

QUESTIONS - BELÉM\*

1. In your opinion, do you think it is easier to learn another foreign language if you already know one? For example, if Portuguese is your language and you know English, is it easier or not to learn French?

In principle, it ought to be easier to learn a closely related language. So it ought to be easier for someone who knows Portuguese to learn French than to learn German, say. In the United States, it sometimes doesn't work like that. Nobody knows why, exactly. So in the United States, for example, if you are a student in school and you don't like languages, and if you have to pass, and have to take a language course, you would think, from looking at the way languages are related, that everyone would pick German. But nobody picks German—very hard for English speakers to learn. Everyone picks Spanish. I don't know why. Somehow Spanish is the easiest one to learn. Within the Western Romance languages (I'm excluding Romanian) there is a feeling—I don't know if it is a mythology or a feeling—that the easiest one for everyone to understand is Italian. And the next easiest is Spanish. And then French and Portuguese compete to see which is the hardest to learn (keeping to the major ones). So Portuguese speakers are supposed to more or less understand Spanish, but not the other way around. How much of this is mythology and how much of it is real is hard to say. You can think of some reasons why it might be that way. I think probably that the real answer is that there are just a *lot* of individual differences.

Learning a first language is like growing up. You just do it. Everybody does it the same way. That's the way you are built. Problems don't arise, except in cases of really extreme deprivation or pathology. But learning a second language is like learning, you know, gymnastics—getting to be a pole vaulter in the Olympics or something. It's not a normal human activity. And when you get to things that are not normal human activities, people vary a lot in their abilities. So that's why you have sports, you know, to watch people do things that you could not possibly do yourself. You don't have competitions in talking Portuguese, right? A much harder thing to do than play football in a professional league, but everybody can do it, so it is

\* After Prof. Chomsky's linguistic talk in Belém on November 29, 1996, a number of written questions were accepted from the audience. Prof. Chomsky answered six of these, which are presented here. The video recording of this discussion was transcribed by Denny Moore and translated by Eduardo Rivail Ribeiro. These two checked and revised the final bilingual versions together.

no competition. It is the same with intellectual games. You don't have games in which one person repeats what another person says, although that is very hard. You couldn't build a machine to do it properly. You do have competitions in chess because that is outside the range of normal human ability, so it is therefore a sport. And second language learning seems to be something like that. Maybe not as extreme, but something like it. Some people do it very well, others don't do it well. If you do it in childhood it is very easy. So in the early years of life people can learn many languages without effort or even attention. No one knows the limit to how many languages the child can learn perfectly normally. In many societies it's a large number.

**2. How do you relate the research program advanced in your talk to the program first stated by Vygotsky that supposes that the brain is relatively undifferentiated and internalization of language creates the language organ and not the contrary?**

That was indeed Vygotsky's proposal. But remember, it was everybody's proposal. So not just Vygotsky. It was also the proposal of B.F. Skinner and Jean Piaget, and in fact the general assumption of all psychology, whether behaviorist, mentalist or anything, was that the brain is uniform, more or less the same. You have certain mental activities that you use for everything. There are differences. So, for example, Piaget and Skinner are perhaps at opposite extremes in that Piaget thought that there were different mental abilities at different stages of growth. So the child went through certain stages of cognitive development and intellectual development and at a particular stage the child has certain operations available, but whatever they are, they are uniform. They are uniform for interpreting visual experience and social interaction and language, and everything else. For Skinner they are the same all the way through.

As for a language organ, virtually nobody believed that that existed at all. Either that it was there in the genes or that it was created. It was just part of your general knowledge. That has been the overwhelming assumption. It is completely false. First of all, it is biologically a total impossibility. I mean, there is nothing known in the biological universe that works this way. Even the smallest system turns out to have highly complex subparts which interact, which have separate properties which interact in all sorts of ways, and you can't find an organism simple enough so that it lacks that. The belief that the human brain, which is probably the most complex object in

the universe—the idea that it should be outside the universe, in that it is completely undifferentiated—is a very astonishing idea, completely false, and now accepted, I think, by nobody.

But what is kind of interesting as a cultural phenomenon is that anybody could have ever believed it. How could anyone ever have believed that your capacities for doing one thing and your capacities for doing another thing involve the same operations? And even the most superficial look shows that they operate in very different ways. They develop at very different times. And pathological evidence shows without question that they are dissociable. You can separate one from another by a certain kind of injury. That is more complex, but even superficial observation shows this, and what we know about every other organism leads us to expect exactly that.

