CONVERSATIONAL IMPLICATURE AND THE LEXICON

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What is conversationally implicated by an utterance depends not only on the utterance but on what other utterances the speaker could have produced but did not. For example, a declarative sentence *A or B* conveys that the speaker doesn't know whether A or B is the case because if he did know which of A and B was the case, he would have been in a position to say *A* or to say *B,* as the case may be, and thus he could have said something more informative than *A or B* with less linguistic effort (Grice 1967, 1975). Because the speaker expended the extra effort, he is taken as not having been in a position to (cooperatively) assert A or assert B and is thus taken as not knowing whether A or B is the case.

In this instance the comparison of the utterance and the alternatives with regard to "effort" is unproblematic: By any standard of "effort," *A* and *B* each take less effort than *A or B*. In this chapter, I will discuss a number of examples that are open to an analysis in which an utterance conversationally implicates something by virtue of its "taking more effort" or "taking the speaker further out of his way" than some alternative utterance. In many cases it will not be completely obvious which of the alternatives takes the least "effort"; I will make some attempt to clarify the respects in which one utterance can count as involving "less effort" than another.

Consider first an observation due to Householder (1971:75). The adjective *pale* can be combined with a great many color words: *pale green, pale blue, pale yellow*. However, there are other color words with which it combines less freely: *?pale red, *pale black, *pale white*. Householder

proposed that the oddity of *pale red* is due to the fact that English has a word for 'pale red', namely *pink,* and that that word has to be used instead of *pale red,* whereas there is no lexical item for 'pale green', 'pale blue', or 'pale yellow', and thus nothing to prevent *pale green,* etc. Under even a very simple-minded notion of 'effort', *pale red* can be said to involve more effort than *pink:* It is more complex in surface syntactic structure, as well as containing more phonological material. Thus, *pink* is to be preferred over *pale red* unless something demands the extra effort involved in saying the latter.

One case in which the extra effort is called for is that of a definition: *''Pink'' means 'pale red'* is a perfectly normal sentence, since replacement of *pale red* by *pink* here would rob the sentence of its point. Madaleine Mathiot has called to my attention the fact that *pale red* can be used to designate a color other than pink. A pale red dress is paler than red but not so pale as to be pink. I maintain that this fact can be attributed to conversational implicature and does not require one to give up the definition of *pink* as 'pale red'. One would go to the effort of saying *pale red* instead of *pink* only if there were some reason why *pink* would be inappropriate. Since the words will have their normal meanings unless forced not to, the color involved will be red in hue but paler (=of lower saturation) than a typical red. If it is only somewhat pale but not unqualifiedly pale, it will be paler than typical red but not so pale as to be unqualifiedly pink; Otherwise it could not be called *pale red,* since then it would either be unqualifiedly pink (and thus demand the work *pink* or an even more specific word) or fail to be red or pale. Thus, an analysis in terms of conversational implicature allows one to define *pink* as 'pale red', show why *pink* and *pale red* are not interchangeable, and show why *pale red* refers to shades of red that are nowhere near as pale as the shades of green, blue, and yellow that one refers to as *pale green, pale blue,* and *pale yellow.*

Consider next some observations made by Fillmore (1974). Fillmore noted that (1a), which is the first sentence of Hemingway's ''The Killers,'' differs from (1b) not only with regard to the location of the narrator [who views the action from inside the lunchroom in (1a) but from outside it in (1b)] but also with regard to who opens the door:

(1) a. *The door of Henry's lunchroom opened and two men came in.*
b. *The door of Henry's lunchroom opened and two men went in.*

In (1a) it is presumably the two men who opened the door, but in (1b) either the door opened by itself or (more likely) it was opened by someone inside the lunchroom. Suppose, however, that (1a/b) is not the first sentence of the story but is preceded by text that establishes that Henry's lunchroom has an all-glass exterior and thus that people inside can see people outside as they

approach the door, and that people outside can see in; now both (1a) and (1b) suggest either that the door opened by itself or was opened by remote control (possibly an automatic door-opening device activated by an electric eye that the two men stepped through) or that the narrator's attention was directed elsewhere when the door opened. In circumstances other than those just enumerated, it would be necessary to replace (1a/b) by a sentence in which transitive *open* is used instead of intransitive *open,* and some indication is given of who opened the door.

