LECTURES ON DEIXIS

CHARLES J. FILLMORE

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CONTENTS

INTRODUCTION TO THE REPRINTING OF THE
DEIXIS LECTURES

The lectures reprinted here were given in Santa Cruz in the summer of 1971, a quarter of a century ago, and have been made available through the Indiana University Club (IUC) from time to time since then. In the preface to the IUC version I stated that I would probably never succeed in reshaping and expanding these lectures into a book because I wouldn't know where to start and I would certainly not know when to stop. That statement continues to hold. I knew I couldn't write something on deixis from scratch, preserving the scope and mood of the Santa Cruz lectures while responding to recent literature on the topics taken up in these lectures, but I thought I could at least remove the most annoying lecture-hall features of the text. But that would have required a major reshaping of the whole thing, and the request that came to me was to publish the lectures more or less as they stood. This means, for example, that instead of giving numbered examples, and referring to numbers whenever I wanted to say something about the same example in different paragraphs, I simply always repeated it. I made a few half-hearted attempts to re-do the lectures in at least this respect, but in the end I gave up.

It would have been to my advantage to make lots of changes. I have, of course, removed a number of embarrassing infelicities, and jokes that I no longer remember the point of, and I have added qualifications here and there. But it would have been a good idea to make a thorough revision of those sections on which I have been criticized, especially the last chapter. Then, since this edition will be the only one many people are likely to see, readers who compare the criticism with the "original" would feel that my critics were foolish and that I was right after all. Laziness, rather than virtue, has kept me from doing that.

There are all sorts of remarks in here about languages that I know nothing about. Most of them were based on my memory of conversa-

tions that I had with Summer Institute of Linguistics (SIL) linguists during a visit to SIL centers in Mexico. Nothing I say about languages other than English, and not everything I say about English, should be taken as authoritative.

These lectures were written when Generative Semantics was approaching its peak of popularity—in fact, the Santa Cruz summer sessions were largely devoted to celebrating G.S.—and some of the remarks here and there in these lectures can only be made intelligible by referring to that background. I have, however, removed a number of allusions to views of grammar that would today require explanations that would only detract from the points that were being made.

I even tried to update pronominal reference, and to repopulate the world of my examples in ways that reflected a more current gender awareness, but I have never been able to deal easily with the grammatical consequences of such monstrosities as "(s)he" or "his/her". But I confess to being more than a little surprised at my own practice, just twenty-five years ago.

The main linguistic writings on deixis that I was aware of at the time these lectures were given were Henri Frei (1944), "Systèmes de déictiques," *Acta linguistica* 4:111–129; Roman Jakobson (1957), "Shifters, Verbal Categories, and the Russian Verb," mimeo, but in French translation as chapter 9 of *Essais de linguistique générale* (1963), Paris: Les Editions de Minuit; Uriel Weinreich (1963), "On the Semantic Structures of Language," in Joseph H. Greenberg, ed., *Universals of language*, MIT Press, esp. pp. 123–127; Charles J. Fillmore (1966) "Deictic Categories in the Semantics of 'come'," *Word* 19:208–231; and John Lyons (1968), *Introduction to Theoretical Linguistics*, Cambridge University Press, pp. 275–281. In the psychological literature there was Karl Bühler (1934), *Sprachtheorie*, Jena, esp. pp. 79–148; and Ragnar Rommetveit (1968), *Words, Meanings and Messages: Theory and Experiments in Psycholinguistics*, Academic Press, passim, but esp. pp. 51–54 and 185–197. Discussion of the philosophical issues connected with deixis could be found in Yehoshua Bar-Hillel (1954), "Indexical Expressions," *Mind* 63:359–379; Arthur W. Burks (1948-9), "Icon, Index and Symbol," *Phi-*

losophy and phenomenological research 9:673–689; and Richard M. Gale (1967), "Indexical Signs, Egocentric Particulars, and Token-Reflexive Words," *The Encyclopedia of Philosophy*, Macmillan, 4:151–155. This last included a discussion, with references, of the positions of Bertrand Russell, C.S. Peirce, and Hans Reichenbach. The Burks article is an exegesis of Peirce.

My thinking on deixis occupied a big part of my time when I was a Fellow at the Center for Advanced Study in the Behavioral Sciences in Stanford, 1970–1971. During this period, at the Center and elsewhere, I had valuable conversations on the topics of deixis with Charles Ferguson, David Peizer, Yehoshua Bar-Hillel, Herb and Eve Clark, Bill Geoghegan, and SIL linguists, Barbara Hollenbach, Bill Merrifield, and Carl Rensch; and with a passenger who rode with me between Palo Alto and Santa Cruz as I commuted for the lecture series, Lily Wong, now Lily Wong Fillmore.

The present version owes much to editorial assistance from Susanne Gahl and Collin Baker. I am especially indebted to CSLI Publications' Dikran Karagueuzian for his unending patience; we were both a lot younger when I first agreed to submit these pages to CSLI Publications.

MAY WE COME IN?[1]

What I intend to do in this first lecture is to offer my view of the full lin-
guistic treatment of the meanings of sentences. I take the subject matter
of linguistics, in its grammatical, semantic, and pragmatic sub-divi-
sions, to include the full catalogue of knowledge which the speakers of a
language can be said to possess about the structure of the sentences in
their language, as well as their knowledge of the appropriate use of
these sentences, and I take the special task of linguistics to be that of dis-
covering and displaying the principles which underlie such knowledge.

