

Language and Cognition



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The relationship between language and cognition has been of perennial fascination to linguists and psycholinguists. Their conclusions range all the way from seeing language as dependent on cognition, through seeing cognition as dependent on language, to seeing language and cognition as independent.

Human culture, social behaviour and thinking could not exist as we know them in the absence of language. Though no one would deny the central role of language in human life, to define the nature of that role has been a persistent and difficult problem since the beginnings of philosophy. Although language pervades mental life, it does not constitute the whole of psychological states and processes. There are images and emotions, intentions and abstractions, memories of sounds and feelings, and much more.

Cognitive psychologists are concerned with speech and thought to the extent that speech is involved in communication of knowledge between people, more essentially they are concerned with language and thought, that is with the relations of inner linguistic and cognitive structures.

The evidence of independence of thought from verbal formulation comes from the statements of scientists, mathematicians, artists and composers about their creative thought. The introspections of Albert Einstein in this regard are especially illuminating. "The words of the language, as they are written or spoken, do not seem to play any role in my mechanism of thought," this is what he said in his times. There is, of course, a certain connection between those elements and relevant logical concepts. It is also clear that the desire to arrive at logically connected concepts is the emotional basis of this rather vague play with the above mentioned elements. But taken from a psychological viewpoint, this combinatory play seems to be the essential feature in productive thought before there is any connection with logical construction in words or other kinds of signs which can be communicated to others. (Schaff 1964:142)

No one would say that Beethoven had not "thought out" the structure and content of his compositions. We would not expect him to have "talked out" the idea of a symphony to himself. His sketchbooks are full of themes, transitions and orchestrations - but hardly any words written in them. A famous mathematician Jack Adamar once said that there are no words in his thinking mechanism. Clearly, speech is one of many tools of thought, but it is not thought itself.

The distinction between language and speech lies in the fact that speech is a tangible, physical process resulting in the production of speech sounds, while language is an intangible system of meanings and linguistic structures. Cognitive psychologists, like Vygotsky and Piaget, are concerned with speech and thought to the extent that

speech is involved in communication of knowledge between people. But, more essentially, they are concerned with language and thought, that is, with the relations of inner linguistic and cognitive structures.

In seeking the relations between language and cognition, we must ask two more differentiated questions.

If we view language as one of many forms of mental representation, we must explore the forms of how they are interrelated. There are various ways in which we describe the structure of knowledge. If we view language as a tool of thought, we must examine the ways in which the use of that "tool" influences cognitive processes and their development. In what sorts of mental activities does the use of language play a significant role? Does that role vary with the age of the individual? Does it vary with the specific language or dialect involved?

To answer these questions, let us step back from the broad issue of "thought" and consider questions of "mental representation." In order for the processes of thought to be accomplished - reasoning, planning, problem solving and the like - it is necessary that knowledge should be coded and stored in some form. First let us consider the forms that seem most evident to consciousness: words and images. It is these forms that initially attracted the attention of philosophers and psychologists. The use of words and sentences is quite obvious. But the role of imagery has been controversial - perhaps because people seem to differ greatly in the degree to which they experience mental imagery.

Language is one of many ways in which we can represent knowledge to ourselves. Some knowledge seems uniquely suited to linguistic representation. How, for example, could we represent to ourselves a philosophical theory or an historical event without being able to talk about it? However, Einstein spoke of visual and muscular images in his thinking, Beethoven would certainly have spoken of auditory, and Picasso of visual images. The mental image, or internal image, has recently regained respectability in cognitive psychology and it has a long history in philosophy.

The problem of the active role of language in man's mental activity may be approached, depending on our interpretation of that activity, either as the problem of the role of language in thinking or as the problem of the role of language in human cognition, which is actually only one special type of thinking. (Jackendoff 1974:76) There is yet a third approach to this problem. We may treat language as a function of culture, where culture is understood both as a specific kind of behaviour and as a specific product of behaviour. We shall first concentrate our attention on the problems of the active role of language in human cognition and in culture. This suggests that we shall have to deal with the problem of language and thinking as well. It is logical to consider the problems in the following order: thinking, cognition and finally, culture.

Language is one of many ways in which we can represent knowledge to ourselves. Human cognition is influenced by language, but it is not formed by language. Rather, language is one of many factors which play a role in "making human beings we actually are".

No one doubts that speaking is always thinking; in other words it is always experiencing the meaning of words both in the form of concepts and in their

accompanying images. By its definition language as the abstract aspect of speaking is a potential thought. There is a certain imaginative element in human thinking which depends on language in many ways but is not identical with it. (Vygotsky 1962:112) The connection between language and thought is complex and permanent.

The active role of language in thinking may be interpreted in at least three ways:

1. Without language as a definite sign system conceptual thinking is impossible. In other words, sign systems called language are carriers of conceptual thinking. Hence, the existence of language is a necessary condition of conceptual thinking.
2. Language is the social foundation of cognition. The ability to speak, the structure of the brain, and the organs of speech in a normal human individual are inborn. Since conceptual thinking is impossible without language, man learns to speak and think in the process of social education. He receives a ready product from society - language-thinking, that is society's knowledge about the world fixed in linguistic categories. Social experience is the foundation of individual thinking, which is creative; otherwise the progress of knowledge and culture would be impossible.

