DECLARATIVE SENTENCES AND THE RULE-OF-CONVERSATION HYPOTHESIS

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Classical transformational grammar maintained a strong division between linguistic structure and language use. Attempts to study meaning within the theory kept this distinction and described the literal meanings of utterances apart from their social contexts. Implicit in this approach was the view that a grammar provides a set of messages which language users can choose among for various communication functions -- the message theory of linguistic meaning. As the inadequacy of the transformational model became apparent, a number of devices, such as performatives and presuppositions, were incorporated into the standard theory in order to handle questions of real language use. The effect of these additions was to pack features of language use into the logical representation of an utterance, i.e., into its 'message'.

This paper focuses on various types of declarative sentences and shows that they do not fit the message theory model. Furthermore, it contends that embellishing the message theory with new conversational rules or performative verbs leads to increasingly tenuous attempts at packing representations of complex social and psychological relationships into tree mapping rules.

1. The Message Theory

The message theory depends on a sharp distinction between language and language use. In classical transformational grammar certain facts were included in the domain of language study but other facts, facts about social context, speech acts, insinuations, politeness, the structure of discourse and conversational interaction were relegated to areas outside of linguistics. Such facts were not meant to impinge on the study of the grammatical structure of sentences.

During the last few years it has been generally recognized that these other facts do all affect grammatical structure. Language cannot be studied apart from language use. However, each extension of the theory to cover context and situation has served to preserve trees as the representation of meaning.[1] The performative analysis, for example, provides for an explicit statement of the conversational function of an utterance as a part of its logical structure.[2] Presuppositions extend tree representations to include information about social context and the psychological assumptions underlying an utterance. The effect of innovations like these has been to make descriptions of phenomena which are related to the social nature of language fit the requirements of a linguistic theory that has abstracted its subject matter away from its social base.

This development of the theory reflects a particular view of language that we want to characterize as the 'message theory' of meaning. In this view, language use is considered solely in terms of the structures specified by the grammar: A sentence is used to convey, from speaker to hearer, the logical meaning that is encoded in its structure. To borrow a phrase from economics, the 'use value'

of an utterance is in its ability to carry a message.

Conversational postulates, too, can be understood in terms of the message theory. They further extend the labeled tree as a representation of meaning in order to handle other aspects of language use. On the one hand they serve to protect the centrality of logical meanings in the study of language use by deriving 'conversational meanings' from them. On the other hand, conversational meaning is also represented as a logical formula whose interpretation is the same as the logical formulas which represent literal meanings. Conversational postulates, in fact, can be considered as statements of an entailment relation between two messages, one a literal message and the other the implicated, or conversational message.

One of the most fruitful developments in recent years has been the attempt to describe the use of language in communicative situations. This attempt has led to the formulation of a number of 'rules of conversation', which characterize the linguistically relevant properties of conversational situations and provide conditions on the felicitous use of various grammatical structures. One particularly explicit set of these rules is given in R. Lakoff 1972:

"In a normal conversation, the participants will make the following assumptions, among other, about the discourse:

Rule I. What is being communicated is true.

Rule II. It is necessary to state what is being said: it is not known to other participants, or utterly obvious. Further, everything necessary for the hearer to understand the communication is present.

Rule III. Therefore, in the case of statements, the speaker assumes that the hearer will believe what he says (due to Rule I).

Rule IV. With questions, the speaker assumes that he will get a reply.

Rule V. With orders, he assumes the command will be obeyed.

All these assume, in addition, that the status of speaker and hearer is appropriate with respect to each other. (Of course, there are special situations in which all these are violated: lies, 'small talk', tall stories, riddles of certain types, and requests as opposed to commands. But in general these conditions define an appropriate conversational situation.)"

These rules embody a strong form of the message theory, one where the participants in a conversation are engaged in an activity that can be characterized by the verb 'tell': declaratives[3] are used for telling someone something (i.e., for informing), imperatives for telling someone what to do, and questions for asking someone else to tell something. In such a conversation the use of a sentence can be described solely in terms of a simple version of the message theory: sentences are used to send the logical meanings that are encoded in them from speaker to hearer.

At first, this view seems quite plausible. What else are meanings except the things people say to each other? The participants in a normal conversation are sincere and reasonable. They speak directly, and they don't ask the impossible. They don't say

what is already obvious,and they don't say what they don't believe. Such cases as lies and play acting exist, but they certainly are not paradigmatic. Conversations are predicated on the rational exchange of communications, and this rationality must be assumed in order to understand the meaning and structure of what is said. The rules of conversation just define the situation in which this exchange is both efficient and purposeful, the paradigmatic case.