I have chosen to begin this inquiry by examining, as thoroughly as I
can, one simple English sentence. This will be my contribution to a
hoary and respectable tradition in linguistics, the dissection of very
short sentences. Edward Sapir, you will recall, made famous the sen-
tence "The farmer kills the duckling."[2] In his analysis of that sentence
he pointed out a number of word-derivational processes in English,
and in comparing that sentence with its translations in several other
languages, he was able to put on display the wide number of ways in
which concepts and relations get lexicalized and grammaticized in the
world's languages.

A sentence which gained some currency in linguistic discussions in
the mid-sixties was used by Jerrold Katz and Jerry Fodor in their well-
known article on the nature of semantic theory.[3] The sentence was,

1. A version of this paper, with the title "May we come in?", appeared in 1973 in the
journal *Semiotica* 9:98–115.

2. Edward Sapir, *Language: An Introduction to the Study of Speech* (New York: Harcourt,
Brace, and Company, 1921). Knud Lambrecht has reminded me that the unnaturalness
of Sapir's sentence is evidenced by the fact that I am among the large number of linguists
who quotes the sentence with "killed" rather than "kills", as I, myself, did in the earlier
versions of this lecture, including the version published in *Semiotica*. I had somehow
unconsciously wished to work with a sentence that lent itself to some level of natural
contextualization.

3. Jerrold J. Katz and Jerry A. Fodor, The Structure of a Semantic Theory, *Language* 39:
170–210 (1963).

"The bill is large," and the reader was asked to determine what one could say about the possible meanings of that sentence independently of any imagined context of use. One of their purposes was to indicate what could be meant by the term *ambiguity* from the linguist's point of view. While it is probably true that no actual utterance of the sentence "The bill is large" would be ambiguous in context, independently of context the sentence can be taken as ambiguous in ways associated with the dictionary entry of the word "bill". Their point was that the context "is large" is compatible with either the "payment-due" or the "bird's beak" sense of the noun "bill", and that a purely linguistic description of that sentence would have to show it to be ambiguous in just those two ways. Katz and Fodor claimed that only a complete theory of language use would be capable of disambiguating utterances in context, and since such a theory would have to incorporate all possible knowledge about the universe, its creation is in principle impossible. In order to be clear about what linguists as linguists can say about the meaning of a sentence, we need to act as if we found it written on a piece of paper with no indication of its author, its addressee, or the occasion of its being produced.

Yehoshua Bar-Hillel, in a well-known demonstration of the non-feasibility of machine translation, built much of his argument on the claim that an algorithm for translating from English into some other language would not be able, in a principled way, to make the right choice for the sentence "The box is in the pen."[4] This, he claimed, is because of the polysemy of the word "pen". Any general procedure capable of achieving a contextual resolution of the word's ambiguity in this sentence would have to have access to encyclopedic information, so that while the writing-implement sense of "pen" would be allowed for a sentence like "The ink is in the pen," that interpretation of the word would be disallowed in our sentence about the box. The information

to which the program would need to have access must specify both that in the desired sense of "pen", pens are larger than boxes and can therefore contain them, whereas in the writing-implement sense, pens cannot contain boxes. One cannot expect the designer of a mechanical translation system to be able to foresee the need to classify nouns according to whether they designate things which can be inserted into fountain pens, or into pigpens but not fountain pens, or which are too big to fit into either.

A particularly famous short sentence in the early history of the theory of grammatical transformations is Chomsky's "Sincerity may frighten the boy."[5] This sentence was used to demonstrate the types of grammatical information that the modern linguist needs to be able to deal with. There is, for example, (1) the categorial information that "sincerity" and "boy" are nouns, "may" is a modal auxiliary, "frighten" is a verb, and "the" is an article, (2) the relational information that the subject/predicate relation holds between the word "sincerity" and the phrase "may frighten the boy" and that the verb/direct object relation holds between the word "frighten" and the noun phrase "the boy," (3) the inherent lexical information that, for example, "sincerity" is a singular abstract noun, while the noun "boy" is animate, masculine, and countable, etc., (4) the strict subcategorizational information that the verb "frighten" requires a direct object and that the noun "boy" requires, in the singular, a preceding determiner,[6] and (5) the selectional information that the verb "frighten" requires an animate direct object but is much less restricted with regard to the class of entities which it welcomes as its subject. One could add to this list of information the additional facts that "Sincerity may frighten the boy" says something about the possibility of somebody experiencing an emotion, with the entity named by the direct object of the sentence as the potential expe-

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4. Yehoshua Bar-Hillel, The Present Status of Automatic Translation of Languages, in *Advances in Computers*, ed. F. L. Alt (New York: Academic Press, 1960), Appendix III, pp. 158–163.

5. Noam Chomsky, *Aspects of the Theory of Syntax* (Cambridge, MA: MIT Press, 1965), pp. 63ff.

6. Today a noun's need for a determiner is no longer thought of in terms of strict subcategorization.

riencer of that emotion; and that the verb must be understood statively when its subject is not animate, but can be understood actively if its subject designates something animate, thus making it possible to predict that while the sentence "Sincerity may frighten the boy" is unambiguous, a sentence like "John may frighten the boy" is ambiguous.

