

Humanistic Linguistics

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I would like to contrast two approaches to the study of Linguistics, what I will call the Nuts-and-Bolts approach and the Humanistic approach. Fields of study are characterized by (i) questions that researchers seek to answer and (ii) tools, both technological and conceptual, that are available and socially acceptable. The Nuts-and-Bolts linguist views research in his field as an attempt to answer the question:

(N-B) What formal principles, both language-particular and universal, are necessary and sufficient to characterize the distribution of and relationships among linguistic elements in each of the languages of the world?

The Humanist linguist asks a very different question, namely:

(H) What can the study of language tell us about human beings?

The Humanistic approach is obviously the broader one, since it incorporates the Nuts-and-Bolts approach as a proper subpart: one of the many things that the study of language can tell us about a human being is what formal principles characterize the grammar of the language he speaks. But Humanistic Linguistics is properly concerned with far more than merely grammars and the theory of grammar. Let me start off with just a short list of a few of the things I would take to be part of Humanistic linguistics.

1. The study of the human conceptual apparatus -- what is thought? what are concepts? what is human reasoning?

2. The study of what goes on in people's minds. Not just what goes on in the comprehension of language, or production, or acquisition, but what people are thinking and feeling, consciously and unconsciously, as it is revealed by the language they use.

3. The study of personality - how the use of language can tell us about what people are like.

4. The study of social interaction and social organization, as it is revealed by the use of language, not just the study of social groups and dialects, but rather everyday social interaction.

5. The use of language in political, legal, and social reform.

6. The use of language in literature and the arts and journalism.

The list can be easily extended, but I think you get the idea.

American linguistics in the Bloomfield-Chomsky era was mostly concerned with Nuts-and-Bolts, although there were important exceptions which will be discussed below. Within the past five years however, there has been an important swing toward humanistic linguistics. It is important to increase the momentum of this movement and to give it as much intellectual content as possible. Which brings us to the heart of the matter -- intellectual content. The typical nuts-and-bolts reaction would be something like: "Gee, it would be nice to be able to get some insight into people and society by studying language, but given how little we now know, most of that would be just bullshit." And given much of the popular literature about language and linguistics, one can only grant that such pitfalls exist. But what is all too often forgotten is that nuts-and-bolts linguistics has within it just as much potential for bullshit, potential that is constantly being realized. Only in nuts-and-bolts linguistics, it is hidden by empty formalism, and one has to know a lot about formal linguistics to separate it out. Classical transformational grammar is rife with examples. Take the Syntactic Structures analysis of the auxiliary in English, which was for years taken to be a classic example of a great result in Nuts-and-Bolts Linguistics. I was one of those who was impressed by that analysis in the early sixties. Here were these very impressive-looking formal rules that seemed to be able to spit out all the morphemes in the right order. I thought there must be something very deep about those rules that enabled them to do that. It seemed to me at the time that there must be something profound about those symbols, AUX, M, TNS, EN, that I did not yet understand but that with study I could someday come to appreciate. What happened was exactly opposite. The more deeply I got into nuts-and-bolts transformational grammar, the more superficial that analysis became. When people like Postal, Ross, Robin Lakoff, myself and others started really looking into the details of that analysis, the whole thing went up in smoke. In the first place, the morphemes didn't really come out in the right order. Postal noticed that the analysis incorrectly predicted that "*Has John a book?" was the past tense of the question "Has John a book?" Ross observed that if 'need' and 'dare' were treated as members of the category M, then the analysis claims that the 'need' in "Need you open the window?" and the 'need' in "Do you need to open the window?" have nothing whatever to do with each other. Ross also observed that the analysis could not account for the

pronominalization possibilities in cases like (1):

(1) Will Sam have been slicing the salami, which Max says he
will (have (been))?

Once we started looking at the details, it became clear that the analysis was just plain wrong. In case after case after case. And on reflection it became clear why it was wrong. The analysis told one nothing whatever about the function of tenses and auxiliaries so far as meaning and the use of language is concerned. One need only look at J. McCawley's "Tense and Time Reference in English" to see that auxiliaries have a semantic function that is reflected in syntax, or at Robin Lakoff's "The Pragmatics of Modality" and "Tense and Its Relation to Participants" to see that auxiliaries have a pragmatic function that is reflected in their syntax. Symbols like AUX, M, TNS, etc. are ways of disguising bullshit. They are not profound. They give little if any insight into the nature of verbal auxiliaries.