Furthermore, the logic-like trees which have been developed in linguistic theory are appropriate representations of the meanings, or messages, which are conveyed from speaker to hearer. The only problem is to pick out the right tree, the right message behind such slightly strange sentences as Why paint it purple.[4]

While rarely made explicit, the message theory is implicit in most discussions of language use. Even the terms used to talk about language -- 'communication', 'information' and 'the interpretation of a sentence' -- seem to presuppose a message theory. This notion is not confined to linguists. Many philosophers and psychologists speak of language as if an idea or thought is packed into a sentence, uttered and then received by a listener, giving rise to a new thought.

However, the rules of conversation and the message theory they entail cannot be simply assumed. They represent empirical claims about real discourse. This paper attempts to demonstrate that the message theory does not adequately account for simple facts of how sentences are used. In particular, the paradigmatic case for declarative sentences is not information transmission. To show this, examples of a number of ordinary, everyday declarative sentences which clearly violate the rules of conversation will be given. These sentences do not inform, or are not meant to inform. They demonstrate a variety of conversational functions that have very little to do with informativeness. Informative sentences could also be used as examples, but in order to separate the informative from the non-informative aspect of declaratives, and to show the variety of non-informative sentence uses more clearly, the examples will be confined to sentences that are in blatant violation of the rules of conversation.

2. Verbal Act Declaratives[5]

Non-informative declaratives commonly introduce some relevant, though known, fact into a conversation or social situation. These declaratives can function in a variety of ways, depending upon the nature of the conversational interaction and the personal relationship of the participants. Linguists might be tempted to describe many of these non-informative declarative uses by the sorts of terms usually used to classify verbal acts. Consider, for example, sentences like

1) Your field is medicine, professor, not economics.
2) As far as I know, Dr. Billings, you are not yet a member of the tenured faculty.
3) Rev. Abernathy, you don't have access to the government's files.
4) Your old man drives a truck.

5) I didn't see you volunteering for active duty.

which can all be used as put downs. They challenge the addressee's expertise or position, and call into question the social basis of his behavior.[6]

Some put downs, while not directly about the addressee, state truths that are taken to be relevant to his behavior. Consider, for example, examples like these:

6) Marrying an actress doesn't make anybody an authority on the arts, Joe.
7) Some people try to be civil.
8) The election's over, Sam. [where Sam is, say, still talking about the issues of the last campaign]

Put downs seem to be members of a larger class of verbal acts, that also includes reprimands:

9) You were hired to keep the books, Miss Godfrey, not redecorate the office.
10) This is the army, Jones. And you're a private. Privates are supposed to salute lieutenants.

and admonitions and recriminations of various sorts:

11) Miss Lee, this is not the powder room.
12) That's my desk you've got your feet on.
13) You were drunk again last night.
14) You're five years old now, Jimmy. [where Jimmy has, say, spilled his milk]

Put downs need not be addressed to the person being squelched:

15) Mr. Nader simply hasn't got the technical background that members of the GM engineering staff have.
16) Tom Hayden hasn't spent the last 5 1/2 years of his life in a North Vietnamese prison.

In many respects, put downs, admonitions, and reprimands are similar to declaratives that have somewhat the opposite effect, such as sentences that are used to boast, encourage or give a build up:

17) That makes six times straight now that I've beaten you.
18) Look, you've been through it before. You're getting older, sure. But you've done it before and you've got the experience that the younger generation lacks.
19) Mr. Hoffa has been in prison. He's seen the inside first hand, and knows the conditions that people are forced to live under there.

In certain circumstances, non-informative declaratives are often also used to complain, make a protest, or voice an objection:

20) But you said I could go, Dad.
21) You've already got a winter coat.
22) It's cold outside, and it's a long walk from here.
23) You're always talking about Bob. Bob's dead. He's been dead for nearly ten years. You're married to me now.

24) I asked you to pick up your Legos an hour ago and they're still all over the kitchen floor.

As portions of these last two examples show, protests and complaints can also be accomplished by a simple description of the situation being protested:

25) You've been on that phone for almost an hour now.
26) That's the second time you've wet your bed this week.
27) I've been in the landscaping business for nine years, and you're telling me about shrubbery.
28) You didn't feed the dog this morning.