It is striking that in all of these demonstrations, the scope of description and explanation has been limited to what can be said about sentences in the abstract. In no case is the sentence viewed as having what the Norwegian psycholinguist Ragnar Rommetveit calls *deictic anchorage.*[7] In no case was any attention paid to how the sentence can be used, to the conditions under which a speaker of English might choose to use it, the role the sentence might play in an ongoing conversation, or the like. It is true that these happen to be sentences whose contextualizations would not be particularly interesting, and in some cases might actually be quite difficult to imagine, but something, at least, might have been noticed about the conditions for using the definite determiner in all of these sentences.

Rather than go into such matters for my predecessors' sentences, I would like to build my discussion of the explanatory domain of linguistics around a sentence which cannot be understood at all apart from considerations of its being anchored in some social context. The sentence I have chosen for this demonstration is simple and short and extremely easy to understand. It is the four-syllable question "May we come in?" I would like to approach our examination of this sentence by way of asking what we might be able to figure out about some real-world situation if the only thing we knew about it was that somebody used the sentence "May we come in?" I said "used the sentence" rather than "pronounced the sentence" to encourage us to consider the speaker's in-good-faith recognition of the conventions of the English language.

Our task is to make explicit everything that we know about the sentence as a linguistic object, and everything that we can know, as speak-

7. Ragnar Rommetveit, *Words, Meanings and Messages* (New York: Academic Press, 1968).

ers of English, about the situation, or class of possible situations, in which it might have been uttered. We will be interested, in short, in the grammatical form of the sentence and the meanings and grammatical properties of its words, and in the assumptions we find ourselves making about the speaker of the sentence and about the setting in which it was uttered. I am following my predecessors in considering the sentence in the abstract, rather than by fitting it to an actual context of utterance, but my goals are to see the ways in which the form and meaning of the sentence constrain its possible uses.

There are various possible phonetic realizations of this particular string of words when used to form a sentence of English. I will speak briefly about other variants later, but will begin by considering that rendering of it which has heaviest stress and rising intonation on the last word.

In asking ourselves to consider the sentence as "used" rather than merely "pronounced", we can allow ourselves first of all to disregard the infinite range of possible conditions for the utterance of this sentence which have little to do with the sentence's form and meaning. Somebody who had been asked, for example, to pronounce four English monosyllables putting heavy stress and rising intonation on the last one might have accidentally come up with the four words of our sentence; or a speaker of a foreign language might have been imitating an English utterance he once overheard, understanding nothing of its meaning; or a librarian might have been reading aloud the title of a short story. Since the range of possibilities for "uttering" without "using" this sentence is only trivially constrained by the form of the actual sentence, a serious examination of such possibilities can safely be set aside as irrelevant.

There are, I believe, two major possible ways of using our sentence. In one, the sentence can be used as a request, on the part of its speaker, that its addressee perform a permission-granting act. On the second (and much less likely) interpretation, the sentence is a request for information, an enquiry as to whether the speaker and a companion already have permission to do something. I will begin by considering the first interpretation.

If we assume that the sentence was uttered in conformity with the system of linguistic conventions whose character we are trying to make explicit, we will probably find ourselves imagining a situation involving some kind of enclosure, call it E, and at least three beings, call them A, B, and C. One of these, A, is a speaker of English and is the utterer of our sentence; one of them, B, is believed by A to be a speaker of English and is the addressee of our sentence; the third, C, is a companion of A. In using the word "beings" rather than the word "persons", I have C in mind, since C might not be a person but might be, for example, A's pet beaver.

We further assume, in picturing the situation in which our sentence could have served as a permission-requesting utterance, that A believes that A and C are outside the enclosure E; that A believes B, the addressee, to be inside E; that A has an interest in gaining admission to E, in C's company; and that A believes that B has the authority—or represents somebody who has the authority—to decide whether or not A and C may enter E. We further understand that the uttering of this sentence is an act which socially requires B to do something—in particular, to say something—it being understood that what B says as a response to the question will count as authorizing or forbidding the move into E on the part of A and his[8] companion C. We know, too, what would count as an authorizing or forbidding act on the part of B. For example, we would know what to make of it if B, on hearing our sentence, were to say, "Sure."

These, then, are the main things that we might find ourselves imagining on learning about a particular situation that somebody uttered the sentence "May we come in?" Actually, if we could assume that people usually know where they are and who they are speaking to, we could give a more basic interpretation by eliminating the fuss about A's beliefs. The scene is one in which A and C are outside some enclosure E,

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8. These lectures were written at a time when the pronoun "he" was used as a general third-person pronoun. Or maybe it would be more accurate to say that they were written at a time when we usually peopled our illustrations with males.

B is inside E and has gatekeeping authority, and A is asking B for permission for A and C to enter E.

Actual situations in which utterances of this sentence get used may depart from this description in several ways and for several reasons. There were references in my description to things which A believes; some of A's beliefs may be mistaken. There were references, in my description to how A feels; A, of course, may be speaking insincerely. And, of course, the number of A's addressees may be greater than one and the number of A's companions may be greater than one. And, with a little imagination, it would be possible to set up other spatial arrangements of the participants in this scene.