As for the internalization of language creating the language organ, I don't know if anyone has actually proposed that, but if they have, it would be incoherent. It is not a question that you can debate. So, for example, suppose you have a monkey. Suppose that I had a pet monkey the same age that I had, you know, when my children were growing up. Well, that monkey would have had the same auditory experience as the children, so why didn't it internalize language? And create a language organ? Well, it obviously wouldn't, just as a cat wouldn't. And the only answer for that, apart from miracles (unless you believe in miracles) must be that there is something in the genetic endowment of the child that is missing in the genetic endowment of the monkey. And what it is is the instructions for a language organ. So there is no question about whether the internalization of the language created the organ because you can't internalize the language unless you have the organ. I mean it would be as if someone asked did our visual system arise from the internalization of visual experience. You don't have visual experience unless you have the visual system. So you can't have it created by internalizing the visual system.

The psychology of human beings has been, historically, a very irrational study. For some reason, which is perhaps worth investigating, humans find it extremely difficult to study themselves in a rational way. You can study any other organism in a rational way, but you cannot study yourself. Or, to be more precise, humans have always been able to study everything except their minds in a rational way. So nobody would ever propose these things about the visual system or the kidneys or the motor system. Never. Such ideas are only proposed for the human mind. Unless

we are outside of nature that can't be true. There is no rational reason for studying the mind any differently from the way that we study every other part of the body and, in fact, every other organism. But that has been extremely hard to do, for whatever reason, and still is.

**3. In your theory, what is the treatment given to pragmatic markers, such as 'right?' and 'OK?'**

There's nothing much to say about them. They seem pretty simple and straightforward. They vary a little bit in different languages, and every language has some sounds that it uses to... For example, when you hesitate in different languages you often make a particular sound. So if you are talking Japanese and you can't think of what come next you say, *anone*, and in English you say, *uh*, you know, and in some other language you say something else. And there are different gestures. If you want to say *OK* in English... I won't say it. If you go, in Portuguese, like this [holds up thumb]... I guess... [laughter]<sup>1</sup>. And even the symbols for *yes* and *no* differ. So in some languages *yes* is like this [nods head up and down]; in others this is *no*. There is nothing much to say about these things; they seem very isolated.

**4. What do you think of the position of Benjamin Lee Whorf about the relation between language and thought?**

Benjamin Lee Whorf was an extremely important linguist. (Incidentally, an insurance salesman by profession and a linguist on the side, but did very important work.) The work that he is famous for, is what is called the Whorf Hypothesis, which is that language influences thought or that it predetermines thought. It might be that that is the least important of the work that he did. It was not really his idea. It's an idea that goes way back. It's very hard to find any evidence for it. Whorf himself had no evidence. His argument sounds plausible superficially. But it is based on extremely poor reasoning. So take the most famous example that he gave, which became widely influential in anthropology and cultural studies and so on. It had to do with time, the understanding of time.

His argument was that the Indo-European languages: French, German, and that whole class of languages—what he called Standard Average European—they had a special conception of time. The way we think about time, he said, is as if there is a line going from past to future. It goes both

<sup>1</sup> The North American *OK* gesture, with index finger and thumb forming a circle, has another, obscene meaning in Brazil.

ways. Maybe an end in the past, but there is a line to the future. It depends on what religious tradition you are in. But it is just a line, and you're standing on it. And you are looking forward toward the future, and you look back over your shoulder toward the past. That's how we conceive of time. That much I think is correct. At least I know that's the way I look at time. I guess everybody does. He argued that the reason for this is that in the European languages we have tense systems: past, present, and future. And that makes us think of time in this fashion. He did some early work on Southwest American Indian languages. And he argued that in some of these they don't have past, present, and future, and they think of time in a different way. They think of it in terms of intensity and various ideas from relativity theory, and so on. Anyway, they think of time differently.

The problem in the reasoning: he had no evidence that they think of time differently. All he knew was that they didn't have past, present, and future. So the conclusion doesn't follow unless you accept the hypothesis. So that's not evidence for the hypothesis. So the evidence is zero. And the same thing goes for the other cases. There is an even further difficulty. I had mentioned that I think of time as a line from now looking forward and so on. But English doesn't have past, present, and future. So if you study English the way he studied Hopi what you would say is that English has only one tense, namely past, and then a sort of generalized non-past. And there is no future at all. There's just a collection of modals, like *should*, and *must*, and *may* and one of them happens to be *will*, which happens to be used partially for the future, but also for other things. So the conclusion, on Whorf's assumptions, would be that we don't think about time the way we do think about it. Well, we know it's wrong for English, so why assume that it is right for Hopi? And, in fact, when people try to investigate it they find out it's nonsense.