How, then, must transitive *open* and intransitive *open* be distinguished if these observations are to follow from one's account of English? Must the dictionary entry of one or both of them contain restrictions referring to the visibility of the agent? One can make the following generalization as to when intransitive *open* is unacceptable: Intransitive *open* cannot be used if the speaker has witnessed an ACT of opening, unless he has otherwise indicated that the event is part of an act. The last clause is added to allow for sentences such as (2), in which the speaker has indicated that an act is involved but has indicated it elsewhere than in the clause that gives the outcome of that act:[1]

(2) *I pushed and pushed on the door, and finally it opened.*

Note that the cases where intransitive *open* is acceptable are those in which the speaker has not witnessed an act of opening: Either there was no such act (the door opened by itself), or the act was concealed from his sight (either the door was opaque and the person opening it was on the other side or the act was performed offstage, say, by Henry pushing a button), or else his attention was directed elsewhere so that while he might have witnessed the event of the door opening (e.g. he heard the door open) he did not witness the act itself (i.e. the contribution of the agent and its direct connection to the opening of the door). The speaker thus appears to be required to acknowledge the existence of an agent whenever his experience directly qualifies him to, even though he must then use a syntactically more complex sentence than if he were to remain neutral as to whether an agent was involved. This extra effort is compensated for by the fact that extra information is provided to the addressee. Moreover, the information is at least likely to be relevant to the purpose of the interchange: If the addressee cares about the event of the door opening, he is likely to care about how that event comes about. However, that is not enough to show why the use of transitive *open* is as obligatory as it is in a case where the speaker has witnessed the act of the agent opening the door.

[1] Cf. my observation (J. D. McCawley 1976:120) that causative *have,* which normally cannot cover coercive causation, is acceptable if the coercive nature of the causation is established in an earlier clause. Thus, an account of a bank robbery might contain the sentence:

The robbers then had the employees lie face down on the floor of the vault.

A different dimension of "effort" plays a role here than in the previous examples. In cases where the speaker has witnessed an act of someone opening the door, his knowledge of the event of the door opening is more indirect than his knowledge of that person's act of opening the door: The event of the door opening was contained within that act, and the event strictly speaking did not begin until after the act had begun. Thus, if the speaker uses intransitive *open* when he has witnessed the act, he is leaving out information through which he gained knowledge of the event and which is of probable relevance to the purposes of the interchange. By contrast, in the case where the speaker's attention was diverted elsewhere and he thus witnessed the event of the door opening (say, he heard it open) but not the men's act of opening it, he may very well know that the men opened the door (since the circumstances may be such that there is no other way that the door could have opened), but his knowledge that they opened the door came through his knowledge of the event of the door opening.[2] I thus conclude that (i) intransitive *open* is neutral as to whether an agent is involved in the event, and (ii) in determining whether a particular utterance involves "more effort" than or "takes the speaker further out of his way" than another utterance, one must take into account not only the syntactic and semantic complexity of the two utterances but also the directness of the speaker's access to the information that the sentences are to convey.

I turn now to the differences between what is conveyed by LEXICAL causatives and by PRODUCTIVE causatives, a topic that has been discussed at length by Shibatani (1973a, 1973b, and 1976). Shibatani has cited many insightfully chosen pairs of Japanese sentences in which a productive causative construction and a corresponding single lexical item make different contributions to the interpretation of the sentence. To take one pair of examples, if said to the ticket taker at the door of a movie theater, (3a) would be a request that he let the speaker in to see the movie, whereas (3b) would be a request that he let the speaker in for some other purpose (say, for shelter from the rain or to use the washroom):[3]

[2] These considerations explain an interesting contrast brought to my attention by Jerrold Sadock: little Johnny is more of a liar when he says *Mommy, the window opened* than when he says *Mommy, the milk spilled,* where he was responsible for both events. In the most easily imaginable situations, Johnny's knowledge of the event of the window opening began with his act of pulling on the handles, whereas his knowledge of the event of the milk spilling did not begin with his careless motion of his arm but with his hearing the glass strike the table and seeing the white puddle spread out over the table.