As linguists we need to ask what it is about the structure of the sentence "May we come in?" that makes it possible for any speaker of English to come up with essentially the same sort of description as the one I just suggested. A successful linguistic description of English ought to make it possible to "compute" the details of such a description from a grammatical and lexical description of the sentence. What we have to work with are the four words and an extremely limited amount of structure: the sentence is a question, its subject is the pronoun "we", its main verb is "come", it contains, in association with this verb the modal auxiliary "may", and the verb "come" comes with a directional complement "in".

Let us take the words one at a time, beginning with "may". The word "may", when used as a modal auxiliary, has three functions that will interest us here, and these I will refer to as its (1) epistemic, (2) pragmatic, and (3) magical functions. In its epistemic function, it is used in possibility-asserting expressions such as "He may not understand you." In its pragmatic function, it is used in sentences uttered as parts of permission-granting or permission-seeking acts, such as "You may come in now." In its magical function it is used in the expression of wishes, blessings, and curses, such as "May all your troubles be little ones" or "May you spend eternity roller-skating on cobblestones."

In its magical use, this modal only occurs in initial position, and "may" is in the initial position in our sentence. The curse I invented, re-

cast with "may" in post-subject position, becomes "You may spend eternity roller-skating on cobblestones." Such a sentence would count as a warning or a gloomy prediction, but not as a bona fide curse. I have said that our sentence is to be construed as a question, and it is clear, I think, that the function of asking a question is incompatible with the function of issuing a magical wish. I assume, in fact, that the sequence of words I have taken as my example cannot be given a "magical" interpretation. (The curse interpretation is clearly not a question, in spite of its form. One cannot imagine a conversation of the sort: A: "May you spend eternity roller-skating on cobblestones." B: "Yes.")

Certain sentences with "may" are ambiguous between the epistemic and the pragmatic functions of that modal. One example is "John may leave the room." The person who utters that sentence may either, in doing so, be authorizing somebody named John to leave the room, or he may be expressing his belief in the possibility of that person's leaving the room at some time in the future. It is clear, however, that the epistemic and pragmatic senses are not both potentially present in every non-magical use of "may". It happens that these two uses of the modal are associated with two grammatically quite distinct sets of contextual possibilities, and instances of ambiguity with respect to these two senses are instances of accidental overlap of these two context sets. In support of this claim, I will content myself with merely giving examples. It is probably immediately clear that the permission-granting sense is completely absent if what follows is in the perfect aspect. The sentence "John may have left the room," for example, does not permit a pragmatic interpretation such as, "I hereby give John permission to have left the room." It is probably also clear that the possibility-expressing sense is absent from "May John leave the room?"; that question does not permit an epistemic interpretation such as, "Is it possible that John will leave the room?"

The fact that the pragmatic sense of "may" does not show up in the perfect aspect, whereas the possibility sense does, has to do with the fact that the semantic complements of the former are to be understood as acts, while those of the latter are to be understood as eventu-

alities in general. The fact that the epistemic sense does not show up in questions, however, appears to be lexically idiosyncratic. The modal "might" can indeed have an epistemic sense in questions, as in "Might John leave the room?" That question can be interpreted as meaning "Is it possible that John will leave the room?"

The reason we know that our sentence "May we come in?" concerns the permission-granting use of "may" is that our sentence is a question, and neither the magical nor the epistemic sense of the modal is compatible with the sentence that is a question. We are left with the assumption that it is used in its pragmatic sense, and therefore that it is used in a social situation involving permission-granting in some way.

Permission-granting situations involve two parties, the person or persons accepted as having authority to grant the permission, and the person or persons whose actions are to be authorized. A sentence with pragmatic "may" may be uttered performatively,[9] in which case the utterance is a part of a permission-seeking or permission-granting act, or it may be uttered nonperformatively. In the latter case, it is a statement or question about somebody's having permission to do something. It is the performative use of our sentence which I had in mind when I lined up the details of the situation involving beings A, B, and C and the enclosure E. In the performative use, our question permits the paraphrase "Do you give us permission to come in?"; and a non-performative interpretation permits the paraphrase, "Do we have permission to come in?" I will postpone until a little later my discussion of a possible non-performative interpretation of this sentence.

In a performative utterance of a pragmatic "may" sentence, the possessor of authority is taken to be the speaker if the sentence is an assertion, but the addressee if the sentence is a question. Thus, the speaker of "John may leave the room" is, in producing the sentence performatively, authorizing John to leave the room. The sentence we are exam-

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9. May I be forgiven for describing the question as also an instance of a "performative use"? It is a part of a conversational exchange for which a performance, rather than information, is being sought.

ining, however, is a question, and in uttering a question with pragmatic "may", the speaker is acknowledging the addressee's authority with respect to the permission-granting gesture. This alternation of the authority role between the speaker of an assertion and the addressee of a question must be accounted for in terms of general principles of conversation and general principles in the logic of questions and answers. Without going into the details, there are many instances in two-party discourse of role switching between speaker and addressee. The most obvious switch is that between the two conversation-participant pronouns, as in these exchanges:

"I did a good job." – "No, you didn't."

"Have you seen him?" – "Yes, I have."