Starting in the early 1950's there were some serious efforts to try to study the hypothesis empirically. And the evidence is very thin. And the only place where you really find evidence is in things that are so uninteresting that it's not worth talking about. Languages do break up color spectrum somewhat differently. Not very differently, but there are some differences. And it turns out that people remember colors in ways that are determined by the color system they use. But that tells us very little, because you don't remember the visual perception, you remember the name you gave to it. I see something is orange. I won't remember what it looked like, but I will remember that it was orange. I'm not sure that that's nonlinguistic behavior.

So in that kind of sense it's not a test. There are many other effects. So if you look at various different languages, you know, say, the languages of New Guinea, which are highly differentiated and have all sorts of ways of classifying things, in terms of long and thin, or flaked off, or a piece of something or made in some other ways—maybe that affects the way people think. At least they have to recognize those aspects of objects when they talk. Whether it affects the way they think, nobody knows. These people working on the languages assume that they think differently, but that takes some work to show. At the moment all we can say is that it is not necessarily false, but there is no evidence for it that amounts to much.

**5. Do you believe that man has a soul and that language is an ability of soul and not of his mind only?**

I don't believe it, but that's because I don't understand it. So I can't believe what I don't understand. I don't know what it means to have a soul, so I have no opinion on that topic. I do think that there are properties of human mind that are very deep mysteries humans have no way of understanding. The normal use of language, as I mentioned, is one such case. But the free will, for example, is something we just don't understand. I mean, we know we have it. I know I could start talking about some completely different topic right in this situation, even in my present physical state and with my current stimulation. I know I could get up and start jumping around the room, or whatever. I'm not going to do it, because it's inappropriate. But what "appropriateness" means nobody understands. We act in a way which is not determined by our environment and not determined by our internal state, but is somehow appropriate. There is variation in appropriateness in different cultures. So some things are considered appropriate in one culture and not in others, but it is a small variation. And mostly it's, you know... That category of human properties, nobody understands.

Whether that is also true for other animals is very hard for us to know. Even when you get down to the simplest organism, say... The simplest one to study, the most complicated organism that is really studied seriously by biologists, is a little worm called a nematode, which has 800 cells and three days of growth. And its neural structures, a sort of wiring diagram, is completely understood. But nobody can understand why this creature does what it does. Like why does it decide to go this way rather than that way, or whatever. These are just extremely hard problems, and for ourselves, they

are just mysteries.

My own suspicion is that these problems reflect our own limits of thought. We are a part of nature, I assume. And like every other natural organism we have certain capacities and certain limits. Like I can't fly. I can't find my way home the way a pigeon can, because my brain just doesn't have those capacities. Pigeons can't do some things I can do. It's got to be the case that we certainly have rich capacities to think about things. But those capacities come from some biologically given structure. And that structure puts limits on what we can think about. So the limits are logically interrelated, just as they are in flying and walking. And there may be simply questions that are beyond our cognitive limits. Some differently organized intelligence looking at us might wonder why we never ask the question in the right way. Just as when we look at, say, rats or monkeys, we can construct problems that they just cannot look at the right way, that they don't have the right concepts, and we are the same. Maybe these things are just outside our cognitive range. Anyway, it doesn't help anything to say, "Well, there is some mysterious entity, the soul, which gives them to us", any more than it makes such sense to do that when we talk about a rat or a pigeon.

**6. Would the discovery of some particular properties of indigenous languages, especially the Brazilian ones, have some sort of influence in the reformulation of your theories?**

Why sure, yes. A radical influence. The languages that were studied in depth first, in early generative grammar... The first generative grammar, that was written about fifty years ago, happened to be on a non-Indo-European language, on Hebrew, modern Hebrew. Didn't have that much syntax, had mostly morphology and phonology but some syntax. The next major generative grammar that was written was on an American Indian language, Hidatsa, was by Hugh Matthews in the late fifties. By that point, quickly we began to understand that we don't know enough about those languages. We can know mostly about languages where we have a lot of evidence, primarily our own. So, from that point on, the most intensive research started to be on English, on French, on German, Dutch, Japanese, Chinese, as linguists from various areas started working on the languages that they knew best.

And, however, highly trained linguists, very good ones, were working on languages of the world. So my own department happens to be a rather theoretical department, but it is also probably the world's center of the study