[3] The productive causative construction in Japanese involves the derivational suffix *-sase-*, which, like most Japanese verb inflections, loses its initial consonant when a consonant immediately precedes (thus, *tabe-sase-* make eat' but *yom-ase-* 'make read'). The following affixes also appear in examples in this paper:

-(r)u	present tense
-ta	past tense

(3) a. *Ire-te* *kudasai.*
admit-PTCPL please

b. *Hair-ase-te* *kudasai.*
enter-CAUS-PTCPL please

A similar difference is found in the following English sentences:

(4) a. *Let me in.*
b. *Let me come in.*

(4a) suggests more strongly than (4b) that the speaker wishes entry not only to the premises but to the activities for which the premises are maintained. Thus a person wanting to reenter his own home would normally say (4a) rather than (4b), whereas an encyclopedia salesman seeking entry to give you his sales pitch would say (4b) and not (4a). In addition, the literature is full of examples in which a sentence containing *kill* is not adequately paraphrased by a corresponding sentence with *cause to die* (e.g. Katz 1970 and Fodor 1970). Katz's example is typical: It would be more correct to say (5a) than (5b) of someone who has tampered with the sheriff's gun with the result that in a shoot-out with an outlaw the sheriff's gun fails to fire and the outlaw is thus able to shoot the sheriff to death:

(5) a. *He caused the sheriff to die.*
b. *He killed the sheriff.*

The fact that a periphrastic causative as in (5a) is interpreted as referring to indirect causation can be attributed to conversational implicature, provided that the lexical causatives are assumed to have meanings restricted to direct causation. For example, (5a) would be an inappropriate thing to say if the person in question shot the sheriff to death, since there is an alternative available [namely (5b)] involving a less complex surface structure. This proposal is confirmed by facts about the use of *yes* and *no*. While (6a) is not

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-te	participle
wa	topic
ga	nominative
ni	dative
o	accusative
no	genitive

Miscellaneous phonological changes take place when *-ta* or *-te* is immediately preceded by a consonant, e.g. *nug-ta→nuida*.

In the interlinear glosses, the following abbreviations are used to indicate the various affixes and postpositions: ACC = accusative; CAUS = causative; DAT = dative; GEN = genitive; PAST = past tense; PTCPL = participle; and TOP = topic.

an appropriate way of reporting Black Bart's shooting the sheriff to death, a corresponding question would still have to be answered with *yes* if Bart has shot the sheriff to death:

(6) a. *Black Bart caused the sheriff to die.*
b. *Did Black Bart cause the sheriff to die? Yes/*No, he shot him through the heart and the sheriff died instantly.*

The claim that such verbs as *cause* and *make* are neutral with regard to directness of causation but are given an interpretation of 'indirect causation' through conversational implicature has an interesting implication, namely that periphrastic causatives can be used for direct causation in cases where there is no lexical causative, i.e. whether a periphrastic causative is interpreted as referring to indirect causation depends not only on its own meaning but on what alternatives the lexicon provides for referring to the events in question. This implication turns out to be correct, as was noted by Heringer (1976:207). For example, the sentences in (7) are appropriate regardless of what sort of causation relates Bill's act (or situation) to what Mary does or what happens to her, as is evident from the possibility of continuing the sentence as in (8):

(7) *Bill* { *caused Mary to* / *made Mary* } { *lose her balance.* / *laugh.* / *drop her parcel.* }

(8) *Bill caused Mary to drop her parcel by* { *shoving her.* / *ordering her to do so.* / *making a loud noise.* / *getting Larry to make a loud noise.* }

An interesting case where the interpretation of productive causatives is influenced by the presence or absence in the language of corresponding lexical causatives is provided by the Japanese words for putting on clothing. As is well known, Japanese has a large number of words that can be rendered in English as 'put on', differing from each other with regard to the place where the article is worn and the manner in which it is put on.[4] For