The interchanged roles may be implicit, not linked to any specific material in the surface sentence. For example, in "Did John seem angry?" the question means, "Did you perceive John as angry?"; in the assertion "John seemed angry," the meaning is that I (or a group including me) perceived John as angry. There are examples of speaker/addressee reversals in the semantic interpretation of an unchanging lexical item, as seen, for example, in the use of the demonstrative "this" in opening utterances on the telephone. If a telephone conversation begins with the utterance "This is Chuck Fillmore," you interpret it as meaning "I am Chuck Fillmore." If it begins with "Is this Chuck Fillmore?" you take it as meaning "Are you Chuck Fillmore?"[10] In short, if A asks B a question, A acknowledges B's authority to answer the question, and B, in trying to answer the question, acknowledges that acknowledgment. Any of the ways in which A's sentence assigns separate roles to speaker and addressee must have those assignments reversed in B's contribution to the same conversation.

In a performative utterance of a sentence like "John may leave the room," the speaker of the sentence is the authority with respect to the

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10. This usage is apparently limited to American English.

permission-granting act which a performance of that sentence constitutes. If that sentence is, as it is, an authorized answer to the question "May John leave the room?" it follows that the addressee of the question has the same role as the speaker of the corresponding assertion. Given these facts about role-switching, you can see that a problem could arise when the subject of a sentence with pragmatic "may" is the pronoun "we", a word which is capable of referring to a group that includes both the speaker and the addressee.

So far we have seen how a speaker of English is able to reach certain conclusions about our sentence: from the fact that it is a question and contains the modal "may", (1) it involves the permission-granting sense of "may" and (2) it is the addressee of the sentence who is taken as having the right to grant the desired permission.

In the sentence "May we come in?" the pronoun "we" has to be interpreted as exclusive (somebody else and me, not you and me), and that was in fact the reason we were forced to imagine three beings in a situation compatible with this particular utterance. The individual we have been calling c is the other being included in the set of beings referred to as "we" and distinct from the addressee B. In our sentence, this fact about "we" is overdetermined, since the verb associated with our modal is the verb "come"; but if we replace "come" by "go", we will see, I think, that there is a relationship between the exclusive character of the pronoun and the performative interpretation of the question. When the question "May we go in?" is used as a permission-seeking utterance, it is more natural to think of the pronoun as referring to a group which does not include the addressee, for the reason that in the permission-granting situation, the person with authority and the person or persons seeking permission are typically distinct. On the other hand, when the question "May we go in?" is interpreted as meaning "Do we have permission to go in?" there is no difficulty in construing the pronoun either exclusively or inclusively.

So far, then, this is what we know: from the fact that our sentence is a question having "may" as its modal, we know that it has to do with a permission-requesting situation. From the fact that it is a question

rather than an assertion, we know that it is the addressee, and not the speaker, who has the authority role. And from a general understanding of permission-granting situations, we know that the person having authority is distinct from the persons who need and seek permission to enter, and that therefore the pronoun "we" must be being used in the sense which is exclusive of the addressee. (To many people this argument is not convincing, because they claim that they can imagine a situation in which one person asks another "May we go in?" and means "Do you now give you and me permission to enter?" Such people would not disagree on the ultimate interpretation of the question at hand, but would disagree on the contribution of "may" to the conclusion about the exclusivity of "we".)

We turn now to the third word, the main verb of the sentence, the word "come". We notice first of all that it is an action verb, and therefore the activity it identifies qualifies as something for which it makes sense to speak of granting permission. If our sentence were something like "May we understand your proposal?" we would have had to reject it as an ill-formed pragmatic-"may" question, since one does not speak of needing permission to understand something. For that sentence to be acceptable at all, it would have to be construed as something like "May we be given more information about your proposal so that we can understand it?"

As an action verb, furthermore, "come" is not an "achievement" verb. If our sentence were "May we succeed on this project?" it would have to be rejected as an ill-formed pragmatic-"may" question, since "succeed", as an achievement verb, refers to attaining a particular outcome of an unidentified activity, something for which a request for permission is incoherent.

The verb "come", secondly, is lexically simple with respect to the type of activity it designates. In this way it differs from a verb like "swim", which has associated with it both the idea of motion and an understanding of a particular manner of motion.

If our sentence had been "May we swim in?" we would have had to point out that it could be used in two distinct permission-seeking situations. Suppose, for illustration, that the speaker and his companion were swimming in a stream that entered a cave, and they were addressing a person guarding the entrance to the cave. In that case there could be no question of their needing permission to swim—they are already swimming—and they are merely asking for permission to move into the cave while continuing to swim. The sentence, in that case, would have heavy stress on "in". Suppose, on the other hand, that the speaker and his companion have already been granted permission to enter the cave, and they wish to know whether they may do this by way of the stream, that is, by swimming into it. In that case, it is already understood that they have permission to move into the cave, and what they are seeking is permission to do so by swimming. And in that case the sentence would have heavy stress on "swim".

The verb "come", I suggested, does not have this sort of lexical complexity, and so there is not any ambiguity about aspects of the situation for which permission is needed. The question we are examining, you will recall, has heavy stress and rising intonation on the final word "in". In the sentence with the double-barreled verb "swim" the de-stressing of the main verb is associated with a presupposition, namely, the presupposition that "we" are already swimming. The de-stressing of the lexically simple "come", on the other hand, has no analogous presupposition associated with it.

The verb "come" has other sorts of complexities, however, and this is where we arrive at the topic of deixis. As it happens, the description of the presuppositional structure of motion sentences containing this verb requires reference to all three of the major grammaticalized types of deixis—person, place, and time.