The case of the Syntactic Structures auxiliary analysis points up the kind of danger that plagues not only Linguistics but other academic fields as well: Formal research tends to drive out nonformal research. The subject matter of the field becomes reduced to the subject matter that can be dealt with by the available conceptual and technological tools. In the heyday of transformational grammar, linguistics became defined by the conceptual tools that Chomsky had made available. The job of the linguist was thought of as investigating how language could be described using transformational grammars. At MIT, the course on other approaches to linguistics became known as "Bad Guys". It has been largely through the work of Dwight Bolinger, Charles Fillmore, Robin Lakoff, William Labov, and their followers that linguistics has begun to transcend the nuts-and-bolts approach in a way that has intellectual content. And equally important, it is largely through their work that real intellectual content has begun to be given to Nuts-and-Bolts Linguistics.

Now, I am primarily known as a nuts-and-bolts linguist. And for good reason. I have worked at things like the theory of exceptions, pronominalization constraints, correspondence grammars, global rules, transderivative rules, the logic of fuzzy concepts, the formalization of presuppositions, etc. Chances are that I will continue to do this sort of nuts-and-bolts work on a day-to-day basis. But my perception of what nuts-and-bolts

linguistics is about -- what good it is and why it is worth the bother -- has changed considerably in, say, the past five years. What has brought about this change has been the nonformal writings of Dwight Bolinger, Charles Fillmore and Robin Lakoff. In paper after paper, these nonformal grammarians have taken up and discussed insightfully problems that are beyond, often far beyond, formal description in any contemporary theories. Their writings are informed by the results of transformational grammar, generative semantics, and other contemporary approaches. Consequently they know that there is no point in trying to write formal rules for what they are interested in, since there are no theories that work. They have not permitted their interests to be defined by the pitifully inadequate linguistic theories that happen to be available. Yet their papers are insightful and interesting, usually more so than papers on formal linguistics, an alarmingly large percentage of which have fallen into the symbol manipulation syndrome and are no more revealing than the Syntactic Structures analysis of the auxiliary. The writings of the nonformal grammarians, together with the recent work by Haj Ross on squishes, reveal the complexity of language in all its glory and the inadequacy of contemporary linguistic theories in all their poverty. They not only show that no theories now work; they show that no theories are going to come close to working in the foreseeable future. They give us an inkling that current theories cannot handle 10 percent, or even 5 percent, or even one percent, of what we know about language -- a better estimate would be more like .00000000000023 percent!

But if this is so, why bother doing formal linguistics at all? What are nuts and bolts good for if you can't build anything with them?! What sense does it make to talk about ADVANCES IN LINGUISTIC THEORY if we know so little? How can one teach a course in linguistic theory with a straight face? Or justify continuing to patch up inadequate theories with Band-aids and Scotch tape? There are, I think, answers to such questions, though not straightforward and obvious ones.

To begin with, Humanistic Linguistics (currently embodied mostly in the writings of the nonformal grammarians) is in a symbiotic relationship with Nuts-and-Bolts Linguistics. Each gives intellectual content to the other. The writings on formal linguistics, in particular, those in transfor-

mational grammar and generative semantics, have at least in a negative way, shaped the interests of the nonformal grammarians. Nonformal grammarians tend to get interested in what they write about largely because those topics are beyond the scope of contemporary formal linguistics. And formal linguists, at least those working in Generative Semantics, choose the directions in which to extend their theories because nonformal grammarians have pointed out inadequacies. In fact, the so-called 'results' in formal linguistics are far and away more negative than positive. Most of the time, we show you cannot handle such-and-such a phenomenon with such-and-such conceptual apparatus. For example, take the following notion of 'semantic representation':

A 'semantic representation' is a structure (say a tree structure) made up of symbols (semantic markers in one theory, predicates, arguments, etc. in another) that can adequately represent all aspects of the meaning of a sentence.

One of the important results in recent formal linguistics which grew out of nonformal observations is that semantic representations in this sense do not exist: finite structures made up of symbols cannot adequately represent many aspects of the meaning of a sentence. In fact, once you think about it, this 'result' is obvious. Let's start with a fact about hedges which was noted by Dwight Bolinger in his classic book Degree Words. Bolinger observed that words like regular and real map connotations into literal meanings. Consider (2):

(2) John's a regular Henry Kissinger.

