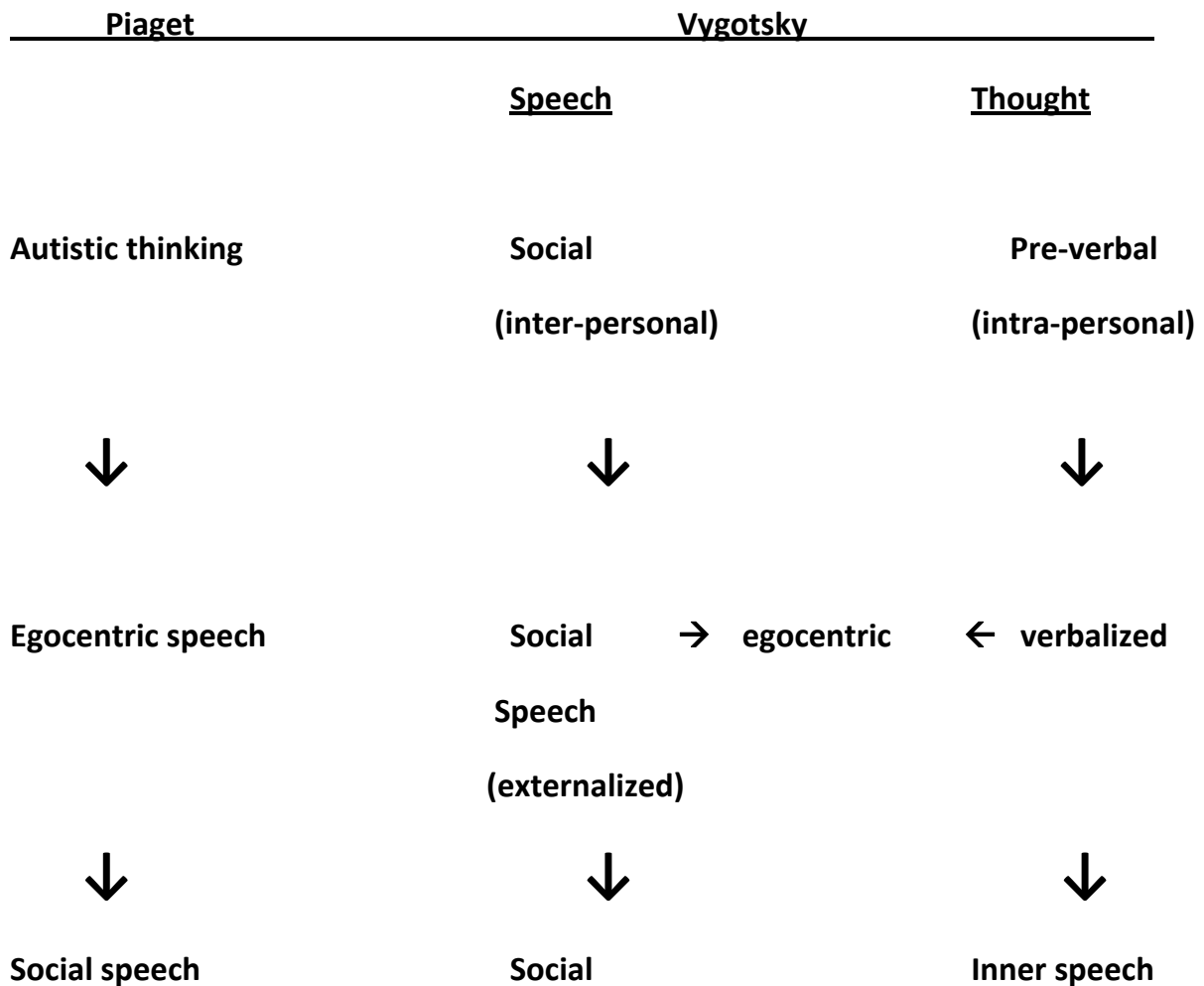
Jean Piaget (1896–1980) was particularly interested in the child's capacity for logical thought. He believed that the nature of the child's thought processes was reflected in the child's use of language. As was the case with adults, it was through language that children communicate to others their thoughts and that provided information regarding their cognitive capacities (Piaget, 1926/1960). One particular observation had considerable impact on Piaget's conclusions regarding the speech and thought of the child. He found that in the

examination of children's communicative capacity a distinction could be made between *egocentric speech* and speech that was socialized. Egocentric speech involved repetition of syllables and words, monologue (talking to oneself), or collective monologue (monologue evoked by the presence of another without concern for that person attending to the speech or their understanding of it). Social speech was clearly different from the egocentric form since the child is actually sharing thoughts with another, influencing another through speech and sharing ideas with another. That such speech did not appear, or at least that egocentric speech did not disappear, until about the seventh year was a harbinger to Piaget. The presence of such speech heralded the fact that children were not yet social beings, involved in the world of other people, having only their individual perspective on the world. Egocentrism was a symptom of inadequate socialization. The child may appear to be conversing with other children but unlike the adults, when conversing among themselves, the children were talking about their own engagements and apparently to no one in particular; they were mostly talking to themselves. From this, Piaget inferred something regarding the developmental process in the thinking of the child. Speech, at the earlier stage, was merely an accompaniment to individual activity, serving to reinforce it, prior to speech taking up a role in supporting the socialization of thought.