First, a digression on time. In speaking of temporal indications in the semantics of natural languages, it is necessary to distinguish the coding time, roughly, the time of the speech act, from the reference time, the point or period of time that is being referred to or focused on in the sentence. (There is more, but that can wait.) We can see how both of these types of temporal concepts can figure in the description of a single sentence by considering the sentence "John was here last

Tuesday." The reference time is reflected in the choice of tense on the verb and is indicated by the phrase "last Tuesday". The coding time is involved in the interpretation of "last Tuesday" as, say, the Tuesday of the calendar week which precedes the calendar week which includes the moment of speech, and in the interpretation of "here" as meaning "the place where the speaker finds himself at the time of pronouncing the sentence".

The role of deictic categories in the interpretation of sentences with our verb "come" may be observed with sentences of the form:

x came to y at t

where x is the moving entity, y is the destination, and t is the reference time. For this example I have put t in the past for ease of exposition. It happens that sentences of the form "x came to y at t" are appropriate just in case any of the following conditions obtains:

1. The speaker is at y at coding time.
2. The addressee is at y at coding time.
3. The speaker is at y at reference time.
4. The addressee is at y at reference time.

To see that this is so, take "John", "the office", and "yesterday morning" as values of x, y, and t respectively. A sentence like "John came to the office yesterday morning" is appropriate under any of the four conditions just indicated. That is, it is a sentence that I can say appropriately if I am in the office when I say it, if you are in the office when I say it to you, if I was in the office yesterday morning when John came, or if you were in the office yesterday morning when John came.

Sentences with the verb "come" are, then, potentially ambiguous in at least four ways,[11] in an unusual sense of ambiguity related to what

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11. This description does not cover all uses of the motion-verb "come". It has special uses when the motion referred to is motion on the part of both speaker and hearer, a use in which the destination is thought of as somebody's "home base", and in a special and very interesting use to which it can be put in third-person narrative. The full story is told in the chapter "Coming and Going" in this volume.

users of the sentence can be said to presuppose. It is not true that every such sentence with "come" is ambiguous in these four ways, however, because limitations on these appropriateness conditions appear when we substitute for the x and y of the formula expressions of person deixis and place deixis, respectively. For example, if I say, "I came there yesterday morning," it cannot be that I am there now, because "there" is by definition a place where I am not now located, and it cannot be that I was already there yesterday morning when I came. Only interpretations 2 and 4 are possible.

But now what are we to say about our sentence? We have seen, from the fact that we are dealing with permission-granting "may" in an interrogative sentence, that our pronoun "we" is exclusive of the addressee. That same conclusion could also have been reached by noticing its occurrence with the verb "come". "Come" is a verb of locomotion which indicates a change of location from some point of origin to some destination, this latter conceived of as a place where the speaker or addressee is located at the time of the speech act or at the reference time. In a permission-seeking utterance with the modal "may", a definite reference time is lacking, and that leaves open only those possibilities that refer to the participants' location at the time of the speech act. Since the pronoun "we" has to include the speaker but does not have to include the addressee, we are forced to conclude that "we" is exclusive: since the addressee must be at the place of destination in order for the use of this sentence to be appropriate, he cannot be included in the group seeking to move toward that destination. Again our analysis supports the picture we had at the beginning: of a on the outside, speaking on behalf of himself and c, also on the outside, and addressing the insider, b.

(There is a possibility for our question that I have not yet mentioned, and that is the possibility that it is uttered in a context in which the preceding discourse has provided a (future) reference time. Understood in that way, the situation with a, b, c, and e that I set up at the beginning would have to be modified. On this new interpretation, it is not required that b be inside e at the time of the speech act, but only that a assumes that b will be inside e at the time of the movement of a and c into e.)

The English verb "come", like its partner "go", is one of the few verbs of motion which require a destination complement in syntactically complete sentences. In our case the destination complement has the form "in", which we may take as an ellipsis for something like "into the place". Since "in" as a destination particle means something paraphrasable as "to a place which is inside", its occurrence in this sentence can be said to ascribe to the destination which the speaker has in mind the information that it is a part of the interior of some sort of enclosure. This is different from whatever interpretation we would have given if our demonstration sentence had been something like "May we come up?" "May we come through?" "May we come over?" or the like. The information that the destination is in some sort of an enclosure, together with the information that the addressee is at the time of the speech act located at the destination of the movement, is what imposes the understanding that the moving entities have as their point of origin a location which is not within that enclosure, and this contributes to our picture of the speaker and his companion being outside of an enclosure, and the addressee being inside it.[12]

The *illocutionary act potential* of a sentence must be studied in the context of the systems of rules or conventions that we might choose to call discourse rules, a subset of which might be called conversation rules. We have seen, in what has already been said about the illocutionary force of our example sentence, that it is not to be construed as a request for information, but as a request for the addressee to "perform" in some way. It is usable as a way of getting the conversation partner to perform the needed permission-granting or permission-denying act. In the sense that a question like "Shall we come in?" can be taken as a request for a command, the question "May we come in?" can be taken as a request for permission. Because of its role in a changing interper-

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12. A more complete story of the fourth word would recognize that "in" is a preposition that permits the omissibility of its complement if information about it is "given" in the context. See Charles J. Fillmore, *Pragmatically Controlled Zero Anaphora*, *Papers from the Twelfth Annual Meeting of the Berkeley Linguistics Society*, (1986), pp. 95–107.

sonal situation, a complete description of the sentence must specify the social and physical conditions which must be satisfied in order for it to be used appropriately. For various reasons these may be stated as belief conditions which must be satisfied by the utterer of the sentence in order for us to acknowledge that it has been uttered in good faith.