Sentences like these are often more like suggestions or proposals, in that they invite a rectification of the situation described:

29) We haven't been to see a movie lately.
30) You've worked for me almost 5 years now, Miss Craig, and in all that time we've never once had lunch together.
31) It's been a long time since you've seen a doctor.

Some declaratives are also used to place blame, or to escape responsibility:

32) You were the last one to leave the house.
33) She's your mother, not mine.

And, at times, non-informative sentences can also be used to warn, threaten, or give advice of other sorts:

34) I'm a lot bigger than you are, kid.
35) You haven't been granted tenure yet, James, and you only published one short paper last year.
36) The police would be interested in hearing about this.

or simply to hint:

37) It's getting late.
38) Hey, you walk past the drugstore on the way home.

This list could be extended almost indefinitely. But enough examples have been given to demonstrate the sorts of sentences we have in mind. It is apparent that many of these examples could be used in a variety of different ways, depending upon the context, the particular circumstances the speaker and hearer are in, their personalities and their state of mind.

Moreover, it would not be difficult to imagine situations in which sentences like these would have, simultaneously, more than one function. Informativeness, especially, is not inconsistent with any of the declarative uses illustrated here. Although all of the examples given above were made up of sentences which failed to inform, they could be matched by a parallel set of informative declaratives that function in precisely the same way. A sentence that informs, like

39) This gun is loaded.

can threaten in just the same way as the non-informative:

40) This gun is pointed at you, Mac.

More than most of the other declarative uses illustrated here, put downs seem to depend on the non-informative nature of the sentence. Informative put downs are, in fact, hard to find.[7] The explanation for this is probably not that a put down meaning is dependent upon non-informativeness, but rather that, to be effective, a put down must be recognized as unchallengeable by the person it is addressed to. Wishy-washy or doubtful statements don't make good put downs.

3. Expressive Declaratives

The preceding section described some sorts of utterances that typically occur in everyday, personal encounters, not the more remote, logical discourses that the rules of conversation assume. But not all the non-informative declaratives that occur in personal conversations fit, in any obvious way, a verbal-acts classification such as the one used above. Many seem simply to express feeling or to set a mood. This characterization of their function may appear somewhat vague; but consider a few examples. For instance, someone comes home from work and says:

41) The traffic out there keeps getting heavier and heavier.
42) I've been working all day.

to the rest of the family. An utterance like this helps set the terms for the interaction that will follow. The members of the family are prepared for what is to come.

Again, consider an expression of disappointment like

43) Oh...it's you.
44) The weekend's almost over. Tomorrow it'll be Monday morning again.

or expressions of empathy and sympathy such as:

45) You had a hard night.
46) That hurts.

or an activity like bitching:

47) The damn pencil sharpener is always getting filled up with crud.
48) It's a waste of time driving around trying to find a place to park in this town.

or a person enjoying an ice cream cone who says

49) We haven't had an ice cream cone in months.

as an expression of that enjoyment and the 'specialness' of it. Non-informative sentences which focus on what the speaker is experiencing, and express his feeling about it, are common in everyday discourse:

50) It's cold out.
51) It's so quiet out here. It's not like in the city.
52) The chilis are really hot, aren't they?

To take a slightly different sort of example, consider someone from New York visiting friends in a small town who says

53) This certainly ain't the Bronx.

when he discovers that people don't lock their doors at night, or, with a different purpose, when he looks through the paper to see what movies are playing.

So far all of the examples have been of sentences which fail to inform because their logical contents are obvious or already known to the audience.[8] Examples of sentences which might inform, but are not necessarily intended to, can also be given. Such sentences serve expressive functions which do not depend upon their accuracy or informativeness.

Classic examples of such declaratives are provided by compliments. Although an utterance such as

54) Your painting is just beautiful. The colors are gorgeous.

might be more highly valued as a compliment if the speaker is sincere, i.e., if he believes what he is saying, it is functionally no less a compliment if he doesn't.

Other sorts of conversations that serve to maintain personal social relationships, especially where the participants know each other well, are filled with sentences that are very similar to the compliment case. Such sentences are said more for their effect on the interactions they are a part of or for their social function, than for their value as literal statements.

Consider examples from an argument or a heated discussion:

55) I don't know why I put up with this.
56) You think you're so damn smart.
57) I can get along without you. I don't need you.
58) You can't do anything right.

or from a happier sort of encounter

59) It's going to be all right. There's nothing to worry about.
60) This is going to be the happiest day of your life.
61) I'll make it all up to you. You'll see.