Depending on context, (2) might mean that John is diplomatic, or that he is a ladies' man, or that he is a manipulative advisor, or that he is profess-
orial, or that he is an opportunist, or that he is jovial, or that he is a war criminal. The point is that connotations are context dependent; and if there are an infinite number of possible contexts, there are an infinite number of connotations for proper names. In short, (2) has an infinite range or possible meanings, each of them dependent on context. But to fans of Paul Grice this will hardly be a surprise. Grice's study of implicature indicates that most sentences have an infinite range of indirectly conveyed meanings, depending on context. In fact, Grice believes that any sentence can mean anything, given the right context. An important recent result in nonformal grammar is that this is not true. For example

(3) John ran away.
(4) Away ran John.
(3) can be a request for help, while (4) cannot. Similarly,
(5) Sam sliced the salami carefully.
(6) Carefully, Sam sliced the salami.
(5) can be a request to be lenient on Sam, while (6) cannot. The point here is that certain syntactic constructions are limited in the meanings they can convey. Interestingly enough, they are the exceptions rather than the rule. The inadequacy of semantic representations as descriptions of meaning is also shown by hedges like sort of, rather, pretty (much), etc., which, as Zadeh and I have shown, require algebraic functions in any adequate account of their meaning. Such hedges require a model-theoretical approach to meaning; combinatorial structures just cannot do the job.

The nonformal observations that initially revealed such inadequacies in the notion of semantic representation have led to formal theories in which such facts can be handled. Current generative semantics depends very much on model-theoretical interpretations of logical structures. These permit both an account of hedges and an account of implicatures in terms of entailments in context.

Over the past five years, nonformal linguists have pulled formal linguists working on generative semantics more and more into the area of pragmatics, that is, into the study of how language is organized in terms of the assumptions and intentions of participants in a discourse. Robin Lakoff's informal discussion of the function of conjunction in "If's and's and but's about conjunction", for example, forced me into a realization that entailments in contexts played a central role in grammar, and led directly to the development of transderivational rules. Another example is Ann Borkin's work showing that the distribution of polarity items depends upon conveyed meaning. Such results, in turn, have led to the further use of model theory in generative semantics, for the purpose of distinguishing between the literal meaning of a sentence and those aspects of meaning that are entailed in a context. Over the past five years, the constant challenge of the nonformal grammarians has led us to more and more theoretical innovations in the area of pragmatics.

At the same time such formal developments have helped to clarify the intuitions of grammarians who were straightjacketed by transformational grammar. For example, take the discussion of tag-questions in Robin Lakoff's "A syntactic argument for negative transportation". She considers sentences such as (7).

(7) I don't suppose the Giants will win, will they?

She accounts for the positive tag in terms of negative transportation and claims that tags in general agree with the subject and first auxiliary of the sentential complement of verbs like suppose, think, and believe, which she refers as kinds of 'performative' verbs, even though these, strictly speaking, were not performative in the same sense as state, order, etc. The intuition behind this description was that the function of tags was to convey a hedged assertion and ask for confirmation. But in 1969, there was no way to express this formally. Given present-conceptions of indirect speech acts and transderivational rules, one can express more precisely what that intuition was. Verbs like suppose, think and believe can be used to indirectly convey hedged assertions. Tag questions (at least this type) function to ask for confirmation of what is being hesitantly asserted, which is why they agree with the complements of verbs such as suppose, think, and believe. The tag is not simply introduced transformationally, but is reduced from the corresponding full question. The tag-construction is an amalgam (See G. Lakoff, 1974) of the hedged assertion and the full question; the amalgamation is constrained by the pragmatic conditions described above. Of course, such an analysis is beyond the conceptual resources of transformational grammar; it requires a theory of contextually conditioned indirect speech acts plus a theory of transderivational rules. The point here is that, even to provide a nonformal description of what is going on, as we just have, one requires conceptual resources far beyond transformational grammar. Just as intuitive grammar can guide the formation of theories, so theories can explicate unformalized intuitive descriptions. Nonformal grammar and nuts-and-bolts grammar are mutually supportive.

I would like to suggest that the recent nuts-and-bolts developments in the area of pragmatics, particularly the use of model theory in the study of context and transderivational rules -- together with the mode of inquiry developed by the nonformal grammarians -- makes possible the development of a humanistic linguistics with real content. A good example is Robin Lakoff's

essay "Language and Women's Place". Humanistic linguistics would, of course, overlap in subject matter with a number of other disciplines, especially psychology, philosophy of language, logic, anthropology, sociology, literature, education, even law.