We have agreed that the speaker must believe that the addressee is inside E, that he and his companion are outside E, and that B is a person capable of authorizing admission into E. We will also agree, I believe, that in the most straightforward interpretation of a permission-seeking sentence, the speaker wants to do what he is asking permission to do, and that he believes he needs to get this permission before he can properly do what he wants to do. By considering these various types of appropriateness conditions for utterances, we are able to recognize various ways in which utterances of the sentence can be said to be deviant. The sentence can be uttered mistakenly, in case the speaker's beliefs are incorrect, or it may be uttered insincerely, in case the belief conditions are not satisfied or in case the speaker does not really desire what his uttering the sentence implies that he desires.

It is in an effort to understand the nature of discourse, I believe, where we can make most explicit the principles which govern the appropriateness of utterance types, because it is there that these principles can be used to make judgments about the appropriateness and the "force" of utterances given their contexts.

Consider our sentence. A may be mistaken in his belief that he is outside the enclosure E, and this will become apparent to him, and to us, if B's response is, "Well, fellows, it looks to me like you're already in." A may be mistaken in his belief about the location of B. He will realize that if he hears, from an unexpected direction, the reply "Yoohoo, here I am; go right on in." A may be mistaken in his belief that B is the proper authority, and this he will learn if he hears B say, "Don't ask me!" And A may be mistaken in his belief that he needs permission to enter, and he will find that out if B's answer is something like, "Of course, why do you ask?"

The sentence can be used "insincerely" in two ways. It may be used

politely, in which case the assumptions associated with the sentence about the social dominance (on this occasion) of the addressee are intended as a polite social gesture, or the sentence may be used ironically, as in cases where the suggested dominance relation is clearly contradicted by the realities of the situation. The word "insincere" is not a particularly happy way to characterize the polite use; I refer merely to the fact that the belief conditions about the status of the addressee are not exactly satisfied. An example of the ironic use can be seen in the situation in which prison wardens address the question to a prisoner in his cell, or in the case of a pair of aggressive encyclopedia salesmen who have already entered the living room.

The conversation rules of the language govern not only the conditions under which it is appropriate to perform the permission-requesting utterance of the type we have been examining, but they must also determine the principles by which a speaker of English is able to recognize appropriate responses to the request. If the question is used in absolutely its most straightforward way—a rare occurrence, I would guess—the normal affirmative answer would be something like "Okay" or "Yes, you may."

There is something slightly rude about these answers, and it is interesting to see why this should be so. The questioner is saying something like "I would like to enter the place where you are, and I am asking you to give me permission to do that." One would think that an answer that means, in effect, "I hereby grant you the permission that you requested" should exactly satisfy the request, but the fact is, it does so in an unpleasing way. In the social dialect of English that most of us probably feel most comfortable with, one of the things we attempt to maintain in conversational interaction is the masking of social stratification. The questioner, in asking "May we come in?" is exposing his desire to enter the enclosure containing the addressee, and is imputing a status of authority for this occasion to the addressee. What a straightforward answer like "Yes, you may" does is acknowledge this status difference, and that is what would make it seem rude in a community where conversational politeness is expected. Oddly, a polite answer to a request

for permission doesn't have the appearance of a permission-granting utterance at all, but of a command. More polite than the answer "Yes, you may" are answers like "Yes, please do," or "Come in, by all means."

If one wonders why a command is more polite, in this context, than a simple permission-granting utterance, one way of looking at it is this. In making the request, A has exposed to B his desire to enter E; on ordering A to enter, B, by return, is exposing to A B's desire to have A enter E, and this is because of appropriateness conditions associated with commands. The more polite answer, in spite of the fact that stratification masking is not explicitly achieved, is the one which shows that B not only tolerates but desires the admission to E on the part of A and C.[13]

That a command can serve technically as an answer to a request for permission is related not only to the appropriateness conditions for commands having to do with the speaker's desires, but also to the fact that there is a logical entailment relationship between commands and permission-grantings. The theory of well-formed conversations, if it is to show in a principled way what sorts of things qualify as answers to questions, must include or have access to a set of meaning postulates for natural language that would indicate, for example, the entailment relationship between expressions containing the pairs of concepts REQUIRE and PERMIT, DESIRE and TOLERATE, or NECESSARY and POSSIBLE.

I have spoken so far about the performative interpretation of our sample sentence. In its non-performative sense, our question comes as a request for information rather than as a request for action. In the non-performative interpretation, the question means "Do you know whether we have permission to come in?" (I believe there are many speakers of English who do not have this interrogative use of permission-"may".) The main difference in the situation which wel-

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13. There is something incomplete about this explanation. It seems that commands are not invariably the more polite way to answer a request for permission, but only when the activity in question could be construed as an inconvenience to the permission-granter. A polite reply to "May I leave now?" is not "Please do, by all means."

comes the sentence on the interpretation we are now giving it is that A believes B to have information rather than authority and that the sentence is uttered in an information-seeking rather than a permission-seeking situation. The discourse principles associated with possible answers to "May we come in?" when construed non-performatively are, I think, fairly easy to determine, and I won't say anything about them except to point out that the response "Okay" would show that the answerer construed the question as a performative.