Like compliments, these sentences are more powerful, more effective, if they are sincerely meant. But regardless of their sincerity, they manage to serve their function. Even those that are primarily expressive are often informative and are believed, at least to a certain extent. But such considerations alone do not lead to an understanding of what speakers are doing when they make statements in real discourse.

As a final example, consider again the case of put down declaratives and the like. As well as saying something that is obvious, a put down or disparaging remark can be attempted simply by saying that something is obvious. But it is all a pretense, not believed and not meant to be believed:

62) You couldn't have done much farming in your life.
63) It's pretty clear that you've never had more than one

course in history.

This element of pretense can be found in a variety of other sentence types. It is, of course, typical of humorous discourse, sarcastic remarks, and signifying.

4. Discourse Structured Declaratives

Aside from accomplishing the sorts of verbal and expressive acts described in the sections above, non-informative declaratives are often used to present evidence or to make a point in the course of what is often called 'rational discourse'. In fact, using non-informative evidence in the course of a debate or discussion may on occasion be of more value than introducing unfamiliar evidence, since it is, in a way, uncontestable. Intellectual discourses are usually composed of a structured mixture of informative and non-informative declaratives. The function of each declarative would need to be studied in the context of the structure in which it occurs.

But let us consider here some obvious sorts of cases where more or less isolated discourses are composed entirely of non-informative declaratives. The first example, which demonstrates that non-informative sentences alone can be used to make a point, is something that could be said at a political meeting:

64) The brother over here was talking about how since the war is still going on we've still got to keep holding rallies and demonstrations like we did before. But this is 1973, not 1967. Nixon's president. The POWs, ours anyway, are home. The draft is over. And the war isn't front page news in most newspapers anymore. The situation has changed.

Political discourse is also filled with things that have been said before, and with descriptions of well known events. Such descriptions serve to characterize events in a way that is congenial to the speaker's political position and purpose. When skillfully done, they are undeniable, i.e., they are obvious and uninformative, but still manage to serve their purpose. Imagine the politics of an individual who might write the following to the editor of a paper:

65) We have here a situation where a group of Americans in Wounded Knee are not only defying our government with armed might, but have fired on Federal officials who were attempting to perform their duties.

The simple juxtaposition of facts, relating one to the other, can often serve to make a point:

66) The POWs who are now telling us about how they were tortured and mistreated, were once dropping bombs on the North Vietnamese. They were captured while flying missions in support of the Thieu regime, which put thousands of its political opponents in jails like the famous tiger cages.

There are other reasons for verbalizing something that is already known. Sometimes it is necessary simply to focus attention to it, or make it explicit. Consider, as example contexts for utterances

of this type, a group of lab technicians trying to figure out what went wrong with an experiment, a jury reviewing the events in a case, a group of liberals recounting and denouncing Nixon's policies to each other, some people reminiscing, or the beginning of a football game where someone says

67) Okay now, you all know the rules. Three complete is a first down, and only two men can rush.

Other non-informative declaratives are used less to provide support for an argument, then to confront the opponent or bring something out into the open. Consider (68) in the context of a domestic argument:

68) What's more, you were late for supper three times last week and twice the week before.

Confrontation declaratives occur in a variety of other contexts as well:

69) You had her fired.
70) Last year, you approved 13 secret war contracts, including 2 for research on the development of laser beam weapons.
71) It was you who sent me those roses.

Though they bear a relation to evidential statements, it would be difficult to formulate a precise logical representation that would capture the point these sentences are making, or what conversational message they contain. They seem rather to accomplish a kind of conversational act.

When confrontation sentences occur right on top of the events they describe, the element of protest in them is very strong:

72) You hit me, you bastard. You hit me.
73) Hey...you reached over the net.

In many ways confrontation sentences are very much like their opposites, sentences which are used to give in or give up:

74) You were right. Meijer's cheese is more expensive than Kroger's.
75) Okay...you found me out. I did it.

Consider now sentences whose conversational function is to help organize the discourse. The comments which initiate conversations will often appear to say things that are quite obvious:

76) There you are.
77) You got a haircut.
78) You're working hard.
79) Pete...I haven't seen you in ages.
80) Hi...it's me.

Introductory declaratives like these are more common, and easier to get, when they are modulated by a parenthetical-like (and performative-like) clause:

81) I understand you've gotten a job at Purdue.
82) I notice that your catalogue no longer advertises the C-35 screw clamps.

Similarly, comments about the discourse itself will often function to organize it, and shift the course of discussion:

83) This meeting was called to talk about linguistics, not politics.
84) So far we haven't mentioned how much money this is going to take.
85) You haven't complimented me on my new shoes yet.
86) You asked what needed to be done.

One peculiar class of declaratives are those which are obvious, and uninformative, by virtue of the fact that they accompany the action that they describe, sort of like a running commentary. In this regard they parallel the examples given above. Consider, for example, the checkers player who says

87) That's king.

every time he moves a piece into the eighth row. Or someone who says

88) I've got you.

while tackling you to the ground. Or saying

89) Here we are back home again.

upon arriving back home after a trip. Cr one of a group of workers saying

90) Well, that's done.

just as they finish a difficult job. Or saying

91) There it goes.

when finally managing to push a car out of a ditch.

Instances of commentaries like these are numerous. They all seem to share a similarity to exclamations in that they are typically short, no longer than a single clause, and not part of a larger verbal discourse. They are, however, integral parts of a sequence or structure of events which they mark at an appropriate time, usually at a point of transition. This intimate connection with an activity or event is reminiscent of performative utterances, especially those like you're under arrest, which are, in a sense, ritualized commentaries.

5. Conclusion

Examples like these, it seems to us, clearly refute the claim that informative declaratives are characteristic of a 'normal' conversation, or that declaratives are 'normally' used to inform.

The development of the above rules of conversation to describe the conversational uses of various sentence types clearly did not result from any extensive examination of real conversational situations.[9] Not only do they inadequately characterize the functions

of declarative sentences in conversations, but in a curious way, and despite their name, they do not characterize conversational interchange at all. The message theory can be adequately stated in terms of the transmission of a single message, it does not depend upon any sort of interactional structure. Correspondingly, the version of that theory which is expressed in the rules of conversation places conditions on the appropriate use of single sentences, single messages. The rules do not depend upon any discourse or conversational structure, and, as such, they reflect the transformationalist choice of the sentence as the basic unit of linguistic description.

Rather than being empirically based, the rules of conversation seem to reflect a particular philosophical or idealistic position. In a sense they are an extension of the competence/performance distinction into the area of language use. The use of language to reason, to carry on science and logical argument, was taken to be somehow 'higher' and more developed than its other functions by earlier scholars like Malinowski 1923. Similarly, the intellectual uses of language are now taken to be somehow more 'basic' within the generative semantics paradigm. This is clearly reflected in the opening sentences of G. Lakoff 1970:

"For better or worse, most of the reasoning that is done in the world is done in natural language. And correspondingly, most uses of natural language involve reasoning of some sort. Thus it should not be too surprising to find that the logical structure that is necessary for natural language to be used as a tool for reasoning should correspond in some deep way to the grammatical structure of natural language."

This position has not led, however, to studies of how people really do use language to reason and argue, or to a study of rational discourse. It has led, instead, to the characterization of an idealized 'conversation', one in which there is an impersonal and rational exchange of information.

Few conversations would match this 'ideal'. It embodies certain cultural values, like efficiency and straightforwardness, which are often not central in actual discourse. Other dimensions, such as wit and eloquence, are often of more importance in determining the structure and the value of a discourse. Conversations are not so impersonal as the message theory assumes. They occur as a part of social activity and personal interaction.

The information exchange ideal cannot be taken as paradigmatic for most conversational interactions (and may not be paradigmatic even for the rational discourses that occur in the real world). The examples given in this paper have shown that the informative function is not paradigmatic for declaratives. Sentences that do not violate the rules of conversation can, for the most part, be put to the same sorts of uses as sentences that do. The fact that a sentence is, or is not, informative is not crucial to an understanding of other aspects of conversational meaning.

Moreover, the conversational meanings of many of the sentences discussed above would seem to defy representation in the form of

logical[10] messages. Rather they must be understood as a part of a discourse structure or in terms of the role they play in particular kinds of encounters. Attempts to put the meaning of these sentences into a message form would result in the message being a paragraph description of the events themselves. It therefore seems unlikely that elaborations of message theory devices, such as performatives and conversational postulates, would ever adequately capture conversational meaning.

At first, conversational postulates seem to provide an opportunity to study language use directly, since contextual structure plays a direct and crucial role in determining the implicated meaning of a sentence. But here, too, the role that context and situation play in the theory is circumscribed by the particular requirements that the message view places on the understanding of meaning. Statements about the context of an utterance serve only as premises in a logical entailment.

Moreover, as long as implicated meanings are also seen as messages, i.e., as entities that are capable of being represented in a manner similar to literal meanings, conversational postulates inherit many of the difficulties of the message theory which have been described in this paper. Rather than attempting to study meaning solely within the constraints placed on the understanding of language use by strict versions of the message theory and by logical idealism, it might prove more useful to investigate language use and the social aspects of language structure directly.

The real questions we are encountering here are related to how language functions for people, individually and socially, and how its structure is grounded in its use. It is, therefore, necessary (to adopt a phrase from Malinowski) to study language as 'a mode of action' and not simply as an instrument of logic.

Footnotes

1) The history of transformational grammar, including generative semantics, can be viewed as an attempt to preserve constituent structure trees in the face of a series of successive inadequacies. Transformations themselves were originally devised to overcome such problems for phrase structure representations as discontinuous constituents. Syntactic features were added to prevent the fragmentation of constituent types. There would seem to be little justification for this single minded devotion to a particular data structure. Outside of linguistics, a number of different structures are used to describe language. Furthermore, maintaining grammatical constituents as the theoretical primatives encourages the tendency to pack everything into the literal message.

2) Austin (1962) attempted to break the rigid constraints that logical theory placed on the understanding of sentences, and to explore other ways of describing how sentences have meaning. It is ironic that linguistics has adopted Austin's theory and interpreted his results in terms of the requirements of its own version of logical theory. This development is not in the spirit of Austin's work. It does not fit his empiricism and his suspicion of undue generalization.

3) The performative analysis makes all sentences look like declaratives. Since a performative clause is included as a part of the

message, the speaker of a sentence is, in a sense, 'informing' the listener of what he is doing in saying the sentence. Thus the performative analysis extends the message theory to other sentence types.

4) This sentence is analyzed in Gordon and Lakoff (1971) where it is argued that its meaning can only be understood in terms of conversational **postulates**.

5) At this point, the classification of examples is meant only to facilitate their presentation. It is much too early in the study of language as a social phenomenon to advance anything but this most tentative taxonomy. Many of the examples will seem very much like clichés. This is a result of the fact that we searched for examples that would elicit a context, without having to specify it. In ordinary discourse, however, the situation is more complex, and utterances usually cannot be understood apart from their contexts.

6) Whether an attempted put down succeeds or not depends in large part on whether or not the addressee accepts the cultural assumptions on which it is based.

7) Informative put downs are not impossible, however. For example, someone who is telling the story of a practical joke he played could be put down by the utterance

92) I don't think that's funny.

Third person put downs are less likely to be non-informative than second person put downs.

8) An interesting set of examples can be composed of sentences that explicitly purport to be non-informative. Sentences that begin with the words you know or you think can be put to a variety of uses.

93) You know that the dog isn't allowed on the couch.
94) You know what I mean.
95) You know I love you.
96) That's a restricted area, you know.
97) You know where we live.

9) Although we have been making our argument in terms of the uses of declarative sentences, similar errors in assigning a paradigmatic function to a sentence type are made with regard to questions and imperatives. The most studied function of an imperative, for example, is its use in making commands or giving orders. This is in spite of the fact that commands are dependent upon very highly structured hierarchical social contexts (like the military), and the fact that most adults encounter very few true commands in the course of a day. But that is not to say that imperatives are uncommon. They are used frequently in advertising (Buy two and get one free), prescriptions (Take one a day for 3 days), admonitions (Get a hold of yourself), greetings (Sleep well), invitations (Come up and talk a while), requests (Hand me that screwdriver) giving directions (Turn right at the next light), giving advice (Go talk to him about it), process explanations (Pour 2 cups of sauce in a large mixing bowl), and a variety of other utterance types. With such a variety it is curious that linguists still talk primarily about imperatives being commands and orders.

10) Our rejection of the formalism of logic is not a rejection of the possibility of explicit models of language understanding. In fact, there has been a parallel development in artificial intelligence and computational linguistics. Logical calculi as representations of knowledge were explored in the context of language processing systems based on resolution theorem proving. Actual experience led people to reject logic as too inflexible. Richer models have been proposed (Charniak 1972) in which different types of knowledge are represented in many different ways. It is not clear that such approaches will be successful, but they serve to suggest alternatives to a strictly unitary representation of meaning.

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