At this point I would like to discuss very briefly what I think the most interesting aspects of this overlap between humanistic linguistics and other disciplines will be. Let's start with philosophy. First, the obvious -- at least so far as linguists are concerned. It has been noted by many people, e.g., Harman, Davidson, Katz, McCawley, myself, etc., that to the extent that philosophical analysis depends on linguistic analysis, philosophical analysis is an empirical study. This is very slowly beginning to be comprehended by philosophers, but there is a long way to go. I am not talking merely about the philosophy of language. Take the philosophy of action, for example. As Ross (1972) and Vendler (1967) have shown, there is a wealth of linguistic evidence bearing on the analysis of actions. Or take causation. Philosophers almost invariably talk about causation as a relation between events. But sentences like (8) show that causation can relate states and states, states and events, and events and states as well.

- (8) a. Being poor has prevented me from being happy.
- b. Being poor made John go mad.
- c. Sam's hitting Bill made John unhappy.

Or take the philosophy of logic. Logic was originally conceived of as the study of human reasoning in general. Now the study of human reasoning is, or should be, an empirical matter. But since Frege and Russell, logic has been largely an a priori study, and in recent years it has become a highly developed branch of mathematics, which has little to do with human reasoning -- except for the subfield of intensional logic, which has been growing rapidly and slowly converging with linguistics. Unfortunately, there is still relatively little empirical research done by intensional logicians. It is here that the work of nonformal linguists can be especially helpful in providing challenging problems that known logics cannot deal with. I have discussed such problems in a number of publications (G. Lakoff 1972a, 1972b, 1973). For now, let me take up just one -- the analysis of proper names, a problem

which is also of interest in the philosophy of language.

Logicians usually treat proper names as constants, which function as what Kripke calls "rigid designators". Typical examples of what logicians mean by proper names are the names of numbers, like '2' and '37', which (rigidly) designate the numbers two and thirty-seven in all possible worlds. By the same token, 'The Eiffel Tower' would always designate the Eiffel Tower. Another implicit property of proper names as logicians conceive of them is that they are undecomposable. Even a cursory nonformal look at proper names in English reveals that they are rather different than logicians conceive of them as being.

First, they yield ambiguities in opaque contexts.

(9) Sam Schwartz told his girlfriend that his name was Henry Kissinger, and so she believes that she has been dating Henry Kissinger.

(9) has two readings -- one where she thinks he is the Henry Kissinger and one where she thinks he is merely a Henry Kissinger -- which leads to:

(10) Sarah is dating a Henry Kissinger, not the Henry Kissinger. The use of articles with a proper name has to be accounted for. There is also a mysterious use of the number one with proper names.

(11) a. One Henry Kissinger was arrested last night in Hyattsville, Md.
b. *One Henry Kissinger is fat.

In (11), the 'one' is unstressed. What is it doing there? What is its function? Even stranger for the logician's view of proper names is the fact that parts of them can be quantified over.

(12) a. Every Kennedy is jinxed.
b. Therefore, Teddy Kennedy is jinxed.

(13) a. Every person with the surname Kennedy is jinxed.
b. Therefore, Menachem Kennedy is jinxed.

Clearly, this is a matter for logic. What is the internal logical structure of proper names? Why does "every Kennedy" in (12a) pick out only members of a certain well-known Kennedy family instead of everyone with that surname? Moreover, parts of names can be questioned (as Chris Smeall has observed):

(14) a. John who?
b. *Who Smith?

c. *John which?

d. Which Smith?

Last names are questioned with who, and the rest of the name with which?

Note that when there is a middle name, which can question both first and middle name, but not just the first name.

(15) a. John Robert Ross.

b. *Which Robert Ross?

c. Which Ross?

In addition, parts of names can be referred to by pronouns.

(16) Teddy Kennedy would never have been elected if that hadn't been his last name.

Then there are cases (pointed out by Henry Thompson) where names can refer to their phonetics, their spelling, or just themselves in the abstract.

(17) a. Sally Cherowski is a funny-looking name.

b. Lillian LaVerne is a lovely sounding name.

c. The aspiring jet-setters dropped two Henry Kissingers and a Jill St. John within five minutes.

Then, there are the host of cases (pointed out to me by Berkeley students) where the name picks out a property.

(18) a. Harry is a regular Henry Kissinger.

b. It's the Richard Nixons of this world who got us into this mess.

c. Paris wouldn't be Paris without the Eiffel Tower.

d. There are two New Yorks -- { daytime and night-time New York.
black New York and white New York.
the East Side and the West Side.
the New York before 1800 and
the New York after 1800.

e. Chomsky is the DeGaulle of Linguistics.

f. John is Leonardo-esque.

g. Henry Kissinger-types bug me.

h. John is a cross between Kissinger and Bismarck.

Simply by using the methodology of nonformal grammar, we have isolated a number of challenges to various philosophical conceptions of proper names.

It is my feeling that the real impact of linguistics on philosophy will be in such empirical domains. At the same time, so-called philosophical problems, like opacity, have become linguistic problems, and the subject matter of

the fields overlaps.

It will not be long before philosophy will have to confront a host of empirical issues of this sort. That will be a real relief from the kind of relationship conceived of between the fields in the mid-1960's, when the inconclusive and, in my view, relatively boring version of the empiricism-rationalism issue was raging. The debate was mostly hot air. It was not the traditional knowledge-by-experience-only versus some-innate-knowledge argument: the kind of 'knowledge' involved was rather different -- the capacity to learn one's native language. Nor were the positions as different as one might be led to believe. The empiricists were not tabula-rasa types: they accepted the idea that man has all sorts of innate capacities: an innate capacity to acquire reasoning ability, innate memory and processing capacities, and an innate general learning mechanism. They claimed that all that innate apparatus -- whatever it would turn out to be like -- should be enough to account for the ability to learn language. Chomsky said it wasn't, and that innate equipment to acquire syntax was also needed. What the debate came down to was the issue of whether the capacity to acquire syntax was a consequence of the other above-mentioned innate capacities? Hardly the present-day incarnation of the rationalism-empiricism debate. Not that the issue is uninteresting -- it just isn't earthshaking, and moreover there was (and remains today) no solid evidence on either side. Each side claimed the burden of proof was on the other -- a debating ploy. Nothing conclusive has come of it, except perhaps publicity. In the future, the overlap between linguistics and philosophy will hopefully have some real empirical content.

What about psychology? In 1967, Fodor and Garrett declared "The most profound problem in psycholinguistics is perhaps to specify the nature of the relation between the grammar and the recognition routine." That attitude, if not dead, is dying fast. It is my opinion that in the future, such studies will occupy a minor corner of the field. There are simply more interesting problem areas worthy of the name psycholinguistics, areas that will become part of a humanistic linguistics. They are:

1. Cognitive structure. What can the study of language tell you about the nature of thought, of concepts? The introduction of model-theoretical methods into linguistics has given us a means of studying the

human conceptual system in a formal way. Logicians mostly look at model theory as a technical tool for doing completeness proofs. But, when applied to the study of natural language concepts, it turns out to be a way of probing into the mind. Of course, as in all endeavors in formal linguistics, the results are largely negative: the more one formally describes a concept model-theoretically, the more we learn we don't know. What is particularly impressive to me is the extent and nature of the complexities of concepts whose simplicity has previously been taken for granted. A good example is the complexity of fuzzy and scalar concepts, as studied by Hans Kamp, Kit Fine, myself, and others. Another example is causation, as it has begun to be analyzed by David Lewis. Once one sees what is really involved in understanding even supposedly simple concepts, the cognitive capacities of children become awe-inspiring. It is ironic that such work at present is being done exclusively by logicians and linguists, and not by psychologists. I believe that in the future the three fields will converge in this area.

Model theory aside, however, the study of cognitive structure has become, in influential circles, an integral part of psycholinguistics. In the study of language acquisition, for example, more and more investigators, especially among current students, seem to be primarily interested in the semantic and pragmatic aspects of language learning, while syntax is being down-played. That is, students of acquisition have been asking not what is the grammar of the child's short utterances (which doesn't seem to give much insight), but rather what does a child know, understand, and intend. Here also, the early results indicate that children know much more than they are given credit for. I have in mind the work of Schatz and Gelman on the communicative capacity of 4-year-olds. Gelman has found, not surprisingly, at least to me, that 4-year-olds have mastered a wide variety of conversational principles, use them skillfully, and moreover, use them very differently in addressing adults versus 2-year-olds. She claims this challenges the view that children of that age are completely egocentric and lack the ability to reason logically. If implicatures are indeed entailments in context, then it would seem that the 4-year-olds she has studied have mastered an incredibly complex logical system. Not being a psychologist, I am not in a position to tell whether she is right. But as a parent who has to daily engage in losing battles with a linguistically cunning 3-year-

old, I would feel very dumb indeed to be told that he is incapable of reasoning.¹