Language is the social point of departure for individual thinking: it is intermediary between the social and inherited, on the one hand, and creative, on the other. Language not only conveys the knowledge of past generations to individuals but communicates the new achievements of individual thinking. By learning to think and by learning to speak, we easily acquire the achievements of past generations rather. The message of past generations affects our vision of the world and our cognitive thinking. In the process of human thinking, language becomes a creative factor in a particularly important sense of the word. It conveys the social message of phylogenetic experience actualized in the ontogenesis of the human individual. It is not the only factor determining our thinking, but it is a factor of immense importance and influence.

The active influence of language upon thinking is explicitly revealed here, although that influence can be fully comprehended only when we realize that both language and thinking are, genetically, products of human activity.

Cognition is actually a process of thinking or its product, which results in a description of reality. The description includes information not only about individual facts but also the various relationships between them. Cognition begins with a practical activity or with some practical needs and the resulting requirement for cognitive information. Quite often the links between cognition and the practical activity are direct, but even in the most abstract and autonomous fields of scientific research we can at least demonstrate an indirect genetic linkage. (Donald 1980:68) So by saying this we resolve the problem of origin and goal of cognition: it serves human practical activity directly or indirectly. Language is in that sense a kind of condensed practical activity, which affects our actual process of cognition in the easiest and most suggestive way.

First of all, language affects the way we perceive reality. There is experimental data to support the thesis that our perception of reality is clearly affected by the language in which we think. This only means that language, which is a kind of copy of reality, is also a kind of maker of our image of reality. Our articulation of the world is not only a function of individual experience. It is a function of social experience as well, which is

conveyed to the individual through upbringing, and first of all through language.

The problem of the role of language in human activity may be considered on a third plane, as the set of definite cultural processes, their products, and forms of human behaviour.

The relation between language and culture, interpreted as a relation between cause and effect, works both ways: we have an effect of culture upon language and, conversely, an effect of language upon culture. Sapir thought that language in no way depends on the development of culture /"language" is interpreted as a phonetic and grammatical system and its semantic aspect is disregarded/. It seems that the point of view adopted by Sapir and his followers is to some extent narrowed by an improper definition of language. If we turn to the other aspect of the problem, the effect of language upon the development of culture, we can state that culture is conceived to include the thoughts of people who are society members. If it is conceived to include products of their thoughts and behaviour, then a definite program of research immediately emerges.

The effect of language upon such products of human thought as science, technology and art is an immense culturological problem. From the linguistic nature of conceptual thinking it is obvious that language influences science, technology and art /first literature, then music and painting/. Social psychology, sociology and other disciplines concerned with the social behaviour of human beings testify that social upbringing in a definite social group conveys accumulated social knowledge to a human individual both in the form of language-thinking and in the form of approved systems of values and associated stereotypes of behaviour in civilized societies, especially the role of language in such stereotypes. Through language society conveys to the individual certain attitudes, valuations and stereotypes; these are fixed by the society's language and powerfully influence individual's consciousness. Because of their everyday character and suggestiveness they are in most cases accepted as natural.

There are obviously many ways in which our possession of language influences our life as human beings. We can't even begin to list all those influences. One thing is important: language influences the ways in which we store old information and acquire new information. Language can be used internally as a tool of thought, and interpersonally as a tool of communication. Both of these aspects of language use - internal and interpersonal - have cognitive consequences.

References:

1. Donald, M. (1980) *Origin of the Modern Mind // Three Stages in the Evolution of Culture and Cognition*. Cambridge, MA: Harvard University Press.
2. Jackendoff, R. (1974) *Consciousness and the Computational Mind*. Cambridge: MIT Press.
3. Schaff, A. (1964) *Language and Cognition* / Ed.by R.S.Cohen. New-York.
4. Vygotsky, L. (1962) *Thought and Language*, trans. E. Hanfman and K. Vakar. Cambridge: MA: MIT Press.

Լեզու և ծանաչողության

Լեզվի և ծանաչողության փոխկապակցվածությունը կարող է դիտարկվել մի քանի տեսանկյուններից: Մարդու մտավոր գործունեության մեջ լեզվի դերը որոշվում է գործունեության բնույթով, երբ կապվում է նաև մշակութային առանձնահատկությունների հետ: Մտածողության մեջ լեզվի ակտիվ դերը պայմանավորվում է այն փաստով, որ լեզվի գոյությունը հասկացական մտածողության ձևավորման նախապայմանն է: Լեզուն նաև ծանաչողության գոյության հիմքն է: Հասարակական փորձը անհատական մտածողության ձևավորման միջոցն է: Լեզուն ներագրում է գիտելիքի ձեռքբերման և կարգավորման գործընթացի վրա, և նրա այս երկու գործառույթներն էլ ունեն ծանաչողական բնույթ: