

## David Olson

- Born 6/16/1935 in Saskatchewan, Canada
- B.Ed. (1960) University of Saskatchewan, M.Ed. (1962) and Ph.D. (1963) University of Alberta

### Major Employment:

- Ontario Institute for Studies in Education – 1971-present, Professor, Human Development & Applied Psychology
- University of Toronto – 1998-present, University Professor

### Major Areas of Work:

- The development of language, literacy and cognition; children's understanding of language and mind; the psychology of teaching.



## SRCD ORAL HISTORY INTERVIEW

### David Olson

Interviewed by Courtney Cazden  
Ontario Institute for Studies of Education  
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### **Cazden: Okay, David, family background; anything really up to--until college?**

Olson: Yes, my parents on both sides, father and mother, were children of immigrants from Sweden. My father's family came from Sweden about the middle of the 19<sup>th</sup> century. My mother's family came about the turn of the century. My mother was trained as a school teacher but she married a farmer. Her parents were farmers and she married a farmer. And I lived on a farm until I was about eight and then the parents sold up the farm and bought a big house in Saskatoon, Saskatchewan, where they kept university students as boarders. And so our house was full of university students for some years actually.

### **Cazden: In all different fields?**

Olson: Students came from the same part of rural Saskatchewan that we had come from. When students from that part of the province came to the university they sought out my parents as a place to stay. So they kept boarders and that's the way they made their living in Saskatoon for a number of years. I went then to a boarding school for my high school. It was run by a Protestant church, the Church of Christ, and it was fairly religious but not wildly fundamentalist or anything. But it was a religious based school and I took my high school there. I had quite a remarkable teacher there named Lillian Torkleson who had very high standards and we, as a class, enjoyed working hard for her and I remember I had many tests in mathematics that I would get a hundred percent on.

### **Cazden: She was a math teacher?**

Olson: She was the math teacher. She expected you to do well. And so she was a good teacher. I also had good teachers in Saskatoon. Mr. Smith was one of them in the eighth grade who taught grammar, maths, and geography. We learned to parse sentences and I learned so much grammar in that one year that right through college, I would get exempted from having to take composition classes and I could just do essay writing and so on. And I enrolled in the University of Saskatchewan I think this was 1953, in an arts and education program. I planned to be a teacher and I did recently well in the university, especially after--after two years of university, I went and taught school for three years which was a real eye opener.

**Cazden: Oh, I didn't know that.**

Olson: And I didn't do well as an elementary school teacher. I couldn't manage the kids well. They just sort of took advantage of me. I was much too gracious and gentle, I think, but high school I did--I taught quite well in the high school and enjoyed that but then went back to the university. And having taught--

**Cazden: What did you teach in high school?**

Olson: I taught sciences--science and math but I also coached sports and so on. I liked all that sort of thing. And after I had been teaching--this is one of the lessons that influenced my later psychological theories--after I had been the teacher, I found it extraordinarily easy to learn. Because I could use the criterion of the ability to explain things to someone else as the criterion for judging that I myself understood things. There is a direct link between explaining and understanding. So from then on, the university was so easy and I got very good marks after I went back to the university and one of my professors named Stan Clark took me aside one day and told me I should go to graduate school and he arranged for me to have a fellowship at the University of Alberta, where I did my PhD. One other person that I had mentioned in my University career at Alberta was Clifford Christianson, who remains a friend to this day 'cause he was the one who, even if I never took a class from him, would slip me books to read including Bruner's The Process of Education which really opened my eyes, I must say. I loved that book. Other students in my class also read it and they would say things like, "Well, what's so interesting about that?" It just didn't catch their imagination but for me, it was an eye opener. Clifford Christianson also put Luria's books into my hands and things on his so called second signaling system and the higher mental processes and so on and I became interested in--in thinking and language and then I read Vygotsky's Thought and Language and--

**Cazden: What year is this?**

Olson: These were years--I think I finished my PhD in 1963, so it was the years '60 to '63, but by '65, I had read quite a bit of Piaget and some of Vygotsky. A lot of Luria, who talked about the role of language and the regulation of behavior. I thought this was terrific stuff and I wrote a number of papers in those years, too, one to the Psychological Review, which was rejected. But the reviewer thought very positively of the paper and thought that I should just keep pushing this line of argument, so that was encouraging, and I did keep working on issues of language and thought. I finished my PhD in '63. I taught at Dalhousie University in Halifax, Nova Scotia,--through '63, '64. I wrote--I wrote a letter to Jerry Bruner explaining to him these experiments I was doing on children's use of language in regulating their behavior straight out of Luria's kind of experiment except I had high--high tech equipment at Dalhousie. They were a very scientifically minded bunch out there.

**Cazden: Was this--was your writing to Bruner a result just of The Process of Education or had you read more of his stuff?**

Olson: I had read more of his--his things and I knew he was very interested in language and cognition. I had heard him give a talk and I had read some of his papers. He was extraordinarily productive as you know in those years. And I kept up with his reading but anyway, I wrote to him telling him about these experiments I was doing on language and thought and I, in fact, asked if it would be possible for me to come and spend some time at the Center for Cognitive Studies at Harvard as I had the summer free from May 'til October. Dalhousie had a very short academic year, bless their hearts. So he thought that would be fine and I came down and he introduced me to a task that we called the bulb-board task where children could look at a pattern--a visual pattern--and then push bulbs to see if the--if the circuits set up in this panel of bulbs corresponded to the visual pattern shown to the children.

**Cazden: Bulb Board?**

Olson: Yeah, bulbs--little light bulbs in rows and columns and if you pushed them down, they could light up. And if the--if you pushed the correct bulbs, they'd light up. If you pushed the incorrect bulbs, nothing

would happen so it was a way of seeing if children could copy a pattern onto a matrix. And I ran that study when I was at the Harvard Center for Cognitive Studies that first summer. And got fairly interesting results. Interesting in the sense that there were some patterns that young children just couldn't do and some that they could do. At the end of the summer, Jerry asked me to give a talk to the research group at the Center for Cognitive Studies and I clearly remember Roger Brown and George Miller and Jerry Bruner showing up, me very nervous giving this talk. And I had all this nice data showing little kids couldn't do things; bigger kids could, and I could show which patterns they could do and which ones they couldn't do and I thought that was an explanation of spatial development. One of them, I think that it was either Roger Brown or George Miller or Jerry Bruner, said to me, "Yes, that's all very well. So--so they're improving but what are they doing?" And I searched--I couldn't even grasp the question; I said, "Well, what they're doing is thinking spatially and they're getting better at spatial thinking. That's what spatial--thinking about space--involved. You just understand space better. And they said, "No, no, no, no, no. What are they thinking? What do--the ones who can't do it, what are they thinking?" I had no idea. But that planted a seed of doubt in my mind. I went back to Dalhousie and over the winter I did figure out what they were doing. And I wrote a draft of this thing when I had figured out what they were doing and I sent it to Jerry. He was composing a book at that time called Studies in Cognitive Growth, and he asked if I would contribute a chapter to it. So I sent him this draft. It was about fifty pages long full of charts and tables and norms and standards and standard deviations, full of everything as well as very objective prose. There were a number of Ss you know subjects in the study, age, this and that and every technical detail and about two weeks later Jerry returned this little thin paper. It was about ten, fifteen pages type written and I looked at this and I said, "Well, what could this be?" And here my name was on it. So I read it and sure enough, it was my paper but it was completely re-written. He used the data. And he used the main ideas of the paper, of course, but he had just re-written it in a way that was so graspable and so interesting. Mine had been so boring in retrospect. And his had been so interesting and I studied how he had written that and every since I've tried to write in that direct kind of way as if you're really speaking to someone, trying to make clear what you're saying, no distancing the reader. Keep close to the reader and always keep asking yourself the question, "Will they know what I mean by this?" And it changed my writing forever.

**Cazden: Can you--give a short summary explanation of how you came to understand their question, "What are they doing and what the children were doing?" What does that mean--what does that come to mean?**

Olson: That's a very good question because this has really been one of my agendas in my subsequent work, too. I think it comes out of this idea that psychological theory had the tendency to explain performance in terms of factors. So you could explain, say, achievement in terms of IQ, SES, and so on. You have a list of factors and they all seem to explain things. You could explain performance better if you had a measure of IQ as well as spatial ability or the Ravens--we used to throw in tests of every description to predict--to account for the variances we would say. So spatial ability accounted for some of the variance. And that was supposedly an explanation. Now to this day, it saddens me to say this, but to this day, especially in educational psychology but also in child developmental psychology, explanations are still offered in terms of factors that account for variance. What the cognitive revolution, which you and I both had involvement with at the Center for Cognitive Studies, attempted to say was we don't want factors. We want to know what people are thinking and why would they think that and how do they come to change their thinking about anything? And I've--in my own little way, I've tried to reorient the field in that direction. Quit telling me about factors that account for variance. Tell me about what people are doing, what they think they're doing, what they would like to do, what standard they would accept as indicating success, what will they--how will they attribute blame if they're not successful. Who will they attribute it to? So in my latest book, this one on Psychological Theory and Educational Reform, I go so far as to say that psychology commits a dis-service to the extent that it takes away people's responsibility and agency for their own behavior. You know, we're so busy saying these children do badly because--oh, they have slightly lower IQ or they come from a poor family or they have this disability. We have all sorts of explanations that take responsibility away from the agent whereas while I acknowledge that those may be important factors, I want to re-emphasize the fact that even children are intentional agents doing things for reasons and they should be given credit for success in their achievements and they shouldn't be let off the hook too easily for failure. You have to make allowances, of course, for individual differences and for the fact that they think--may think--it's a different task or that they have different criteria for judging that

they're successful. I mean you have to take those things into account, too, but in the process, you also have to--this is my argument--you have to always acknowledge the fact that people are basically responsible for their actions and they should be rewarded for their successes and they should realize that there are implications for failure. So the issue of responsibility with the intentionality, agency, essentially accountability is absolutely central to my last book. I tried to work that as a basic theme in my last book. The question of responsibility--who is responsible.

**Cazden: That's such an interesting intersection of a sort of ethical principal in a way with a cognitive principal. Then you've got to find out what that intentionality--what the thinking is behind that intentionality of a child.**

Olson: That's right. That's right. So it is moral and cognitive together and that to me is a new thing. I always avoided moral education; never thought much of it to tell you the truth. Only to find that in my own thinking about cognition, you have to take that as a sort of a bottom line, who is responsible? Who thinks they're responsible and responsible for what and under what conditions will they accept responsibility for actions or inactions and so on. Now, that's a delicate issue because at the same time you don't want to marginalize or discriminate. Now, see you and I could have quite an interesting dialogue about this because you're quite conscious--you, Courtney Cazden, are quite concerned with diversity. And I'm--I'm conscious of it but I haven't worked on it like you have. I've worked more on responsibility and the cognitions you have to have in order to take on responsibilities and meet your responsibilities and so on. So my emphasis on the--well, you could say emphasis on the cognitive and on the responsibility side, the individual responsible side has to be meshed with social conditions under which people can accept responsibility because not all people in all environments or all social conditions will take responsibility for certain lines of action. The question is working out who's responsible for what? And under what conditions.

**Cazden: That's a very interesting point because I remember when I was in--presenting some work by a math educator, Deborah Ball, in which she was working as a teacher with a young African American girl; a third grader. And the discussion as she wrote about it in the paper was--involved the girl's African American-ness. And when I mentioned this in a AERA--I think--forum, question was raised about the dangers of attributing what the child did to her African American-ness. And my answer was--I wasn't--that Deborah wasn't mentioning and I wasn't mentioning it in order to be part of an explanation of what the child was doing but instead because it was a very important part of the teacher's response to the child--the concern, Oh, if I don't teach this child this concept, her next teacher will think she's dumb because she's African American so it was because of the affect on a person's perception of and response to the child, not to explain the child's action, but it is a very important issue.**

Olson: Yes--no--very nice and I agree with that completely. I've also phrased this in terms--this issue about responsibility and accountability and taking on responsibilities and earning entitlements and so on--I've also addressed this in terms of the difference between causes and reasons. So psychology has tended to look for causes of action. Again, you get variables like spatial ability as a cause of action or a disposition as a cause of action or ethnicity can be a cause. Whereas, I've tried to focus on reasons, because reasons can be held accountable by the agent. You see, if something I do is just a product of the forces on me, I'm not really responsible for it. It's just what happened to me; it's a happening. It's a cause; my behavior was caused, so I'm not responsible. Whereas, I'm trying to make people responsible or at least address the issues of responsibility by saying that people have reasons for action and they should evaluate the reasons; there should be good reasons for acting. And if they are acting for reasons, then they can be held accountable not only for the action but for the reasons for acting. You see, it makes the whole issue of responsibility into a more cognitive kind of enterprise so I contrast causes and reasons. It's too simple--

**Cazden: Will you come back at some point to an example of that from your research? You don't have to do it at the moment. But I think it would be interesting to play that out.**

Olson: Well, let's just pursue it now a little bit.

**Cazden: Okay. Good.**

Olson: I tend to think that if behavior is explained causally, it diminishes responsibility.

**Cazden: Yeah. Yeah.**

Olson: It diminishes responsibility.

**Cazden: Yeah. Yeah.**

Olson: So the question is how do you make people feel responsible for their actions and for the beliefs they hold and for the knowledge they accumulate? Because ultimately you want the child not only to be trained; you want the child to be responsible for what they think and do and the way you--this is really more theory than good evidence--the way you make them responsible is to highlight the reasons for actions and the intentions and purposes behind the actions. Now, we did do research in this direction on the theory of mind kinds of tasks. Janet Atington did more of this than I did by studying children's idea of a promise because a promise is an intention to carry out an act in the future. Well, children confuse the fact that you do something because you had said you would--you've taken on a responsibility--with the immediate physical causes of the action, such as that you didn't go because it rained. The rain caused the action. Not that your having promised to go caused or failed to cause the action. So that line is played out in my thinking although my experiments weren't on promising. Janet Atington did the work on that but it's very much in the spirit of the thing that I'm talking about here.

**Cazden: A good example.**

Olson: Yeah.

**Cazden: Now, the--leaving aside for the moment the Center for Cognitive Studies and your work there and subsequently, are there any other adult experiences--external to universities that played any part in your work in child development?**

Olson: Not too many. I had--I always had good academic positions and good funding; I could pursue the things that I wanted to--or that I thought were worth pursuing. One thing that changed--didn't change my career but certainly influenced my career, was the fact that I'm a Canadian and thought that I owed something to Canada. So while I was tempted to stay in the U.S., when we lived in Cambridge, Mass.; I loved Boston obviously, and we spent time at the Center for Advanced Study in California. I loved California too but my thinking always was that the U.S. has plenty of talent; they don't need me. But Canada needs to develop talent so I felt some obligation to stay in Canada. Another person who exemplified this even better than I did was Robbie Case, a colleague here at the University of Toronto who was an extraordinarily good Scientist.

**Cazden: Sure he was.**

Olson: But he always wanted to make his contribution in Canada so even if he had jobs at Stanford and Berkeley, and so on, he--

**Cazden: He came back.**

Olson: He came back and then, unfortunately, he died so young. But he's had lasting impact on our field. Anyway.

**Cazden: Uh huh. Certainly has.**

Olson: So that's--that's a consideration. I have a large family; that probably was a consideration. Hard to move although we did spend a year abroad several times; I had fellowship at various places. Like the

Netherlands Institute for Advanced Study and the Stanford Center for Advanced Study (CASBS) and I had a fellowship at Wolfson College, Oxford. Jerry Bruner arranged that, I would say. And then most recently at the Wissenschaftskolleg in Berlin which was another Center for Advanced Study, an extraordinary place to work, and the advantage of having those years at those places was that at almost each and every one of them I finished a book or so. I got a lot of writing in the Wissenschaftskolleg in Berlin, every day at nine o'clock, I would go to my office and I would work there until lunch time and then I would work again until four thirty or five just knowing that if I put in the hours, I would get the job done. And it's quite an extraordinary dedication to the writing but everybody else was doing that there, too, so I mean I would have felt like a shirker not to do it. But I always sort of knew that if you just log the hours, you'd get the job done and I've been pretty good at that.

**Cazden: Well, obviously, you've--you were good enough in your research and your writing that you got recommended for those opportunities that many people don't have that kind of time available for--**

Olson: That's exactly right.

**Cazden: --for writing free of other responsibilities.**

Olson: One of these came from Lawrence Cremin who was head of Spencer Foundation. I should tell you about this because it's extraordinary. I was sitting in my office and one day the phone rang and I picked it up and I said, "Hello," and he said, "This is Larry Cremin calling." I said, "Oh, really, well, I'm honored." I said, "I know your work very well. So, what can I do for you?" And he said, "Well, actually, I'm the head of the Spencer Foundation and I would like to give you some money to support your research for four or five years." "So how much money would that be?" he said. [Laughter] And I had no idea, I said, "Well, what is the sort of range you're thinking?" And he said, "Oh, perhaps two hundred fifty thousand dollars," which paid my research for I think for five years just based on a telephone call like that.

**Cazden: Was that what Spencer called a Senior Scholar Grant?**

Olson: Yes. Yes. And that made an enormous difference, too. I was beginning to work on written language and literacy and that was plenty to keep me going for some time. I had a Research Group and a number of good students I mention at some point in this discussion and in fact, the part of that money was used to pay for my--pay half my fellowship at, I think, Wolfson College, Oxford. I don't know--some place anyway, they'd give me time off for more or less a year or half a year or something like that to do my writing. My Institute here has also been very supportive, I must say. The Ontario Institute for Studies in Education, because we had a Sabbatical program that gave you leave every five years, although it's I think back to seven now, if you had a project--if you could qualify in some sort of way. And when I got fellowships at these places, the fellowship would pay half of my salary and my Institute as part of the Sabbatical program would tend to pay the other half so that's how these things are funded and as I say, that funding--without that kind of funding and without some breaks in responsibilities, I couldn't have done so much.

**Cazden: That Spencer money, I also got a phone call from Larry Cremin.**

Olson: Isn't that wonderful?

**Cazden: Same thing. But that kind of money with very loose guidelines and nobody looking over your shoulder and monitoring is terrific. I don't know if Spencer now is still doing it. With its new President but it was--it's been wonderful...**

Olson: Yes, I regret that I never met Larry Cremin. He died too early.

**Cazden: Yes. Yes.**

Olson: But I knew Tom James who had also led the Spencer.

**Cazden: Yes. Before, before--**

Olson: I knew him and he had high regard for my work, too, actually. So maybe he had put Larry Cremin to look at me or something. I don't know. Anyway, I had--

**Cazden: Hard to know.**

Olson: I had good feeling for him as well. Quite remarkable people.

**Cazden: I think the President of Spencer Foundation in those years could just--**

Olson: Do--do what they thought best.

**Cazden: Bestow as they wished. Adult mentors; you certainly have mentioned Jerry Bruner. Who else in the field has been important to you?**

Olson: Yes, yes. I told you that Professor had Clifford Christansen put me on to some books--

**Cazden: Oh, back in Saskatchewan--**

Olson: Back in Edmonton and then he--and he's often pushed books in my direction. He eventually took a job here in Toronto, too, so I keep in touch with him. He'd say, "Have you seen this book?" And--so he's been an informant but the other major intellectual influence on me beside Jerry Bruner was Jack Goody. I don't know if I've said enough about Jerry. He certainly picked me out--he invited me to the Center for Cognitive Studies from 1965, '66. He published my first major paper and he re-wrote it but that paper in Studies for Cognitive Growth was really what put me on the starting line.

**Cazden: Well, that was a very influential book.**

Olson: It was influential. Yes. And he--he was the one who gave me this bulb-board to fool around with and I hit on the topic of the diagonal. Kids could copy patterns of horizontals and verticals and H's and F's and so on but if I put a diagonal pattern in, they had no idea which bulbs to press.

**Cazden: I remember reading that and being very struck with--**

Olson: Yes, I was astonished at this and I called my office mate who was Jacques Mehler now Editor of the journal Cognition, who was my office mate and I said, "Jacques, come in here; you're not gonna believe this." Because it was a very clever kid--a five year old who could do anything but I'd put that diagonal pattern up and he just hunted around in there and he just couldn't find which bulbs to press. Well, that really intrigued me and then I read Piaget again to see if Piaget had an explanation of things like this and he didn't really. Piaget had an explanation about how the children had to find new--new frames of reference for thinking spatially and so on but there was nothing in there that indicated what was the problem with these children and I wrote a whole book on that called Cognitive Development: The Child's Acquisition of Diagonality.

**Cazden: Had--did Piaget even mention the problem? Mention the diagonal--**

Olson: No. No.

**Cazden: Diagonal; diagonality. [Laughter]**

Olson: It turned out to be quite simple that the children couldn't remember the orientation of the line. They knew it was sloped but they couldn't--see they wanted the sloped line but they couldn't represent it in a way that would allow them to re-construct this. I made a checker-board eventually and I've given children checkers and I would put them in the diagonal holes and say to the children, "Can you do that?"

And they'd all say, "Oh, yes," but then they would go straight down the edges or across the middle or anything else but they couldn't get that diagonal and it turned out that the problem was that they tended to see these checkers as being next to each other in the diagonal. See what I'm saying? Because it made a straight line they would say, okay, these checkers are all--mentally, this is what they would thinking, I would argue--they were looking at these checkers and they'd say, "Okay, they just go next to each other." But the moment they tried to put a checker next to the preceding one, the holes for the verticals and horizontals are actually closer than the holes for the diagonal so they would make a horizontal or a vertical row instead of a diagonal.

**Cazden: So interesting.**

Olson: The--the theory--the hypotenuse and the other two sides--whose theory is that? Pythagoras?

**Cazden: Yes.**

Olson: And so they just put in the next closest hole, which would end up giving them a row or a column. And the way they could get around that was to notice that they had to--well, sometimes they would say, it's not that one and it's not that one so it must be that one. Sometimes they'd do it by inference but other times they would say, they would represent it in terms of, down and over. See they'd use a horizontal reference and a vertical reference but not a diagonal reference. And then they had to represent the diagonal in terms of horizontality and verticality. And that was a re-conception of what the diagonal was. So this was--this was quite interesting.

**Cazden: I was--I was trying to think, why did he mention Pythagoras but you mean because this square plus this squared equals this square. The diagonal is always going to be--**

Olson: Longer.

**Cazden: --longer.**

Olson: The diagonal is always longer than the horizontal or vertical also the checkers are farther apart. So you have to represent it in terms of something else [Several comments at once]. Yeah. Either. So it's a question of mental representation. So I've always--I've told you that I--after that question, why are they doing that? I spent a lot of--

**Cazden: Well, that's a good--that's another good example of what are they doing?**

Olson: What are they thinking; why would they do that? How are they--and the question came how are they representing it which was--the talk--all the talk in those days.

**Cazden: Yeah. Yeah. Of course. But did you come to that explanation of what they were doing figuring it out theoretically in your own mind or did the children ever say anything--did you do this by interviews? Did they every say anything that gave you clues to that line of thinking?**

Olson: No, it was purely by inference from the data. They couldn't tell me what they were doing. But I did some interviews with them, too. I would ask them--I remember asking one child and he said, "I can't tell you; I'm too busy working on this problem." [Laughter] So that was the end of the interview. I'm too busy now, he says. He was trying to figure out these things but I did notice that there were parallels in their language, like they could say, "It's at the corner," or "It's on the top." They could use prepositions like at and on. But they couldn't use complicated ones like down one and over one. Which is sort of a complex representation or up to the right. Up to the right; that's a complex representation--they could say it's that way or that way or it's up or down but they couldn't say it's up to the right which is a complex representation. And when they could, then they could get the thing right. We did another whole book; Ellen Bialystock and I published a book on Spatial Cognition in which we summarized this study and many other spatial tasks in terms of how were the children representing these relations and I think it was, I think, very productive.

**Cazden: But we still don't find--. Okay, so individuals, mentors, significant colleagues--you mentioned Robbie Case.**

Olson: And I was going to say the other major influence on me and the long-term relationship with me was Jack Goody the well-known Cambridge Anthropologist. Shall I tell you a little about that relationship?

**Cazden: Yes, because--I wondered whether that was only because of--primarily because of the oral written--**

Olson: Yes. It was--

**Cazden: --issue.**

Olson: almost entirely because of that. I--when I worked with Jerry--although Jerry and Pat--Patricia Greenfield had written a very nice paper on writing and culture and cognition. In the Studies in Cognitive Growth book--they compared children who had been to school with children who hadn't and the fact that the written language had some explicit use of--

**Cazden: Who were the authors of that?**

Olson: Patricia Greenfield and Rose Olver

**Cazden: Oh yeah.**

Olson: and Jerry Bruner.

**Cazden: Yeah.**

Olson: That the written language spelled out in ways that--

**Cazden: She was probably a graduate student.**

Olson: She was a graduate student at the time, very competent person. And they talked about the importance of writing and they referred to Vygotsky. I checked in the book yesterday and there was some reference to the Vygotsky in that '66 book.

**Cazden: Interesting.**

Olson: And I sort of thought about writing in the back of my mind but mostly when I worked with Jerry, I thought about language and mind, speech and mind. And Doug--

**Cazden: Language meaning speech?**

Olson: Speech, yes. And Douglas Carmichael who was also a dissenter in those days--he was a physicist, I think but he was interested in cognition--came to my office one day and he said, "Have you read this?" And it was an article about Marshall McLuhan from the University of Toronto here, called The New Intellectual Guru or something and--but Marshall McLuhan was talking about writing and I read that article just in a popular magazine and thought, Gee, that's interesting. Maybe the question about language and thought shouldn't be language and thought; it should be literacy and thought. McLuhan sort of pushed in that direction and then I read McLuhan's books, especially the Gutenberg Galaxy which is so interesting but so scattered; there's no theory I would say although there's a kind of a theory but nothing I could use as a Psychologist really. But at the same time, I came across Jack Goody and Ian Watt's beautiful paper called the Consequences of Literacy published in some historical journal Comparative Studies in Society and History but it was re-published in one of these Freeman reprint series. I don't know how I got my

hands on it actually but I read that and I was--I was in seventh heaven. This was absolutely astonishing I thought. So I wrote to Jack Goody saying that I had--

**Cazden: He was what at Cambridge?**

Olson: He was at Cambridge in Anthropology; I was--I had already written a draft that turned in to the paper for which I'm best known called From Utterance to Text. You know that paper in the Harvard Educational Review.

**Cazden: Uh huh.**

Olson: I'm cited for that paper more than any other paper I've ever written. I had a draft of that and I was working on it trying to get utterance, speech, text written. Trying to work out that relationship and I wrote to Jack Goody and I said I've been working on this paper and I'd like to show it to you. And he said, "Well, why don't you come over to Cambridge and we'll have a chat." So I brought along my paper; I sent him my paper, arrived in his office in Cambridge. He hadn't read it. He said, oh yes, oh yes, yes, yes, yes. Where's that paper? So while I sat in his office, he read the paper occasionally saying, "Um." Grunting and groaning noises but he obviously liked the paper. And we became fast friends after that and have been in touch ever since but Goody is sometimes criticized sometimes by people like Brian Street and even Michael Cole who criticize Jack saying that Jack argued that if you'd just make people literate, Walah! Everything is going to fall into place. Well, Jack never said that. And Brian Street identified Jack with the UNESCO notion that everybody in the world should be made literate. UNESCO of the United Nations has their charter on education--the importance--Education is a human right, they say. And the central core of education as a human right is to teach people to read and write.

**Cazden: Yes. Well, they also had a controversial little booklet about literacy should be in the first language.**

Olson: Oh.

**Cazden: It--there's a right to learn your first literacy in whatever is your so-called mother tongue.**

Olson: I like that idea. I like the idea that literacy is important, too; I mean I've spent about thirty years now working on literacy so obviously--it has a use--so obviously, we believe it's important. But Jack Goody gets, by critics, put into category of just being an evangelist for literacy saying--everybody should be made literate. It's not true. What Jack Goody and Ian Watt did and Harold Innis at the University--another at this University of Toronto here--there's a group called the Toronto School actually who we sort of pulled together as having a commitment to literacy. Harold Innis an economist did the first thing on writing--he compared writing on stone with writing on papyrus. Beautiful work in the 1950s. Then Harold--then Marshall McLuhan, of course, who became enormously famous for that line of argument. Brian Stock who is a Classicist here wrote a wonderful book on Medieval Literacy called The Implications of Literacy. Brian Stock and then me on the Psychology of Literacy in The World on Paper.

**Cazden: Did you meet? And actually carry on sort of informal--**

Olson: Discussions of ...

**Cazden: --discussions?**

Olson: Yes. McLuhan was--I don't know what--let me finish about Jack Goody.

**Cazden: Yeah. Yeah.**

Olson: So Jack Goody gets put in the category by Brian Street as one of these advocates for literacy but it's not correct. What Jack Goody tried to do was what Harold Innis had asked people to do--quit trying to make everybody literate and ask what's going on when people become literate. Harold Innis was the first

to say that. He said there are people who--are so interested in converting everybody to literacy that nobody stops to say, "Why literacy? What's the big deal about literacy?" Turn it into a subject to think about rather than just something to promote and that's what's the difference between reading research and literacy research, too, I would say. They are very closely related of course, but reading research is mostly concerned with how you improve levels of literacy.

**Cazden: Yeah, that's true.**

Olson: Literacy research--not quite there--it doesn't really care whether you're literate or not or whether this is the best procedure or not. It just tries to ask the question, "What happens if people start to think in terms of the document rather than in conversational discourse."

**Cazden: But when you say what happens, are you back to that early question from George Miller or Jerry Bruner? What are they doing?**

Olson: Yes. Yes. Yes. What's meant--do they use a different mental representation; are they thinking in a somewhat different way when they're writing than when they're speaking?

**Cazden: Now, as you know, and I think you mention this in your new book--both Jack Goody and you and other people in thinking along the same line has been criticized as creating a sort of great divide. But you think this way if you're not literate and you think a different way if you are and there's a big different.**

Olson: Very good.

**Cazden: Where are you?**

Olson: Where am I? Well, I'm--I'm--I am in the great divide category [Laughter] unfortunately. Because I don't--I don't really believe there's a great divide. I've been convinced by Socio-linguists and Linguists that there is a formal register in speech, too. You can--you can step back and weigh your words, plan your discourse, speak carefully, somewhat anonymously. There is a kind of speech that tends in that direction and there is a kind of writing which is very informal. Dear Courtney, how are things going? Which is not much different than speech.

**Cazden: Uh huh. Uh huh. Uh huh.**

Olson: So I admit that to put them into the great divide--

**End of Side A**

**Side B**

**Cazden: Yeah, continue with your great divide or not so great divide.**

Olson: Right. So the oral--literate is a bit of--too much of an abstraction. But I still use it to some extent because what I try to do is to say what things are amplified when you're writing. It's not that they didn't exist in speech; it's that--it's that they suddenly become the focus of attention in a way that remained implicit in most speech practices. And so I've tried to look at the things that really get highlighted and picked out in the course of writing and the main--to say in a word what line that I've developed--there is that writing as in fact, Hockett claimed, is a representation of speech. It's not an alternative mode of communication.

**Cazden: As who claimed?**

Olson: Charles Hockett. There was a nice paper published in Written Language and Literacy of Hockett's old lectures on writing and he said writing "stands for speech" is the expression he used. Other people like Saussure had said that writing--it's a tyranny that we shouldn't be paying attention to writing. We should

be paying attention to speech. And others have said that well, there's two modes of communication. There's the oral mode and the written mode and that sort of thing. I think those are quite misleading because writing isn't just an alternative to speech. Writing is a representation of speech. So when you write--so here's my theory of writing--basically, when you're writing, you're talking to yourself. You're not just talking; is that what I want to say? More than that, when you're writing, you're editing yourself. I use the expression from Roland Barthes this literary theorist--he talks about the difference between hearing and over-hearing. When you're hearing, you're just listening to what I'm saying. When you're over-hearing, you're not there at all; you're a bystander and you're hearing this discourse and you're trying to--and you're interpreting it as if you're a bystander. It's kind of over-hearing. I also use the expression that writing is like putting things in quotation marks.

**Cazden: That's interesting.**

Olson: And so you're given this special--it has a special status when it's written. Not all writing has that property but that's the--that's the status that's really highlighted or at least exploited massively in writing I would argue. So I do believe there is kind of continuity between speech and writing. There's nothing new that gets into writing that isn't already present in the cognition. But there are things that are really pulled out and amplified and I think one way of saying this about quotation is that--you know, quotation is part of speech but suppose that you start to think that you're always talking in quotation marks. It lets you think about the form--what was said--in contrast to content--what was meant. The say/mean distinction. Then you do get a bit of a bias to writing. The other thing about writing and this is in my new book is that writing allows the creation of documents. And then--

**Cazden: That's a social rather than a cognitive.**

Olson: That's right. And then our--

**Cazden: I don't think anybody could question--I don't know of anybody questioning the special social feature--**

Olson: Of document culture so that even this interview, we have a form in front of us that says this and that and you tend to organize behavior in terms of scripts--written scripts and they have, of course, come into schools in a massive way. Schooling is really an introduction to document culture. Okay, so we're finished with Jack Goody was there any person that--did you say that we should comment on?

**Cazden: No, I just wondered if there were any others beside your teacher in Saskatchewan, Jerry Bruner, Jack Goody--**

Olson: And then this little group here in Toronto.

**Cazden: Oh and this little group here.**

Olson: And there's now a program at the University of Toronto that I just sit in on once and a while called Book History and Print Culture which is really about the culture of the book. The way books--the kind of culture that gets built about a reading community, assumptions that writers can make about whose reading these books and it builds kind of a special world around written text so this is sometimes called written culture--the study of written culture and I'm very interested in that but it's mostly run now through literature--literature and medieval studies and classics rather than through psychology.

**Cazden: Now in this whole oral literacy area while we're on it, have you worked in child development in that the transition from oral to writing or--**

Olson: Yes.

**Cazden: What kids do and when they're writing etc.?**

Olson: One of the things that I never did and--because it gets too vague, I think was to show that the things that I discovered about children's writing--or about children's new understanding of language really is a consequence of their learning to read rather than a developmental more general developmental process. There are many people like Hakes who argues that meta--meta-cognitive and meta-linguistic concepts are developmental. What I mean by meta-linguistic concept is like the concept of--say word or sentence meaning as opposed to speaker's meaning. The distinction between what you said and what you meant. These things come in about age six or seven. Piaget said so, too. Children at five if you ask what's--which word is longer, caterpillar or train--

**Cazden: Will say train.**

Olson: --will say train's longer. That sort of thing. Well, when do they start to talk about words rather than things? Well, the--Piagetians say that it's developmental--was that it's developmental. What I argued was that it's the consequence of dealing with artifacts, written artifacts and words exist in text in a way they don't exist as separate entities in speech but I've never done an experiment to show that their learning to read actually causes this awareness. What I do in my experiments, and we did lots of these with Bruce Homer and Nancy Torrance, Jan Pelletier and other people--was take children who are pre-readers and show that this is what they do and then readers and this is what they do so we can show the change that occurs across the correct gap but it should be possible to measure the level of reading with the Marie Clay kind of scale and show that the one low on the scale are the ones who are giving the so-called immature responses and those higher on the scale are the ones who are giving the more mature. Let me give you one of the tasks we invented. We say to children, we show them a card. It says "three little pigs" and we say, "What does this say?" And they say, "Three little pigs." And then we erase one of the words and we say, "What does it say now?" And they say, "Two little pigs." Because they think that the words are the pigs. [Laughter]

**Cazden: That's a new one.**

Olson: Yeah, that sort of thing.

**Cazden: You know, it just occurs to me that another possible way of doing that kind of research--that the age of teaching reading varies as much as two years in different countries. Some start at five; some start at seven, maybe even later but at least five to seven and that is crucial, five to seven period when a lot is going on. So you could find seven year olds who--**

Olson: Who have never learned to read.

**Cazden: --who have never been taught to read and you can have five year olds who have been. So that you could--**

Olson: Yes, you could do--

**Cazden: --could do a little experiment to see if it's developmental apart from literacy or more a function of literacy.**

Olson: Yes. One of the reasons we haven't tried to do it even with individual differences in Canada is that--that these notions can be taught to children before they become--before they're actually taught to read. If you read to children a lot and you keep pointing at the words, and that, they're gonna pick up--or if you talk to them about words, like if you say, "What's another word for duck?" or for chicken or something like that, I mean there are other devices to teach these concepts, too. So my argument now gets more complicated because it would say that well, the analysis comes from literacy but once it's learned, it can be taught orally. There's nothing--like a blind person could be taught every meta-linguistic concept even if they've never seen print because once the concepts are around--once they're predominant, you can't learn it through oral language so there's nothing in the print that couldn't be handled in oral discourse. So that's what make the causal links unclear.

**Cazden: Uh huh. Uh huh.**

Olson: So for the moment, we're happy enough--well, I quit doing research the last year or two but as far as I got with it was to say, look, here's the kind of meta-linguistic competence that dealing with textual tradition tends to bring out and if they--if people aren't involved in that textual tradition, they're not going to have these kinds of concepts--concepts like words, sentence, speaker's meaning as opposed to sentence meaning, synonymy, antinomy, so on. There's some consciousness of language obviously in any speaker. So again, the oral great divide can be misleading here because all languages have some meta-language. Like the verbs, say, ask and tell are all meta-linguistic verbs and everybody has got those. It's other concepts like implied, inferred, assumed, demonstrated, exemplified, this complex set that's more likely to be associated with an interpretive, textual tradition. So it's not just writing as making marks; it's really writing as a social function. It's people like Michael Cole and Shirley Heath who did brilliant work on the uses of writing. So it emerges from just being orientation to particular kind of writing system to orientation to the documents created with that writing system. And that's what Goody was talking about really--Goody was talking about what happens over a period of a thousand years if the culture starts to rely increasingly on documentation. So it's not fair to say that Goody was saying just teach people to read and write and they're gonna be asking for the vote--they're gonna want a democratic society.

**Cazden: SRCD asks about if there are any political or social events that have influenced your research in writing, teaching?**

Olson: I was in the U.S. during the final years of the Vietnam war and I was very--very sympathetic to that counter cultural moves of those days. Remember the book Teaching as a subversive activity, by Neal Postman--

**Cazden: Neal Postman.**

Olson: I liked all of that but I never was completely a creature of the '60s; I always--I never became a complete relativist for example. I always believed that there was a truth of the matter and that you could find it if you did the work and I believe that up to these days even if I'm now less certain--everybody is a good post modernist these days thinking that everything's are patterns of discourse and so on and social agreements and so on. I still maybe more than is valid, think that if you do the right inquiry, you can find the truth of the matter. A little naively but that's my orientation really.

**Cazden: Maybe it's not a bad assumption to work on 'cause it pushes you.**

Olson: So I was not affected by the '60s. What other political resource events? I was certainly a product of the revolution in education that--where schools became more child centered. You, too, had this experience--

**Cazden: Uh huh.**

Olson: --in your teacher training--of child psychology. I didn't get that as much from teacher training as I did from cognitive psychology--asking the question, what are the kids thinking and if you're trying to teach them something, you're not just trying to get them to recite it. You're trying to say, how are they coming to terms with it. That sort of follows Dewey and kind of influences the direction of the cognitive science. I'm quite critical of moves to--current moves to explain things in terms of biology and neuroscience and genetics because it runs absolutely counter to what I think's the main thing--mainly responsibility and human agency.

**Cazden: That's interesting.**

Olson: --because if you do things because--

**Cazden: You want to say some more about that because that so hot today.**

Olson: If you do things because your genes are a certain direction, I don't think you deserve any credit. You didn't do anything; if you did something, took on a responsibility and met your obligations, you've done something and you've earned something thereby so in fact, I'm opposed to giftedness programs for this reason. If giftedness programs are put in place because people have earned access to them--if you do well in Math, you should have access to higher math--that is okay. But if somebody says, oh, we'll give you a free advantage in education 'cause we have given you this IQ test and you really have--you have a talent, you didn't earn that. That's just a gift and you should be grateful for talents you have, of course. But talents aren't earned. You earn access to good programs and so on. So giftedness programs to me are mistake--you test somebody and award them a bonus on the basis of some test like an IQ test, rather than awarding them a bonus for having done well in math.

**Cazden: But with respect to child development research, are there any areas--topics, research questions where you foresee maybe some useful interaction between the cognitive science, neurology, brain work and the kinds of developmental questions that you are interested in?**

Olson: I haven't really; I know that there is a future to be--there is a future there. So people who are thinking about it can expect some but--

**Cazden: But it's not something that--**

Olson: But it's not the--I tend to--I tend to quote Jerry Fodor who say, you want to know about how the mind works then study the mind. Quit looking at the genes and the neurons.

**Cazden: Okay. Fair enough. How would you--the next question is how you would characterize the longitudinal trajectory of your research activity. Has it sort of followed a regular pattern or are there any big shifts and discontinuities?**

Olson: Well, you can see three--from a distance you can see that there were three sort of big domains. One was the spatial cognition that around diagonality and other mental representations of spatial relations. And then the literacy stuff and that didn't have much--those two things didn't have much to do with each other. I should say about the literacy, the other reason I took it seriously was that I knew I was in--committed to education. I was in the Institute of Education and literacy is obviously educationally important. So it would seem to me that that's a good reason for working on literacy rather than say basic learning theory or the language of two-year-olds. That's not an educational responsibility so that justified looking at literacy. In the last fifteen years or so, we've done a lot of work on Children's theory of mind. How--what they think about other people's thoughts and I see--I see that as--for my own thinking as an extension of the literacy because what lit--what I argued about literacy was that it is an occasion for becoming more conscious about your own mental processes, so called meta-cognition. Namely, what's a summary; what's a paraphrase? Those are all higher mental activities generated by--in the attempt to create, edit, revise, rewrite documents and so on. But what happened with the theory of mind was that these higher concepts like paraphrase for example, are somewhat higher order than the fundamental ones that are occurring in four and five year olds. So we--we began asking questions like how do you know? What do you think? Does she know? If he has poor evidence, does he know? Does he think? Think and know distinctions. Believe, we fooled around with those and then Joseph Perner and Heinz Wimmer did that nice study on false belief tasks. And we--Janet Astington has written an introduction--an introductory chapter to a Festschrift in my honor called The Mind in the Making. It's a very nice book and she in there tells about the history of our research group which was composed of Janet Atington, Lynn Forguson, a Philosopher, Alison Gopnik who's now at Berkeley, a very distinguished researcher, and myself. We had this foursome--and we ran only for a year unfortunately--where we kept trying to think about how best to do studies on what children thought about thinking--did they actually know that other people have thoughts or did they just know what people were doing? And Janet Atington in this introductory chapter to the book, The Mind in the Making, says that in fact, in our research group, we came up with the same experiment that Joseph Perner and Heinz Wimmer actually did but we didn't do the experiment. We had it on the drawing board. So anyway, theories of mind--Janet has a big group here still working at the University of Toronto on that. I have been involved in that for years but in fact, I'm not any longer--I think I'm giving one more talk on that at the International Congress in Beijing so I keep involved in it to some extent. But the theory of mind

is really also being carried on by other people. Let me tell where the intersection is. Joseph Perner has shown that people who can solve theory of mind tasks can handle synonymy at least that's my reading of his data but synonymy is a meta-linguistic concept.

**Cazden: Uh huh.**

Olson: So I still want to argue that thinking about mind is thinking in some sense thinking about language, what people have--what is said, could have said, might have said and that sort of stuff so when you're projecting a thought to another person, you're sort of projecting the thought of what--what could they have said? What would they say? It's so--what they say and what they think are linked--more or less synonymous as people like Vendler and some other philosophers argued. Any way, so getting back to Joseph Perner he showed that people who can solve theory of mind can do a kind of synonymy task, you tell a child, you show a child a bunny and you say, what's this? It's a bunny they agree. Could you call it a rabbit? Yes, it's a rabbit. They're happy with that. Then you say, now we're gonna do a task, if I call it by one name, you have to call it by the other one. Oh, okay. So you say, this is a bunny and then you say to the kid, so what is it? He says, it's a bunny. They just repeat it; they don't--

**Cazden: They don't get it.**

Olson: They can't do the meta-linguistic task so I still think there's a link between thinking about language which literacy sponsors and thinking about the mind which is a very important part of human development. Now I wouldn't say that literacy causes that because there are whole cultures that have no writing and they still do this to some extent, but the amplification of that--thinking about one who would say--conditions which one would have said it, all that stuff, I think is cultural and there is some evidence as I said.

**Cazden: Now across those three topics, diagonality,--**

Olson: Literacy--

**Cazden: Literacy and theory of mind.**

Olson: Theory of mind.

**Cazden: There certainly is the continuity of that original question, namely what are they doing?**

Olson: Yeah.

**Cazden: In the last two it's clear as you've just explained that they--the--what are they doing involves language. In the case of diagonality, is that--is there language involved there or is that--a non-verbal, visual thinking?**

Olson: Good. I didn't think language was involved when I did that. But when I look back on it, I now think that their representation, the way they could think about that task, was bracketed by the concepts they had available. I mentioned this earlier, some tasks they could do perfectly well. You show this is *on* that *or* at--at the corner, say, no problem. They can do that. Now we didn't do these tasks verbally; they were all just non-verbal but in retrospect, I can see that the tasks they could solve were the ones for which they had concepts expressed in language like *at* and *on*. The ones they couldn't do were things like *up* to the right for which they didn't have any language. And when they did start to get that right, I now--I didn't do these experiments but I would now say they probably could tell you, yes, well, you have to go over one and up one or something like that. But it didn't seem to be essential. I thought at that time spatial ability really was different from verbal ability. Some people still think that but I don't think that any more. I think that spatial perception, motor action and so on is a spatial function but the moment it becomes a representational problem which is to say something to think about, say planned in action, I think they're more linguistic.

**Cazden: The way you describe it reminds me of the logo-research. I don't know that research but they also have--thought moving around and giving direction and the like.**

Olson: Yes, that's right. They make it into a representational problem. Yes, I thought that was very interesting work actually because what the child has to do there is not just recognize and interact but represent, namely, devise categories and think of relations amongst them and that's very conceptual and very verbal.

**Cazden: The whole interview is on personal research contributions. We I think covered some of this. Strengths and weaknesses of your research and theoretical contributions impact of your work and current status. You mentioned that one of your articles had more citations than any other. Say some more about where you think your impact has been--**

Olson: Yes.

**Cazden: Whether it's been in--whether other people have thought important, what you thought was important.**

Olson: Yes. From Utterance to Text I said is probably my most influential piece. Harvard publishes a collection on language and literacy every two years. Well, they put it into the last four anthologies so it gets attention--they pick it up and repeat it. But other publishers pick it up and publish it, too. But the interesting thing about citation--most of the time that it's cited, people disagree with me. They say, too big a category. Utterance or text--it's all utterance or it's all text or it's all neither or both; stuff like that. So in fact, at the University of Illinois, they used to tease me by saying they named a theory after me. I said, "Oh, that's a great honor." So what's the theory called? It's called Olson's fallacy. [Laughter] So they did--they didn't like the--well, there was one thing I said in the paper they didn't like which was that, in writing, texts become autonomous and they didn't like that because they said that every text will either be seen as having an author and it will be interpreted in terms of the biases of the reader. You cannot escape the biases of the reader nor can you hide the subjectivity of the writer. I agree with both of those points. But what I was really trying to say was that when you talk about--when I was talking about autonomous texts, what I meant was that the act of creating the text and interpreting the text calls on different resources than conversational communication does because in conversation you can rely so much on what you think the listener already knows or shares with you as a speaker and you can work this out in collaborative discourse. In writing you get to a whole new meta-level in which you can think about 'what you said' vs. 'what you meant to say' and work out an understanding of both and create a document that has some independence from the writer and reader. So that when I talk about autonomy, I didn't really mean to escape the reader or hide the writer, I really meant that you're trying to create something that can stand on its own and it never does, of course, but that's what you try to do at least I think that's what you're trying to do. Like if you create a law--write a law as opposed to having an agreement of, say, you shouldn't kill--you try to write the law and then you say, well, who shouldn't kill; under what conditions? You know, you have to spell it out sufficiently that an interpreter, a judge over generations can look at that law and be guided by it. Now Jerry Bruner's written this nice book about law saying that law isn't doing as much work as you think and he's correct about that, too. But that's not to deny my point which is that when you create an artifact like a written law, you are embedding a lot of constraints into a text that would never be--never occur in oral discourse. It's shaped and re-written, re-written, revised, tried to clarify and then there's still all this loose stuff at the ends admittedly but the law is nothing like a convention for not killing. So an oral culture that has conventions against killing is not like a document culture which has a written law code.

**Cazden: I think it's quite--it does show the influence of your work in that article even if people do cite it in order to argue against it. I did the same thing with that precise article and called my response the mythical autonomous text.**

Olson: Yes, I remember that now. That's right. You're actually the one that started it.

**Cazden: Because--but the influence is because somebody has used that--what you said as a basis for further developing ideas in that area. So it's the--it's very important influence, even if--unless it's critical thinking as well as praise.**

Olson: Yes.

**Cazden: What about other examples apart from that article that you feel either should be or you have evidence that they have been influential in the field?**

Olson: The general work on literacy, the book of World on Paper is used a lot. It's been translated into six or seven languages. I still get invited to conferences all over the world to speak about things that I wrote in that book and that book is ten years old, so I know that that book is in a modest--I should be clear about this--in a modest way, it's had an impact because I--I got the sales figures for World on Paper the other day and it's only sold I think, 5,000 copies. Whereas, Bruner's books probably sell 50,000 or something. So 5,000 isn't as wonderful but it's--it's acceptable and I have many other books. I have another book called, The Making of Literate Societies, I think it's published by Blackwell. I think a very good book because it's about literacy in other cultures. Not the imposition of literacy as when governments write a program and they're gonna make everybody literate and I don't deny that that's a worthwhile agenda actually, but this book is mostly about more indigenous literacy practices, people who find writing useful. And then pick it up and use it for organizing their business, or for reading group or for documenting their family history or whatever. Well, I think that's not written by me, that's edited by Nancy Torrence and me. But that's a very good book but it's not being picked up. I mean it's sold maybe a thousand copies or something like that.

**Cazden: What about journal articles?**

Olson: Yes, I--I have written an enormous number of articles. Like between two and three hundred.

**Cazden: But are there some that stand out as sort of seminal?**

Olson: I wrote a Psychological Review article that had an enormous number of requests for reprints. In the days we used to do reprints.

**Cazden: When you--people still requested them.**

Olson: So I still have a mountain of reprint requests for that but the idea--

**Cazden: What was it about?**

Olson: It was about language and thought, too, about the relationship between the perceptual categories you had and the learning of nouns and adjectives for designating those things so it's a perceptual basis for semantics is what it argued. And it--that idea re-appears even in "situation semantics" so called. That kind of idea re-appears but the idea never really took hold in the field like the other texts in the field even if it had more reprint requests. I don't know why I've never had a real impact. It's more like and I think this is probably a more correct description: I'm a member of a discourse community as you would probably say. So there are a lot of people working on theory of mind, on mental representations and so on and I'm one of them. And I've had--I think a few good ideas about it. And they get cited but it hasn't really changed the field. Well, we shouldn't aspire to that--I mean we have the Chomskys and the Bruners who come along once in a generation. I'm no Bruner and I'm no Chomsky. I'm more like a worker in the field. I have good students and write my papers and try to nudge the field along in a certain kind of way. I've had some--some presence in that domain but I haven't--I wouldn't say I've done the central work.

**Cazden: Of course, which ideas picked up is not solely a function of the inherent value of the idea but sort of when it resonates with what's out there as well. The left sub-question of that is--which contribution's the most wrong headed? [Laughter]**

Olson: Well, that's tricky because the utterance--text is the kind of thing that's not wrong headed but you can see that it's oversimplified in that it hid the social formations in which these texts take form to become social/cultural kinds of theories. Shirley Brice Heath's work for example. What utterance to text implied was that there's a kind of a universality to the impact of writing. Maybe Jack Goody, too, is to be faulted for implying that there's a kind of a single direction and a universality to the implications of literacy.

**Cazden: Regardless of how it entered into--**

Olson: That's right, social structure.

**Cazden: --social life and therefore perhaps into oral practices.**

Olson: And that is missing in my paper. Of course, it's a different kind of tradition and in more recent writing, I'm much more careful about that to say--I'm not talking about all writing for all purposes for all people. I'm talking about kind of dominant use of textual materials in a bureaucratic society in my new book for example. So here's what we're talking about--we're not talking about the whole thing about writing. You can say some things about writing itself and I have an article called What Writing Is. I'll give you a copy. As if you could actually say what writing is because it's--there's many kinds of writing systems and they are used in many kinds of ways but is there anything you can say about writing?

**Cazden: That is universal?**

Olson: Yes. That just is writing and of course, the answer is fairly--well, it's very complicated but the one thing you can say about it is that it--all writing has this property of not being language but being about language. Not being speech but being about speech.

**Cazden: So you're saying there are universal--I don't know--mental correlates, mental consequences--**

Olson: There are some things you have to do with your brain--I shouldn't even use the word brain--you have to do with your mind by virtue of dealing with a written document that are different from what you'd do with a spoken one. With a--restriction here. What you're doing with a written document, I say, is what you're doing already when you're thinking about quoted speech so it's not entirely new. It--

**Cazden: It's one thing if you're quoted, your quotation marks. But that's universal? That's a universal aspect of writing per se.**

Olson: Right.

**Cazden: Inherently?**

Olson: I think so. And it shows up in--for example, in editing. When you write something, you cross things out and erase things. Watch kids write. They never just put it down. In speech, if we start a sentence over, you don't go back and erase the first part of the sentence, you just sort of stumble along but in writing, if you make a mistake, you erase it. You know, you immediately edit.

**Cazden: Kids, yes, but think about typists, not typists who are copying, but fluent word processors, which I'm not. I mean I don't have touch type but people who can just--it goes right from mind to fingers at terrific speed. You still--you think there still is that--**

Olson: Yeah. I think over here--

**Cazden: --quotation mark. Even if it's very fast?**

Olson: I write like that; the reason I've written so much is that I'm a fast typist.

**Cazden: I'm not.**

Olson: See I had the misfortune of being in a small high school--this is a private high school that only offered a limited range of electives and I had a spare or I needed a credit or something and the only thing that fit my schedule was typing. I think: "Good grief, I don't want to be a typist but well, might as well take the course." I learned to type. Well, then when I went to graduate school, I never typed much as an undergraduate, I don't think. In graduate school, you had to type. Well, I found I was a phenomenally fast typist. And to this day, I can sit at my Word Processor and the stuff just runs out of me as fast as I can think. But even there, I'm editing. I know I know when--is this the end of a sentence; does the subject match with the predicate? I mean, I can monitor all of that stuff.

**Cazden: So you didn't stop along the way and do that kind of monitoring?**

Olson: Oh yeah.

**Cazden: I'd stop a lot. But that--I'm all--I'm so slowed down that I can do it very easily.**

Olson: See, but you don't do that with speaking; you do correcting when you speak but you don't edit, at least not in that degree.

**Cazden: Well, I do when talking like this.**

Olson: Yes. Moreso.

**Cazden: Or giving a lecture. I do a lot of it--of editing, pausing and...editing and making sure that I'm gonna get to the end of what is a real sentence. Research funding--you've mentioned--you've mentioned that.**

Olson: My institute, Spencer and the Canadian Social Science Counsel (SSHRC).

**Cazden: And fellowships from these--**

Olson: Places.

**Cazden: --different Institutions elsewhere.**

Olson: Yeah. Yeah.

**Cazden: Any experience in peer review committees for NIH or--**

Olson: Yes, I do a fair amount of reviewing; I'm on the editorial board of an astonishing list of journals, to this day. So I have always done reviewing and I do reviewing for projects--many international, like Israel and Belgium and Netherlands and Germany and Italy and I do projects for various countries. Although now that I'm retired, I'm very leery of taking on reviewing anything but I have done a lot of that. I wouldn't say its--I've never been editor of a journal but I've been editor of many of these books, you know. We've published about ten or twelve books and Nancy Torrence did a great deal of that work with me--she's still here although I think she's retiring this year. She was a very great colleague. I actually--when we were talking about influence, I should have mentioned that the one thing that worked very well for me as a academic was having a research group. I think I started having a research group when I first became an academic here.

**Cazden: Research group of colleagues or a research group of students?**

Olson: Mostly students; sometimes I'd get one or two colleagues to come in.

**Cazden: You've mentioned collegial groups.**

Olson: Yeah. Yeah. But no, I had research groups mostly with students. But sometimes the students weren't really students, like Jens Brockmeier who is an Academic from Germany who was here for a couple years and he would be in my research group but he certainly wasn't a student and he was somewhat of a thorn in the flesh because he was very much social cognitive theorist and I had a student of Dorothy Smith's--and Dorothy Smith is a very distinguished Sociologist--sitting in my group who nagged me all the time about the lines of arguments but most of my students were trying to set up their own research studies and we met every week during the term and I think almost to the end of June and the point was to get primarily to get students projects into a shape that was worth doing empirical work on.

**Cazden: Uh huh. Uh huh.**

Olson: And we also used it for trying out ideas for our own research projects and I found that most of the good research that I got done was done with the students. They had a real ownership of the work and really would work hard on the projects and often get things done that me and my research assistant--well, we did some just on our own, too--but we often involved students even in those studies and it was very productive so I had--I'll just mention some of the students.

**Cazden: Yes, mention some of the students and what they worked on.**

Olson: Yeah.

**Cazden: That you're most proud of.**

Olson: Ted Ruffman and Tom Keenan did work on children's understanding of what did you say and what did you mean by that; did you intend to do this? Did you intend to say--you know, say--mean kinds of tasks? We worked on those for years, Nancy Torrence, Elizabeth Lee, Hillel Goelman and those two, and Janet Astington, to some extent collaborated in a bit of that. Bruce Homer did the studies on word awareness in children as did Jan Pelletier and Jens Brockmeier as I mentioned. He did some studies on consciousness of words and what is a word and so on but all meta-linguistic kinds of things. I mentioned Ellen Bialystok on spatial cognition.

**Cazden: Did she go on to do work in second language?**

Olson: Yes. And she works on that to quite an extent but also on metalanguage. Yes. And Janet Astington who's now head of our department here did work with me. I told you we had a research group, Alison Gopnik Janet, Lynn Ferguson and I on the Theory of Mind. When would a child say he knew; when did he think--say he'd think and what are the conditions under which they would say if they guess or remember. Moratsos did one of these early studies. If children guess at something and they guess right, and you say, well, did you know; they say, oh yes, I knew. But a little older, they will say well, you know, I was just guessing so--

**Tape 2, Side A**

**Cazden: Significant students that you remember particularly.**

Olson: Yes. Well, as I was saying, the research group was the heart of my research career; they are the--students that kept me going, I would help them design studies on children's understanding of surprise or understanding of believe or understanding of meant it or of paraphrase and so on but all of these were done in--with this research group that ran for years. And Rita Watson worked with me on definitions, which is kind of a meta-linguistic task.

**Cazden: Oh, absolutely.**

Olson: Janet Astington did all this work on--she began on promising but also on various other theory of mind kinds of tasks. And as well as on theory of mind implications in textual writing. Like well, marking

things as being assumptions as opposed to conclusions in writing indicating some understanding of the fact that when you say something, is this something you know as a fact or is this something you assume or is this something you're offering as explanation of something. What's the status and things of that sort? Nancy Torrence and Angela Hildyard worked with me for years when we were beginning the work on literacy and we organized a conference and published a book called Literacy, Language and Learning, which was quite an influential book. It led to the invitation to write the section on writing in the Encyclopedia Britannica. That book did quite well and then we did another book called Modes of Thought which again, was based on a conference--come to think of it. We not only had the research group, but we would have a conference every two or three years and invite people that we thought were doing work that was of particular interest to the topic of literacy and that's where some of these books came from. There were other students, too. Every year I would have two or three new ones and they stayed around for three or four years. We usually had a collection of about ten or twelve people and every week we'd argue amongst ourselves and try to shape up questions for research and nag each other about details and so it was quite excellent--I really enjoyed that research group. People like Joan Peskin, Maria Artuso, Anne Butler, Penny Vinden, Deepthi Kamawar, Jason Ramsay and many others made life worthwhile, I'd say.

**Cazden: There are a lot of questions about research sites. You've had unusual experience at a number of different foundations, centers for advanced study, etc., and you've mentioned the wonderful opportunity those places gave you to write. But what about special colleagues at those places; were there any sub-groups at the Center for Advanced Study at Stanford when you were out there or people in Berlin or wherever, who became influential in pushing your thinking?**

Olson: Yes. The one place where this did happen was at the Center for Advanced Study in California. Because when I looked through the roster of people there, I notice that there were quite a few people who were interested in language and mind. And so I sent a memo around; I went down the list. And said, "Why don't we meet on Thursday afternoons or something?" and we'll each take a week to tell about what we're doing and see if there's some discussion. And there were about ten or twelve people and they showed up quite faithfully and we had John Searle come around when he taught at Berkeley. He came out one day and talked to our group. He didn't discuss with us; he just gave a lecture. I don't know if you know John Searle very well? He really helped make intention into a topic of study.

**Cazden: No, I don't know him.**

Olson: Anyway, this group was just before we set up the group here at Toronto with Lynn Ferguson, Alison, Janet and I. Because--because the California discussions really highlighted this question about when do you attribute beliefs to somebody? Do you attribute them to animals? Dorothy and Robert Seyforth, animal psychologists who worked with Robert Hinde at Cambridge, were there trying to see whether vervet monkeys knew what other vervet monkeys were thinking and doing. Ray Jackendoff, the linguist, became an ally and friend and this group really helped gel my ideas.

**Cazden: What year--**

Olson: That was '84. But what I was writing at that time was the World on Paper. So I was thinking about theory of mind and that's what we did the studies on here, but I was working on that book trying--concentrating my wits for The World on Paper. I wrote several draft chapters at the Center for Advanced Studies, which I then put aside when I actually wrote the final version of that book but I had done a lot of thinking when I was at the Center. Actually, this is one of my embarrassing moments, come to think of it. I got this really interesting idea about writing and literacy when I was working on the book there and each of the fellows give a talk. I don't know if you gave a talk when you were there.

**Cazden: No, I didn't; 'cause I did the plenary the Child Language Conference instead. So--but I know most of them did.**

Olson: So I--I gave a talk. I asked to give a talk. It was near the end of the year and I felt I just have to share this idea with them. It's really interesting. The idea was that there were two very different ways of

reading. One was to assume that the text was just an occasion for el-expatiation--is that a word--for entertaining your own thoughts. So--

**Cazden: I think it was your word originally. [Laughter]**

Olson: Yeah. Maybe. So there was--I came across this thing about twelfth century readers--Karl Morrison said, "Twelfth century readers looked at the text but they sought epiphanies between the lines." By that he meant, they weren't really trying to say what exactly did the author intend for me to believe on reading it. They took it as an occasion for the most luxurious interpretations, whatever happened to come to mind. They took it as an excuse for generating their own thoughts. They didn't read textually in the sense that we would now call close reading for example. They read meaning in everything - as Shakespeare's character who found "Sermons in stones and books in babbling brooks and good in everything" in As you like it. Sermons in stones--you can project meaning onto anything--stones or anything. In the Middle Ages texts tended to be read as an occasion for this kind of rich interpretation whereas the Lutheran tradition not just Lutheran tradition but all Protestantism, said, no, the meaning is in the text. This is where I got the expression the meaning is in the text. Luther said so. But it wasn't just Luther; it was also Frances Bacon who was also saying--in Science, you've got to quit mixing interpretation with observation. You got to pay attention to the facts. Bacon said "God forbid that we take a dream of the imagination for a pattern in the world." He said that earlier scientists are just making all this junk up; he wanted them to just describe the patterns in the world, to distinguish seeing from imagining. Well, that's what the church--the Protestants were saying about the Catholics--they're just making this stuff up. So I developed this parallel between reading scripture and reading 'nature'.

**Cazden: It really meant that God forbid it.**

Olson: Yeah. So I--this idea I thought was really--to me was really interesting--so I gave a talk on this but I had so much data and so much information that I just felt like I wasn't getting the point through. I felt quite depressed about this talk.

**Cazden: This is your fellow speech at the center.**

Olson: My Fellow speech and Ian Watt bless his heart, came to hear me. You know, Ian Watt who's the Doyen of literary theorists. He's now dead but--

**Cazden: Was he at the center that year?**

Olson: No, he was the head of the Humanities Center at Stanford where he hosted a remarkable set of scholars, including Geoffrey Lloyd who I later invited to give lectures at the University of Toronto that led to the book Modes of Thought.

**Cazden: Oh.**

Olson: But Watt was coauthor with Jack Goody of that famous paper on literacy so that's how I knew him. And then when I was talking about literacy, he came up to the center to hear my talk. Well, I was really depressed after that talk because I felt that I had just--I had been too energetic in trying to tell everything rather than getting the simple contrast--the one had just articulated roughly to you--instead of getting it clear. So I was very depressed after that talk and Frances was there at my talk and she said, well that was a real dog's breakfast. And she was right. I never again gave a talk that I tried to do so much in. Take one--have one or two points and make them as clear as you can. Anyway, that was--I don't know what other people thought of that talk--but I was very disappointed in myself.

**Cazden: Did you follow up that idea on the ways of reading?**

Olson: Oh yes. Uh huh. It's in my World on Paper. Yes, that was really exciting to me. Now I connected that with literacy generally but you see, both ways of reading were literate ways. Both groups were readers. So it's more like Shirley Heath's thing. They are both readers; it's just that some readers follow a

tradition reading in one way and a revolution is constituted when you start to read another way. You know, Protestants read the scripture in a very different and new way--than did the Catholics.

**Cazden: That is like her work with the young children--and a lot of other work on different ways of reading. And it certainly is an enormous divide among religions.**

Olson: Absolutely. Absolutely. And I didn't realize that but this goes back maybe to this Christian high school that I attended where we did things like bible study. You know, you'd read the verses and you'd say, well, what does this mean? And you'd argue about the correct reading and interpretation of scripture. Maybe that influenced my later work; I never thought that it did but--if you get in the habit of this sort of careful reading, close reading it would be called now, you may start to do that quite routinely not just for reading scripture. That's what Frances Bacon more or less said, too. This has to be close reading, none of this imagining stuff. My point was: If you read scripture literally you'll read nature 'literally' too. That was the birth of Modern Science.

**Cazden: But you were free to argue?**

Olson: Yes.

**Cazden: Vs.--**

Olson: Learning.

**Cazden: --a religion where somebody has the bureaucratic if you will authority to say, this is what it means.**

Olson: That's right. No. No. You're free to argue. You were free because the assumption was the meaning is in there. So you just--the more carefully you look at it--you can't go wrong. You can't go wrong by more careful reading. I later decided that the church that I belonged to didn't in fact, do that and I quit. [Laughter] So even if it was a strategy--

**Cazden: The church didn't agree with your theory of reading, David.**

Olson: No, they didn't agree with my theory of reading.

**Cazden: That's amazing.**

Olson: Yeah.

**Cazden: Okay. Question about experiences as a teacher. You've talked about your work with students--tensions between teaching and research. Or--**

Olson: I have a philosophy about this. I never taught a lot and I taught graduate school so that's so much easier than teaching massive undergraduate classes. But I never had any sympathy for those who thought their research is so burdensome that they couldn't do their share in the department. I wish people like that would just quit or go somewhere else. Because as an academic, I think we have responsibilities for teaching, which I always did. Maybe not as much as some teachers would have done but I certainly never shirked my teaching; I never tried to get out of my teaching. And I never tried to get out of my obligations of being here and running my research group. People like to do their work at home; it's fine if they're doing their work at home but it's good to be in the institute, I always thought, as well. So I treated my job like a job with certain obligations and I--maybe I was blessed because I could get away for these leaves and if I never got away, I might have a different attitude but I liked teaching and I liked my research group. And they didn't really interfere--they helped me with my writing. Even teaching helps me with my writing. You argue with students in class about something; you realize you should really write something about that 'cause it's not clear. So I use writing to clarify my thinking. It's--we all do.

**Cazden: Describe your experiences in so-called applied child development research.**

Olson: Well, literacy is--could be called applied but I didn't, in literacy, try to be so applied as to write a reading program, a way to teach reading. Marie Clay I would say does applied research, she actually tries to make a program to teach these people things. I just try to figure out what children are doing, thinking, so I've never--the most applied I've ever become is not applied at all. My recent book on education reform is an analysis of what people are applying and why they are applying it but I don't propose to do any actual applied work. I would not want to run a teacher's workshop or anything like that. I would talk to teachers but I don't do any applied work.

**Cazden: Do you--have you talked to teachers or been asked to address people at any level in educational enterprise or--**

Olson: Yes. Disappointingly, rarely actually. There are many issues that are taught in Ontario educational circles like testing.

**Cazden: Uh huh.**

Olson: And like discipline that my book bears on--I have a theoretical basis for saying some things but they don't seem to call me up--call me to comment on these things and they just sort of go along the way they feel like. So I feel it's not used as much as it should be. And maybe if I got out there more it would help but mostly I see myself as somewhat detached--and intellectual academic.

**Cazden: A set of questions on SRCD and your relationship to that.**

Olson: I want to say one thing and that was that my first colloquium--my first talk, I should say, was at an SRCD meeting in Boston where you and Roger Brown and your group gave a symposium. I gave a talk--not in your symposium but in that conference, on the diagonality problem. That would be 1967--I think it was. Maybe it was a year later or something but it seems to me it was in Boston. Anyway, my first talk ever to a public group of psychologists was on diagonality at the SRCD. And that was a very important event for me. I met a lot of people.

**Cazden: But when--that's not the one we were talking about where when Roger Brown --sixty because that's much, much, much later. This was in--it must have been an earlier one because--**

Olson: Yes, it was--it was about 1966, or '67, something like that.

**Cazden: I see.**

Olson: Okay; so it's a different session. But anyway, SRCD was very important for bringing that group of people together and I attended SRCD quite faithfully for years.

**Cazden: Bringing what group of people together?**

Olson: The SRCD--brought child development people--people who were interested in cognition. The cognitive revolution had really taken hold in that group. There was a lot of language learning papers--

**Cazden: Uh huh.**

Olson: A lot of cognitive tasks of various sorts--it was a very important group.

**Cazden: They'd specifically ask about the first biennial meeting you attended. That would have been--**

Olson: I think '66.

**Cazden: --one where you gave that diagonality paper.**

Olson: Uh huh. So I have high regard for SRCD. It's now a massive conference and I don't go to it or to AERA or APA unless I'm particularly invited to give a talk, which is not very often. Well, it's okay.

**Cazden: It happens.**

Olson: So I haven't been to SRCD for a few years.

**Cazden: You mentioned being a--editorial--on the editorial--doing reading for many journals. Does that include some of the SRCD journals?**

Olson: Uh, I'm not on the Editorial Board of Child Development but I've read papers for them.

**Cazden: Yes.**

Olson: But I'm on the editorial board of a lot of journals connected with writing or literacy or--I remember one other SRCD. SRCD organized a tribute to Jerry Bruner and there were four people who spoke about Jerry Bruner. Did you happen to come to that session? Roger Brown was supposed to chair it and he was ill or something and they phoned and asked if I would do it, so I ran that. Anyway, that was an SRCD event and it had a massive audience.

**Cazden: Oh yes, it would.**

Olson: Alison Gopnik and I both spoke but I can't remember who the third and fourth people were.

**Cazden: Anything about history of change--any--about changes in SRCD? You mentioned the growth in size.**

Olson: Yes.

**Cazden: But anything else about changes in--**

Olson: The discipline?

**Cazden: In the discipline that might be reflect--well, changes in the discipline is a very good question, whether or not they are reflected in changes in the sort of dominant themes of the biennial meeting.**

Olson: Well, I know changes that I'd like to see made more than have actually been made.

**Cazden: All right. Well, talk about that.**

Olson: Well, we've talked about it already. One is this business about factors that explain behavior--causes as opposed to intentionality and responsibility issues so that's a direction I'd like to see--that has happened to some extent but I'd like to see that happen--

**Cazden: More in the direction of agency and intentionality.**

Olson: Right. Right. Right.

**Cazden: And we've talked about the brain and--**

Olson: Yes, brain vs. mind.

**Cazden: Cognitive science. They're all--**

Olson: And I realize that in cognitive science, there's an attempt to avoid issues of mental representation now--trying to explain action in terms of well, both situations and embodied cognitions.

**Cazden: Representation is out?**

Olson: Yeah representation is out.

**Cazden: Oh, I didn't know that.**

Olson: Yeah.

**Cazden: See I don't keep up--**

Olson: In some circles it's out I think that's a mistake. Let's see. Connectionism pushes mental representations out. Pinker's articles and books draw a contrast between rules and certain specific learnings. The learning is more or less non-representational; it's just a set of attunement to particular pieces of knowledge, whereas a rule is more of a representation of cognitive state. I've written papers about rules, too, because rules seem to me to be the next--oh, this is relevant--the next thing to be under--examined and understood. We know some things now about beliefs and how children come to have beliefs but we don't know so much about rules. Children learn rules--

**Cazden: It's a dangerous word in a sense because we think it's explains itself and it doesn't.**

Olson: No, it doesn't. So rules I think are due for some study. There's a very nice paper by Rom Harre' in a book called Jerome Bruner that's the name of the book, Jerome Bruner. And he talks about--

**Cazden: I didn't know Harre' had written a book by that name.**

Olson: Yes. Well he--

**Cazden: He's a very interesting writer. I wish I knew more.**

Olson: Yes, he is. His is just a chapter in the book. The book is edited by Stuart Shanker and David Bakhurst.

**Cazden: Oh.**

Olson: But his paper on rules is very interesting in there and I've written a few things about rules but I don't think I've published any of them yet. One of them is shaping up to be an article at some point. But I've been talking--giving talks about rules. Children play tag--play chase but there are no rules for chase; there are no rules for chase but when they play tag, there are rules. You know you're either it or not it and if you're it you do the chasing or if not the escaping.

**Cazden: It's a game; with rules.**

Olson: It's a game. That's right. So children start to play rule games when they're about five or six. That's when they acquire theory of mind; is that just a coincidence? Maybe--

**Cazden: Say that again.**

Olson: They acquire the idea of rules, that you're it, about the same time that they acquire a theory of mind, namely they understand that I don't think it's hot in here but you think it's hot in here. They can attribute beliefs to you that they don't hold themselves. They do that about the same time as they grasp rules.

**Cazden: Piaget worked on rules, didn't he? Rules of games.**

Olson: Yes, he did. More complex rules but he didn't study--just like--

**Cazden: But those--I guess they were rules--social rules--justice.**

Olson: Yeah, but they are rules. But see the thing is that there's a point at which they come in--they first appear. Piaget was good at children's beliefs, too, but he didn't realize there was a stage where they didn't have a consciousness of beliefs at all and I think there's a stage at which children don't have any consciousness of rules at all. They don't know there are any rules and then they begin to learn rules and that goes back to this educational issue of discipline in the schools. The reason teachers have so much trouble, of course, is the kids don't obey the rules. They don't even know there are rules. And teachers have problems because for some kids, it's very difficult to teach them that there are rules in school - like that you must raise your hand before you speak.

**Cazden: The rules in that sense are different than the rules that Pinker is talking about.**

Olson: They seem to be because the rules there are implicit. Yeah. Like the generative rule for regular verbs but the kid doesn't know there's a rule.

**Cazden: They're not prescriptive rules.**

Olson: No they're not, but rules in tag are prescriptive and rules in school are prescriptive. They're like games. Anyway, I think that's a fascinating topic and I'm sure it will get attention over the next decade or so.

**Cazden: Now something--oh, back to the representation which seems so important. To the extent that the parallel processing people rule out--representation in their description of mental processes, doesn't that put them with a Skinnerian behaviorist--it just sort of reinforcement--repeated experience of a certain kind. But doesn't go through any mental--**

Olson: It is kind of behavioristic in that it doesn't appeal to thoughts and mental representations. They do admit and call on brain states, which are attuned to textures of the environment--more like Gibson than like Skinner really. They're attuned to the environment and then they organize behavior in terms of these attunements but there's no thought there. How does it become a thought is sort of an additional question. I like to think of it more or less like Pinker does, namely that there are attunements, you just learn how things work, how does a word sound and you can do some of these things and act on them. But I'd like to see a second order state in which you become conscious of these things as rules so you do know there is a rule and then the rule is going to become prescriptive in a sense. You could say, no, I'll do it because there is a rule or I'll do that because this is what you do.

**Cazden: Or I'll deliberately violate it.**

Olson: Or I'll break the rule, yeah.

**Cazden: --for a particular reason.**

Olson: Right. Right. But I think there is a problem in education in that many children--they're called disadvantaged but that doesn't help at all--but there are many children for whom the idea of a rule is rather foreign. They just do what seems natural but schools don't run on what seems natural. School runs on the basis of prescriptive rules; now, sometimes they can be softened as progressivism did and you can still learn the rules without just being heavy handed about it but many of the rules just are matter of fact, like when the bell rings, you have to come into the room and when the bell rings, you sit down or stand up or all this sort of stuff.

**Cazden: Yeah, they either may not know or they may just know there is but they don't want to follow them but I mean the distinction I guess the distinction between those two kinds of rules is clearest in the issue of grammar. In the psycho-linguistic sense rules are implicit and developed without tuition.**

Olson: Right.

**Cazden: Vs. prescriptive teacher rules you cannot start a sentence with And or But or--**

Olson: Yes. That's right.

**Cazden: --whatever.**

Olson: And a set period goes after a sentence.

**Cazden: Yeah.**

Olson: A sentence has to have this and that, yeah. And those are the rules that now become prescriptive--yes, and I think the tension between those two things is extremely important. In fact, I've commented a bit on that in my new book because I say that it's hard to learn the prescriptive grammar if you don't have intuitions that come from your implicit spoken grammar. If you just try to learn a rule like whether to say who or whom. And you have no intuitions--if it doesn't sound funny--it's almost hopeless but if you're learning a grammatical rule and you can say, yeah, that sounds odd to say it that way, bingo, you've got it.

**Cazden: Whereas in second language learning, you're taught a lot of prescriptive rules with no intuition. All right. Comment on the history of the field. Well, that's the--that's what we've just been talking about. View concerning importance of various issues--changed over the years?**

Olson: No, not really.

**Cazden: Hopes and fears for the future.**

Olson: Yes, one, I'll just highlight because the relationship between child development or human development generally and educational psychology is, the relationship is, extremely important. It goes two ways. Namely, educational psychology came to life I would say when--when human development and cognitive approaches were brought to bear on it. Namely, when--when psychology started to ask questions like what are they thinking as Dewey encouraged people to do. What are they thinking; why are they doing that? What's the reason for believing that kind of thing rather than just finding factors that predicted school achievement. So human development enriched educational thought enormously. But now there's a problem on the other side. Educational theory as a psychological issue has tended to disappear completely and be assimilated into issues of human development as if schooling is just human development. It is a part of human development but I think that education--in particular schooling as an aspect of education--is peculiar and can't be reduced to just issues of human development.

**Cazden: You're saying that--say again what the danger is. What you see as a trend today that you think is not helpful.**

Olson: Yes. The trend is to think that human developmental theories such as that of Vygotsky that say that cognition occurs in a cultural context provide an explanation of schooling. You learn to think in terms of the social relations that you have with peers, family and friends and so on. And--but that's a general theory--it explains both social, cultural activities and education because that is simply more culture. I want to say there's a--a rather firm line to be drawn between cognition as cultural practice and cognition as schooling.

**Cazden: Okay.**

Olson: Because in school, the rules are all explicit; they are prescriptive. They are monitored by official agencies like the State and you--to understand what's happening to children in schools, you're going to have to know more about schools. It's not just more human development. That's the point I want to make and that's not being done. You see, that's what I'm saying. Psychology tends not to be doing that.

**Cazden: Child development has been too successful.**

Olson: It's been too successful and it eliminated an important field that needs to be re- re-constructed.

**Cazden: Okay. Last question.**

Olson: Yes.

**Cazden: Personal interests, family, anything that's relevant there to your professional work, scholarly work? You mentioned having had five children--**

Olson: Yes.

**Cazden: --and--but--**

Olson: You know, I did my first experiments with my children, you know these diagonality experiments and these sorts of things. I first tried out my ideas on them.

**Cazden: Yeah, yeah. You did it with your own kids?**

Olson: With my own kids.

**Cazden: Like Piaget.**

Olson: Yes. But Piaget was more persistent than I was. I can't think of anything that really is helpful on--

**Cazden: Okay. Then I think unless there's anything that hasn't come up that--any notes there that we didn't cover?**

Olson: Well, the one thing I'll say in conclusion is that I'm now--giving myself the education I should have gotten as an undergraduate. I'm reading the Iliad. I'm nearly finished and you know when Hector got killed, I nearly wept. It's really that touching. So I look forward to the movie. [Laughter] Troy.

**Cazden: What--which kind of reading are you doing or does that--those different kinds of reading not apply to fiction?**

Olson: I do read fiction as if it mattered. In other words, when I read fiction, I don't read only for the story--I read the story but I really look to see how the writer is doing it and what devices they are using and--

**Cazden: Yeah, but you must--you're obviously reading and identifying with characters if you cried over Achilles.**

Olson: Yes. Yes. But I--when I read the Iliad, I notice the writing is remarkable. He will tell about--

**Cazden: Of course, it depends on what translation you're reading and--**

Olson: Yes, yes. Probably. Achilles is chasing Hector around and around the city walls of Troy, threatening to kill him and Hector is running for his life and finally he stops to fight and the poet, so called, Homer--

**Cazden: Uh huh.**

Olson: --will tell that he held up his spear and then he'll go into a long digression on the fact that the armor is glistening and it's near the river there and time is passing and people are looking over the--

**Cazden: And do you read that description word for word or do you--**

Olson: Yes, I read it all and then--and he'll go on and on and he'll say, the river is glistening and it's glistening because of the sun that's setting and he'll just go on and on on this thing while the spear is poised and you want to know, did he hit him or didn't he?

**Cazden: Yeah, exactly.**

Olson: And finally he says, the--this--the spear pierced through Hector's neck, missing his windpipe, he says--missing his windpipe. So Hector as he lay dying could say, please don't feed my body to the dogs. Please, give my body back to my parents and Ulysses says, "The dogs will eat you, you--I'll spare no mercy for you." Absolutely ruthless but you really feel sorry for Hector. Beautiful--and they describe this beautiful body--rips the armor off and he says, what a beautiful young man, dead to be eaten by the dogs. It's very moving. Anyway, it's a good place to quit, huh?

**Cazden: Yeah. We quit on the Iliad. So this is A side only.**

**End of Interview**