So far I have been considering only that phonetic rendering of our question which has heavy stress and rising intonation on the last word, and I promised to say something about other possible renderings of this particular string of words. I already pointed out differences in stress placement potential between our sentence and the question "May we swim in?" I said that for that sentence, when the word "in" is stressed, the presupposition is made that the speaker and his companion are already swimming, and that when the word "swim" is stressed, it is presupposed that they have already been given permission to enter. The verb "come", as I pointed out, does not give us this option, because this word is a pure motion word that does not have associated with it any notion of means, medium, or manner of movement.

I assume that there are two functions of contrastive stress: one of these has to do with the assumption of a contextually relevant proposition that can be constructed out of the destressed portion of the sentence, in which some unspecified but perhaps contextually understood Constituent occupies the position represented by the contrastively stressed element; the other occurs in utterances that a speaker is repeating because his addressee did not hear or did not believe what was said the first time, with the heavy stress assigned to the constituent which the speaker is trying to be clear about. For our sentence, the second of these functions allows the placement of heavy stress on any of our four words. In the first function, heavy stress may occur on any of the words except "come", but most naturally, I suppose, on the pronoun.

Let me now summarize the various kinds of facts which must, I suggest, be included in a fully developed system of linguistic description.[14]

1. The linguistic description of a language must characterize for each lexical item in the language
    a. the grammatical constructions in which it can occur,
    b. the grammatical processes to which it is subject in each relevant context,
    c. the grammatical processes which its presence in a construction determines, and
    d. information about speech act conditions, conversation rules, and semantic interpretation which must be associated in an idiosyncratic way with the lexical item in question;
2. it must contain a component for calculating the complete semantic and pragmatic description of a sentence given its grammatical structure and information associated with these lexical items;
3. it must be able to draw on a theory of illocutionary acts, in terms of which the calculations of 2 are empowered to provide a full account of the illocutionary act potential of each sentence;
4. it must be able to draw on a theory of discourse which relates the use of sentences in social and conversational situations; and
5. it must be able to draw on a theory of conversational reasoning by means of which such judgments as the success of an argument or the appropriateness of elements in conversations can be deduced.

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14. I would say this very differently today, since I now follow a grammatical framework in which everything involves static descriptions of grammatical constructions, and in which sentences are licensed by the unification of the constructions which underlie them. I could not "correct" this section without writing an additional chapter that would motivate the language in the "correction".

In this lecture I have argued that there are principles of linguistic description which should be geared in some way to deictically anchored sentences. Very little of previous linguistic theory has paid attention to this phenomenon. In my succeeding lectures I will emphasize the deictic aspects of language, exploring in turn notions of space, time, movement, the ongoing discourse, and the reflexes in language of the identity of the participants in a conversation and their relationships to each other. My goal in this lecture series is to show how the phenomena of deixis impose a number of serious empirical, conceptual, and notational problems for grammatical theory, and to try to solve some of them.

SPACE

(Much of this chapter and the next one would be very different if they had been written after such publications as Clark (1973),[1] Herskovits (1985),[2] Jackendoff (1983),[3] Lyons (1977),[4] Miller and Johnson-Laird (1976),[5] Talmy (1985),[6] and Vandeloise (1986/1991).[7] Regrettably, no updating attempt has been made.)

I said in the first lecture that one of my goals in these talks was to become clear about the ways in which the grammars of natural languages reflect what Rommetveit calls the "deictic anchorage" of sentences—an understanding of the roles sentences can serve in social situations occurring in space and time. Frequently, as I tried to show in that lecture, a sentence uttered in context can only be fully interpreted if we know something about the situation in which it has been used; in many cases, then, understanding a sentence out of context involves knowing the class of situations in which it could be appropriately uttered, and knowing what effect it could be expected to have in that situation.

One of the sub-categories of deixis is *place deixis*, having to do with

1. Herbert H. Clark, Space, time, semantics and the child, in *Cognitive Development and the Acquisition of Language*, ed. T. E Moore (New York: Academic Press, 1973).

2. Annette Herskovits, *Language and Spatial Cognition* (Cambridge: Cambridge University Press, 1985).

3. Ray Jackendoff, *Semantics and Cognition* (Cambridge, MA: MIT Press, 1983) Chapter 9 is "Semantics of spatial expressions".

4. John Lyons, *Semantics*, 2 volumes (Cambridge: Cambridge University Press, 1977). Chapter 15 is "Deixis, space and time".

5. George A. Miller and Philip N. Johnson-Laird, *Language and Perception* (Cambridge: Cambridge University Press, 1976).

6. Leonard Talmy, How language structures space, in *Spatial Orientation: Theory, Research, and Application*, ed. Herbert L. Pick, Jr. and Linda P. Acredolo (New York: Plenum Press, 1985).

7. Claude Vandeloise, *Spatial Prepositions: A Case Study from French* (Chicago: University of Chicago Press, 1991). (Original publication in 1986 as *L'espace en français: Sémantique des prépositions spatiales, Editions du Seuil*)