Thinking for speaking

Dan Slobin is emeritus-professor of Psychology and Linguistics at the University of California, Berkeley, and was consulting on research on the acquisitional and developmental (sign) linguistic skills of deaf children with hearing parents and deaf children with deaf parents in Groningen at the time of this interview. Slobin ’s research and views on language could have interesting implications for philosophers. Read for yourself and find out!

By Geert van der Velde

Q: Could you tell us what prompted you to become so interested in language and what kept you being interested? Did you ever have one of those inspired ‘Eureka moments’?

DS: I had several eureka moments. When I was 15 or 16, I spent a year in Vienna – my father was a Fulbright teacher. So, I became fluent bi-lingual in English and German. I remember I was walking home from school one day and I realized I knew perfectly well what I was thinking about but I wasn’t hearing any language in my head. That was a real eureka moment. I said to myself: “Oh wow, language and thought are separate because I know what I’m thinking about but I can say it in either English or German.”

And then, throughout my life, I learned a lot of other languages. A year after my stay in Vienna I learned Spanish because one of my best friends was Mexican. Later I learned Russian and worked one summer in Russia. So, I knew [European] languages of quite different types. Then, I spent a year in Turkey doing research on Turkish language and Turkish children’s language acquisition. Now, Turkish is typologically unrelated to any of the Indo-European languages. It’s structured really differently. And, then I had this remarkable experience when I was able to speak and think in Turkish a little bit. It seemed to me that all of the European languages fell together as minor dialects of each other. So, then I said to myself: “Russian, German, Spanish, English they’re really built pretty much the same way,” whereas normally within Europe, you’d think they’re really radically different types of languages. So, that was another important moment.

Another, not exactly ‘Eureka’ but important experience was having my own children; hearing their language all day from day to day and seeing the kinds of changes that go on and how they relate to other things in the child’s life. So, I think that if you’re working on child language you really better have your own children because you won’t find out many important things just from bringing kids into the laboratory and reading things about child language. Because if you are a parent who’s tuned to what the child is saying, you notice changes that wouldn’t be picked up in any particular study in a laboratory. In fact, most of the important child-language research for the past 200 years has been done by parents – philosophers, psychologists, linguists – who just got intrigued by listening to their own kids.

Q: You mention something in your article about adults having a more static way of language use, because they’ve grown accustomed to the schematics of the language whereas children are more interactive and they’re still trying to learn the rules of the game. So, have any interesting new ideas come to you out of your research with children and the interactive aspect of their language use?

DS: Are you asking about where language change comes from?

Q: No. Let’s say we have an adult who knows the aspects of the language and a child who’s figuring out the aspects of the game and is still playing with the rules. I’m just wondering if any noticeable differences in cognition and perception that you can generally group together have been perceived in the research.

DS: Well, children are shaped by the language really, really early in terms of their conceptual development. Essentially you’re talking about children’s semantics or their syntax. Yeah, they’re playing with syntax and it takes them a long time to get it right. And, eventually they do get it right. I think that’s part of children’s drive to be like the adults in every way; to walk like them, to have the same values, the same way of dressing and preferences until they become rebellious…But, on the conceptual level: Research, especially done at the Max Planck Institute for Psycholinguistics in Nijmegen, shows that very young infants of a year and a half already respond to visual stimuli differently depending on what their native language is and how those stimuli are categorized in the language that they’re exposed to. Even before they speak very much it means that they’re already listening to the language and figuring out what categories are being referred in that language.

There’s work on infant perception both in speech sounds and of some categories of some nonspeech events. For instance in Japanese there’s no distinction between ‘l’ and ‘r’. They have difficulty hearing the difference between the two and they produce a sound that I can’t imitate that’s somewhere between ‘l’ and ‘r’. And, if you take 6 month old infants in America and Japan and you give them perceptual tests then there’s no difference in their capacity to distinguish between ‘l’ and ‘r’. So, there is a sort of basic perceptual capacity. But by 12 months, the Japanese kids can no longer hear the difference between ‘l’ and ‘r’ and the American kids can still hear it. So, that means that before they’re even talking they’re listening to their language and dropping the distinction that doesn’t turn out to be important. On the other hand in Swedish there are more vowel distinctions than there are in English. And, Swedish babies continue to hear all those vowel distinctions that American babies don’t hear. So, that’s the input language delicately shaping what you pay attention to. And, there are only some beginning experiments that show that this is also true for the way infants categorize non-linguistic events. So, it probably works in the same way.
Q: So, why are you studying deaf children with hearing parents or deaf children with deaf parents?