Given what has been said about the impact of the theories of *sociogenesis* on Vygotsky's thinking, it should be no surprise that he would feel a need to address Piaget's propositions. In particular the notion that children lack truly social behavior until around age seven was in direct opposition to Vygotsky's perspective. Children, to Vygotsky, were clearly social. Piaget apparently held the limited belief that unless a child could communicate effectively, with understanding to another, the child could not be considered to be social. Vygotsky, in that regard, pointed out that the child that is possessed of social speech can be found to beg, share information, level threats to another, and make inquiries (Vygotsky, 1962). Was this (speech) the only means by which the child could make entreaties to another and display social behavior and social interactions? The use of gesture, most certainly, was a form of communication despite the absence of speech. The social child in reaching towards something signals that something is desired. In fact it is in the process of pointing to objects that the child is directed by adults to associate a word with its referent. Gesture is communication, a transitional form of communication, but a form of communication nonetheless. Furthermore the gesture is directed to another and is therefore of a social nature. Social behavior too can be something more than communicated ideas. Nonverbal chimpanzees after all are social beings; they engage in behaviors that involve one animal affecting another (Vygotsky, 1931/1997). A glance, a touch, or a cry may influence another. This is no less so in the human child.

Vygotsky had to demonstrate that egocentric speech had a different function or served a different purpose. According to Vygotsky, around age two the separate lines of development begin to unite and speech begins to serve intellect (Vygotsky, 1962). Thoughts begin to gain spoken form and words start to take on a functional role in abstraction. The child, having discovered the symbolic function of words, actively seeks to attach more and more signs to environmental objects. Speech now is becoming rational and thought is becoming verbal, but

that does not mean that all forms of thought are included in verbal thought, nor all forms of speech, e.g., guffaws and harrumphs, included in thought. There does, however, grow a close correspondence between thought and speech. The importance of this wedding of speech to thought is most evident in the phenomenon of inner speech and it was this that Vygotsky would use to explain egocentric speech. To understand how this comes to be one has to begin on the side of the social.



Vygotsky proposed that speech is social from the start. It commences as speech with another despite the lack of competency of the child. Egocentric speech, as Vygotsky (1962) aimed to demonstrate, was a form of thinking that aided the control of ongoing behavior and represented the partial interiorization of social speech or its transformation into verbal thought. In order to identify the causes of egocentric speech, experiments were developed, based upon Piaget's, but with added complications and frustrations. By interfering with the child's free activity the child was confronted with problems. For instance, a child who was about to set to drawing discovered paper or the necessary drawing implements were unavailable. Under these conditions, the rate of production of egocentric speech doubled. The children were using speech to themselves in the process of working through the difficulty, e.g., stating out loud: "I need a blue pencil." A condition in the production of egocentric

speech thus appeared to be a disruption in the smooth running of ongoing activity and that self-talk was a means of coming to grips with the situation and to remedy it. This established the problem solving, thinking function of egocentric speech. Next Vygotsky set out to show the residual social function of egocentric speech.

In order to demonstrate that the reason that the child, in thinking to her or himself, vocalized was due to a lingering impact of speech being initially social, another set of experiments was conducted. In these experiments the aim was to try and remove any social influences and, by doing so, to note their effect on subsequent egocentric speech. By creating situations where the child could not be heard (playing alone in the midst of deaf children or within the din of a loud symphony orchestra) or not understood (playing among children who spoke a foreign language), or simply working alone, Vygotsky found that egocentric speech dwindled. The reason that the child spoke aloud was that words had been so closely tied to conversing with others that the presence of another elicited unintended vocalization. As a result of these findings, according to Vygotsky, it is rational “to assume that egocentric speech is a form developing out of social speech and not yet separated from it in its manifestation, although already distinct in function and structure” (Vygotsky, 1962, p. 138).

Despite its apparent social quality, egocentric speech is an instrument of thought in searching out and planning solutions to difficulties and in directing actions. The function of egocentric speech itself was something that was subject to development and change. When confronted with obstacles, Vygotsky found that there was a difference between younger and older children. As children got older they frequently examined the situation in outward silence and then enacted a solution. Upon being queried the child reported having had thoughts that were similar in meaning to those of the egocentrically speaking child. This suggested to Vygotsky that the preschooler whom is engaging in egocentric speech has the same mental operations as the schoolchild in whom they have been transferred to, and transformed into, soundless inner speech. The processes of inner speech develop and stabilize and it is that which causes the rapid decline in egocentric speech rather than speech finally becoming social.

Vygotsky suggested that a similar transformation occurred in children’s naming of their drawings. Small children engage in drawing and only after the drawing is completed do they name it or designate it as being something. When a little older drawings are named when only partway complete and finally declarations of what will be made are done before the drawing commences.

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