2. Personality and personal interaction. When you meet someone for the first time, you can learn a lot about him by talking to him for a few minutes, discussing any random topic at all and paying attention to the way he uses language. In any conversation, participants reveal presuppositions, hedge in some cases but not in others, use politeness principles in some places but not others, use various indirect speech acts instead of direct speech acts, etc. What you find out about a person in a random conversation is very largely determined by these pragmatic factors -- and these are just the kinds of things that are being studied insightfully today, and to some small extent being formalized. To the extent that they can be formalized, we find out what we do and do not understand about them -- mostly the latter. Moreover, the methods of the nonformal grammarians, which are being developed into high art, should enable us to begin to analyze what it is about the use of language that enables us to gain insight into personality through the observation of language use. Moreover such studies should provide a gold mine of important data that humanistic linguistic theory must come to grips with.

3. Mental disorders. There are good clinical psychologists who can listen to a tape of a family conversation, with the child absent, and tell with a high degree of success whether the child is schizophrenic, delinquent, or normal. Moreover there are talented analysts who can diagnose mental disorders accurately by listening to patients' use of language. How are they able to do this? At least partly by looking at the revealed presuppositions, hedges, indirect vs. direct speech acts, etc. Here again humanistic linguistics overlaps in subject matter with something of interest and concern to all of us. By the way, linguistic work in this area has begun in the research of William Labov on therapeutic discourse and Robin Lakoff on schizophrenic speech.

In addition, much that was thought to be part of performance -- for example, hesitations, repetitions, and especially corrections in mid-sentence -- have been shown to be an intimate part of grammar. See the classic

studies by James (1972, 1973a, 1973b) and DuBois (1974). Again subject matter that was taken to be in the province of psychology has found itself as part of a broadened Linguistics.

Psycholinguistics, as it developed in the 60's, was very much a nuts-and-bolts discipline. The nuts-and-bolts are well known experimental techniques: click location, galvanic skin response, eye movement, pupil dilation, sentence paraphrasing, and time measurements for a variety of tasks. It was unfortunate that psycholinguistics, like linguistics proper, fell into the trap of letting the field be defined by the available technological and conceptual tools that were socially acceptable within the field. The alternative, which is now beginning to be realized, is to ask fundamental questions, for example, what can you learn about the mind by studying language, and vice versa?

Let me now turn very briefly to sociolinguistics and anthropological linguistics. The study of presuppositions, speech acts, and implicatures has forced contemporary linguistics into the study of social interaction and culture. The reason is that there are linguistic principles that depend on social and cultural concepts. For example, Robin Lakoff has shown that principles of politeness enter into rules of grammar. Unfortunately, there was no adequate analysis of politeness given in sociology on which those rules could be based. What she did was to get an informal first approximation to those principles by studying linguistics. On the other hand, there is at least one case where a non-obvious sociological concept, Goffman's 'free goods' plays a role in grammar, namely, constructions with 'may I ask', which requires the assumption that what is being asked for is not free goods. Also, Eleanor Keenan has shown that conversational principles that Grice took to be universal vary from culture to culture, and that these in part define a culture, and can be gotten at through the study of language. In such area, linguistics can have a bearing on social theory, and vice versa.

In the study of speech acts, implicatures and presuppositions, Linguistics has come to overlap in subject matter with psychology, philosophy, sociology, and anthropology. It is in this area that I think most progress will be made in establishing Linguistics not as the study of the distribution of linguistic elements, but rather as the study of man through language.

Footnotes

¹ So far as I can tell, the Gelman-Schatz results do not contradict Piaget's results, as they suggest, but rather supplement them. Piaget has shown that children at age four and above behave egocentrically with respect to certain types of tasks. Gelman and Schatz show that in very different (non-Piagetian) situations, they behave, at least in part, non-egocentrically. Their results suggest to me that egocentrism is overcome at different times in different spheres of behavior, which does not seem to me to contradict any Piagetian claims. The same is true of reasoning. If the use of complex conversational principles constitutes reasoning, it is certainly not the conscious, manipulative reasoning of the sort Piaget has tested for. The Gelman-Schatz research seems to raise the question of what counts as egocentrism and reasoning in non-Piagetian tasks and how can their development be traced in ways that supplement Piagetian results.

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