DS: I'm consulting with Nini Hoiting, a psycholinguist at Koninklijk Instituut voor Doven "H. D. Guyot" in Haren. She has been gathering videorecorded data there for many years and is in the process of analyzing and writing up her findings. Most deaf children have hearing parents so this is interesting because then you can study deaf children learning sign language as a first language and the parents learning it as a second language.

Q: Is there a major difference between Dutch Sign Language and the Dutch spoken language?

DS: Yeah, they're two completely different languages. For example, sign languages are different from spoken languages because you can encode path [the direction of movement -ed.] and manner [the physical way in which someone moves -ed.], simultaneously. So, if I set up a house I gesture the shape of a house I can go to the house [walks 2 fingers on his hand] while I have path and manner happening at the same time. In English I'd have to say something like "I walk to the house." What's linguistically interesting about sign languages is that the information is conveyed simultaneously rather than successively.

Q: Because it is visual?

DS: Well, it's visual and it uses all of these 'articulators' - the hand moves in space, parts of the hand move at the same time; the eyebrows; the eyes; the tilted shoulders, the expression of the mouth, so that the conveying of information is very complicated by this simultaneous layering of information.

Q: Would you say sign language is more complex than spoken language use?

DS: Well, no...it's a different kind of language. But when you work with sign languages for a while you realize that we leave out a lot in our descriptions of spoken language because we work within transcriptions. And, written transcriptions leave out intonations, stress, eye contact, gesture. But, in fact when we are using language we all use them simultaneously. So, spoken language has the same complexity as sign language but that hasn't been acknowledged because the entire history of linguistics for the last 2500 years has dealt mainly with written language, which is only a tiny part of language use.

Q: So, I'm curious...Is there a main hypothesis or idea that you're trying to corroborate with the research that you're doing now?

DS: I wouldn't quite put it that way. One of the issues that I'm interested in is what the range of possible human languages is. And, sign languages correspond to a group of spoken languages which are little known. A lot of American Indian languages, Eskimo languages, some languages in the South Pacific, in the Caucasus, are like sign language in that they put almost all of the information in the verb and you don't need to use nouns or pronouns often because the verb will tell you who did what to whom, where it happened, why it happened and so forth...

So, by studying sign languages and those kinds of spoken languages we can characterize one way of building a language: putting abstract information into the verb as opposed to the languages that are more familiar - including all the European languages and Japanese and Turkish and Arabic and mostly the languages you would know about - where there's a more equal division of labour between nouns and verbs.

We're trying to understand what the possible types of human languages are.

Q: Now, sign languages are much younger than most spoken languages are...

DS: That's a good observation. And, as a matter of fact: English and American Sign Language are mutually incomprehensible. Everywhere where a deaf community is established they have evolved their own language. And also, like you said, they are relatively young because communities came together around schools for the deaf, which didn't start being established until the late 18th century. We don't know anything about their history because you can't archive the evolution of sign language except for some limited descriptions that are available.

Q: You would think that since sign languages are much younger that they would come much closer to a more intuitive way -perhaps less culturally influenced- of speaking, whereas most language today is so culturally embedded that it's a lot less "fresh".

DS: I think that's true and people have made that argument about sign languages.

Q: Could you elaborate on the concept of 'thinking for speaking', which you developed?

DS: Sure. In order to say anything in any language you have to arrange your thoughts according to the categories of that language. So, in reaching for this glass [points to the glass on the table] I don't have to think in any way about speaking. I look at it. I see its size. I adjust the shape of my hand to grasp it. So, that kind of thinking and speaking is clearly independent of language. And, much of our everyday behaviour has no language at all. We're carrying out routine motor behaviours. We prepare a meal. We drive a car. You don't tell yourself in words: "Now I move my right hand from the steering wheel to the gear shift." You simply do it. Now, some people think there can't be any thinking without language. Of course what I just described is lots of thinking without language. As, for instance when you remember visual scenery or what someone's face looks like, or a melody or smell. There are all kinds of thinking without language. But the other error is to believe that when you're thinking with language your thoughts and your words are exactly parallel, that your thoughts and your words are just running off together and there's no difference between them. A moment's reflection can convince you that that's not true because you can start to say something and then stop and say "Wait, that's not what I meant. Let me say it another way", which means you know in some non-verbal way what it is you want to say. You can modify it.

So, there's that break between thinking and speaking. But, when
you decide to encode a message in language, you’re then forced to tell what the language tells you to do. So, if I want to say “What’s in this glass?” in English, all I have to say was ‘in’. Or another example: “The liquid is in the glass. ‘In’ doesn’t tell us anything about whether it’s liquid or solid or what the shape of the glass is. That’s all left to inference. ‘In’ is a very general word in English or Dutch. I can say: “My hand is in my pocket” but that’s a very different ‘in’ than “The liquid is in the glass”. If I find a crack in the glass then that’s another kind of ‘in’. So, ‘in’ only means a general relationship of containment. We apply our world knowledge to decide what the default interpretation is.

Q: The context around it
DS: The context and the cultural understanding.

Q: Yes, in your article ‘Thinking for Speaking’ you give the example of the term ‘friend’ in English and Dutch use. Where in Dutch the sex of the ‘friend’ is already included in the noun as opposed to English where it’s not. You’d have to specify it in the story you’re telling. If for instance I wouldn’t mention a person’s gender, throughout a story I’m telling you (in English), you might get suspicious or curious why I’m not telling you if my ‘friend’ is male or female because the sex is not included in the noun in English as opposed to Dutch where the gender of the person is already included in the noun ‘vriend’ or ‘vriendin’.

DS: Yeah, but it’s not just context it’s also pragmatic interest. For instance if I say: “She put the candy in her mouth.” You tend to interpret that as the whole candy in her mouth. But if I say: “She put the cigarette in her mouth” you know she put the end of the cigarette in the mouth because you know that’s how cigarettes are conventionally used in our society.

Q: Ha-ha…true
DS: So, that’s the pragmatic interpretation. We figure out what the default meaning of ‘in’ would be, given other things around it. In another language, you may have no word for ‘in’, you may have a word that means ‘in a cylindrical container’ or that the thing that’s ‘in’ is liquid or solid. So, then whenever you say: “There is liquid in the glass” you have to think about the shape of the glass, or what the substance is… that is ‘thinking for speaking’.

We can get away without paying attention to some things. But, if our language requires us to then we have to pay attention to it. So, it’s the kind of thinking that goes on when you’re preparing your ideas for expression in a linguistic expression - which, has to be shaped by what the language provides. The language provides you some options and in some cases you’ll have no options at all. For instance if you want to refer to this table in German, you have to know that it’s masculine and if you want to refer to it in Spanish you have to know that it’s feminine.

Language is just a suggestion based on a very limited notation system.

Q: In your article ‘Language and Thought Online: cognitive consequences of linguistic relativity’ you state that: “The pervasive effects of language, selective attention and memory for particular event characteristics are based on mental representations.” So, you’re not necessarily talking about ‘thinking’ but more about the in between process of trying to get out of ‘thought’ and into a form, which in this case is language?

DS: Exactly. You have to have a ‘formulator’ that mediates between the mental representation and the expression.

Q: So, language is never exact. It’s always a ‘come-close to’ what thought is, would you say?

DS: It can’t ever come anywhere near it. Language is just a suggestion based on a very limited notation system. Thought is always going to be richer than language. But, ‘thinking for speaking’ is the level at which thought is forced into that schematic expression that a particular language gives you.

Q: So, do you believe – as Chomsky does – in a universal grammar?

DS: No. Chomsky’s universal grammar proposals have never been fully or convincingly demonstrated, in my opinion. It’s an abstract belief system like “Platonic ideas”. Chomsky keeps us backtracking what minimalism is about, which is removing more of his earlier proposals because they don’t work. And, what you’re left with is a language universal that’s something so schematic that it’s not really very interesting. Chomsky’s argument comes from the, what I call, “poverty of the imagination” side. He says: “I can’t imagine how a structure like this can be learned so therefore it’s innate and not learned.”

What’s more interesting to me is that there are sets of elements out of which all languages are built. And, what we have is interacting constraints. If a language has one piece it’s likely to have another piece. And, those interactions can probably be explained by online processing with factors of production and comprehension.

Q: That we all share as a human characteristic or maybe a biological one?

DS: The processing constraints are very general issues of attention, perception and memory that are not specific to language. But, when you apply them to language you tend to get certain kinds of things co-occurring. So, if you have a language – like Turkish or Japanese – where the verb always comes at the end, those languages don’t have prepositions, they have postpositions. So, that’s sort of a strategy that says it’s easier to have all of your processing strategies go the same way. You’ll say for instance “Water, glass in” or “Coffee drink”. In either case you’re putting the referential term at the end. So, almost universally, languages that put the verb at the end also have postpositions instead of prepositions and a whole bunch of other things that go...
together. So, I think there are universals of that kind but they are implicational universals. If you have A then you’re more likely to have B. We try to find explanations for that rather than say well it’s just built in [...]. In fact, you see languages changing over time. You see languages in intermediate stages where they’re not quite consistent.

Q: Do you have an example of a language where you would say that it’s in an intermediate stage?

DS: Well, every language is. No language stays put.

Q: But maybe, one compared to another? I’m just wondering whether that is why sign language is so interesting to you, because it is younger and perhaps less stable.

DS: Yeah, that’s true. Sign languages change quite rapidly. Umm… but think of German for example. German has an active case system that’s no longer present in Dutch or English. So, in German you can say “Den Mann liebt die Frau”, and you know it means the woman loves the man because it’s “den Mann”. You can’t do that in Dutch or English anymore. So, if you want to change the topic relations in Dutch and English you have to use something else. You have to put in various kinds of little words or contrast or stress or some-thing of that sort. And, if you look where case has remained in Dutch and English it remains only in some of the pronouns.

Q: So, some of it is lost?

DS: It’s almost all lost. German will have the difference between “Ich” and “Mir” and “Mich” and in Dutch it’ll just be reduced to “jij” and “jou” or reduced to “Je” in many cases. In English it’s just “You” in all situations.

Now, you can see where there are changes going on in English now also. You’re told in the grammar books, for instance, that English has a distinction between “Who” and “Whom”. But, English speakers don’t honour that distinction anymore. They’ll say “Who did you see” not “Whom did you see”, that sounds old-fashioned.

So, that’s a case where something has changed within the past 2 generations. “Whom” is now almost gone.

Q: Right, in Dutch we have that too, where we have the older “Gij”, just like in English (Thou), where they’re now not really using that distinction anymore. It’s “U”. [Although they still maintain this distinction in Flemish in Belgium –ed.]

It seems like nowadays anyways, they’re trying to make language all as simple as possible and leave most of the more difficult spelling and pronunciations out of the language.

DS: But then you have difficulties somewhere else. You never simplify totally because when you take something out you have put something back in somewhere else.

Q: Oh, I agree. I’d like to see language expand instead of implode because I think, that since thought is so complex, the bigger, the more complex your language. Perhaps the...

How do you decide whether to call a certain person who carries out a certain act, a ‘terrorist’ or a ‘freedom fighter’?

DS: Well, there’s no way in which you can define one language as being more complex than another. If you look at all of the devices available in a language, my guess is they’ll balance each other off. So, if you lose case-inflection then you’ll have more complicated word order laws and richer uses of prepositions because you don’t have cases anymore. So, it’s unlikely that overall, if you find some which were very much simpler than others; except for recent languages – like Creoles – that haven’t existed for very long. Although there’s some evidence that languages spoken in small face to face societies – unwritten languages – tend to be more complex.

Q: More complex?

DS: More complex! I think that is because when a language is spoken by a larger group, by people that don’t know each other as intimately, as it is over time learned by a lot of immigrants for example, that there will be some simplification because of the lack of common knowledge and the fact that there are constantly new people learning the language.

Q: So, the larger the group the simpler the language? Although there’s probably some borderline where it stops simplifying because it’s not necessary anymore…?

DS: Yeah, that could be.

Q: Do you have an example or an anecdote about any of these smaller groups that have these more complex languages?

DS: Well, if you read some linguistics research you’ll find the American-Indian languages just make dozens and dozens of distinctions that we just can’t be bothered with.
Q: I guess, the most well known example is the one about Eskimos having 50 different terms for snow.

DS: Well, that’s not true actually. And, the numbers of words don’t matter because you can invent new words for anything you want. So, the Dutch have maybe 30 different words for types of rain because that’s really important here. But, you can invent those words.

Q: Ha-ha… We do have a lot of words for rain.

Q: Do you believe that language steers us in certain direction with our thought, that, perhaps, it leaves out certain aspects?

DS: Yeah, that’s a really hard question. And, we don’t really know yet. The effects of language are pretty subtle and there are lots of other things like values and where you fit in to a society. And, I think there’s a tremendous amount of research to be done.

