

Genetic Analysis of the Sign Operation¹

We shall consider mediated mental operations as specific characteristic of the structure of higher mental functions. It would be a great mistake, however, to assume that this process arises through purely logical means, that it is invented or discovered by the child in the form of a lightning guess (an aha! Experience), by means of which the child assimilates the relation between the sign and the method of using it for all time so that all further development of this special operation occurs purely through deduction. It would be as much a mistake to think that the symbolic relation to certain stimuli will intuitively be comprehended by the child as if he were retrieving it from the depths of his own soul, that symbolization is primary and not reducible further to the Kantian *a priori* by an ability to create and comprehend symbols that was primordially established in the consciousness.

Both these points of view, the intellectualistic and the intuitive, essentially eliminate metaphysically the question of the genesis of symbolic activity since for one of them, the higher mental functions are preliminarily given prior to any experience, as if implanted in the consciousness and waiting only for the chance to appear with the empirical cognition of an object. This point of view also inevitably leads to the *a priori* conception of higher mental functions. For the other view, in general, the question of origin of higher mental functions is not a problem since it admits that these signs are invented and subsequently, all corresponding forms of behavior will be derived from them light results of the logical prerequisites. Finally, we already mentioned in passing the attempt, insupportable from our point of view, to deduce complex symbolic activity from simple interference and summation of habits.

Observing over the course of several experimental series the different mental functions and studying the path of their development step by step, we came to a conclusion exactly opposite to the two views just presented. The facts disclosed before use the process of deepest significance that we call the natural history of sign operations. We were convinced that sign operations develop in no other way than as a result of a most complex and long process that displays all the typical traits of genuine development and is subject to the basic patterns of mental evolution. This means that sign operations are not simply invented by children or acquired from adults, but arise from something that is not at first a sign operation and that becomes a sign operation only after a series of qualitative transformations of which each promotes the next step, being itself promoted by the preceding step, and connects them as a stage of a single process historical in nature. In this respect, the higher mental functions are not an exception to the general rule and do not differ from other elementary processes: they are, without exception, subject in the same way to the basic law of development; they arise not as something introduced from outside or from inside into the general process of the child's mental development but as a natural result of this process.

What is a sign operation?

Summarize the main idea of this passage.

¹ Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.