I just read an online review on a book of research on the use of language in the law. And, it showed how the language in which questions are asked in legal proceedings really affects the answers and effects the presuppositions of the jury and the judges and the witnesses. There are all kinds of underground effects of language. Some of those come from which language you’re speaking but a lot of it comes from what choices of words you make within a language.

Q: Elizabeth Loftus…

DS: Yeah, that’s right. Elizabeth Loftus did a lot of research on how eye witness testimonies can be easily pushed by how the language is phrased.

Q: So, in a sense it seems language is power…

DS: Yeah, we use it to categorize and then to evaluate. How do you decide whether to call a certain person who carries out a certain act, a “terrorist” or a “freedom fighter”? He might be doing the same thing but in calling him one or another it brings a whole other set of associations and consequences for actions.

Q: I think it’s interesting how philosophers and writers and thinkers have felt that language – besides being a tool or an instrument – can also be an obstacle or barrier to overcome. Nietzsche for example thought our language was a symptom of an underlying morality and Heidegger thought [German] language was inadequate to describe Being.

Where is sharpness when the knife is gone?

DS: Yeah, and you can also see how philosophical issues arise in a particular language. French has this strange word called ‘conscience’ which means both ‘conscience’ and ‘consciousness’, which, to us are two different notions. But, if you grow up thinking that there’s one thing called ‘conscience’ that leads you then to pose certain psychological and philosophical questions you wouldn’t pose otherwise.

And, a lot of the history of science and history of thought has to do with these strange hidden things within language. My favourite example is the history of the physics of ‘heat’. Where, for several centuries European scientists looked for ‘heat’ substance. They looked for phlogiston or caloric. And, they would weigh a pitcher of water and heat it and they would weigh it again and they would be puzzled as to why the weight hadn’t changed because ‘heat’ had been put into it. “Does heat have no weight?” All of this because ‘heat’ in Indo-European languages is a noun and it was thought that you can add ‘heat’ or remove ‘heat’ or lose ‘heat’ or regain ‘heat’. Of course we know now that that was mistake. ‘Heat’ should’ve been verb. It’s kinetic energy. The way this was solved was by Count Rumford - who developed the kinetic theory in, I think, the 1820’s - while visiting a military factory where they were making cannon. And, the way you make cannon is that you have this tube and you drill into it. So, you have this bore going into metal. And, it gets very hot. So, he said to himself: “Wait a minute. Where does the heat come from?”

There’s no fire, all they’re doing is turning metal against metal and it’s getting hot. So, then he came to the conclusion: “Wow, heat isn’t a substance.” You have to be confronted with a situation where it doesn’t fit anymore. If you were doing experiments but because of what Poincaré called “Chance in a prepared mind” happened. So, the whole history of the search for ‘heat’ substance may never have happened if ‘heat’ hadn’t been a noun in Indo-European languages. And, then you think that all of our philosophy and political theory is based on that… all these problems come from taking words and the implications of those words and fitting them into certain syntactic frames, without realizing that the syntactic frames have meaning in themselves and had implications in the beginning.

Q: I think, one of the best examples of that within philosophy is the word ‘mind’.

DS: Yeah, and the whole ‘mind-body’ problem. My favourite answer to that is an 8th century Chinese philosopher who saw it all in his own way. Where, it was clear to him that ‘mind’ is function of a living body and not a thing located in the body. And, the way he posed the question was “Where is sharpness when the knife is gone?” Sharpness is an attribute of the knife. It can’t exist when the knife is not there. Why do we think that ‘mind’ is an attribute of the body and then when the body is gone there’s still a ‘mind’ somewhere and we’ll call it the soul or something?

Q: I’m not sure but I am sure that dualists or religious people would.

DS: But if you realize there’s simply no such thing as a ‘mind’, that there’s simply the activity of this organism while it’s alive then, you don’t say: “Where is the activity, when the organism is dead?”

Q: That’s a very Eastern philosophical way of approaching it. There was the idea in certain Indian philosophical schools that ‘mind’ is an aspect of an organism or a movement of…

DS: Yeah, it’s really, I think, basically a linguistic problem. If you have dualism you’re always left with the unsolvable issue of how two completely different kinds of substance can influence each other. And, then you have to create something invisible and mysterious or supernatural… So, in the end I think every philosophical problem is a linguistic puzzle, like Wittgenstein said.