[4] It is a common misconception that the choice of the verb is determined by the object NP, e.g. that *hameru* refers to putting on gloves, that *haku* refers to putting on shoes, socks, and trousers, and that *kaburu* refers to putting on hats. If an article of clothing is used in a nonstandard manner or if an article of nonclothing is used as clothing, the verb is the one

some but not all of the verbs for putting clothes on one's own body there are related verbs for corresponding acts of putting clothing on another's body (or on an inanimate object such as a doll or a statue):

(9)

a. *Syatu o ki-ta.*
shirt ACC put on PAST
'He put on a shirt.'

a′. *Kodomo ni syatu o kise-ta.*
child DAT shirt ACC put on PAST
'He put a shirt on the child.'

b. *Boosi o kabut-ta (<kabur-ta).*
hat ACC put on PAST
'He put on a hat.'

b′. *Kodomo ni boosi o kabuse-ta.*
child DAT hat ACC put on PAST
'He put a hat on the child.'

When a verb for 'put on oneself' has no corresponding verb for 'put on someone else', the productive causative construction is used instead:[5]

(10)

a. *Taroo wa Ziroo ni tebukuro o hame-sase-ta.*
'Taro made Jiro put the gloves on' **or** 'Taro put the gloves on Jiro.'

b. *Taroo wa Ziroo ni zubon o hak-ase-ta.*
'Taro made Jiro put the trousers on' **or** 'Taro put the trousers on Jiro.'

(11)

a. *Butuzoo ni tebukuro o hame-sase-ta.*
'He put gloves on the statue of Buddha.'

b. *Ningyoo ni zubon o hak-ase-ta.*
'He put trousers on the doll.'

The examples in (11) are chosen in such a way that the supposed embedded sentences will be anomalous:

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corresponding to how it is donned and worn, e.g. 'He put socks on his hands' requires *hameru* rather than *haku,* and 'He put a shirt on top of his head' requires *kaburu* rather than *kiru.* It should be noted that most of the verbs in question can cover a far broader range of situations than the discussions in elementary textbooks generally suggest; see Miyajima 1972 for extensive examples.

[5] I am grateful to Noriko A. McCawley for considerable assistance in constructing the Japanese examples given in this paper and for valuable observations regarding them.

(12) a. **Butuzoo ga tebukuro o hame-ta.*
'The statue of Buddha put on gloves.'

b. **Ningyoo ga zubon o haita (< hak-ta).*
'The doll put on trousers.'

It is conceivable that (11) should be taken as having not (12) but (13) as the complement of the causative morpheme *-sase-*:

(13) a. *Butuzoo wa tebukuro o hamete iru.*
'The statue of Buddha has gloves on.'

b. *Ningyoo wa zubon o haite iru.*
'The doll has trousers on.'

Whether an analysis of (11a–b) as containing (13a–b) in their underlying structure is correct depends on the answer to a question that at present remains open, namely that of what the relationship is between action uses of the 'clothing verbs', as in (14a), and state uses, as in (14b):

(14) a. *Taroo wa syatu o ki-ta.*
'Taro put a shirt on.'

b. *Taroo wa syatu o ki-te i-ru.*
'Taro has a shirt on.' [6]

Sentences involving *hame-sase-* and *hak-ase-* have an important bearing on the conclusions reached by Shibatani (1973a, 1973b, and 1976) regarding the analysis of lexical causatives in Japanese. Shibatani argued for an analysis in which productive causatives have a complex underlying structure, containing the sentences that they are causatives of, but that lexical causatives have deep structures essentially the same as their surface structures: E.g. (15a) has an underlying structure of the form (15a′) but the underlying structure of (15b) does not contain a sentence *enzin ga tomar-*:

(15) a. *Taroo ga enzin o tomar-ase-ta.*
NOM engine ACC stop-CAUS-PAST
'Taro made the engine stop.'

a′. *Taroo ga [enzin ga tomar-]$_S$ -sase-ta.*

b. *Taroo ga enzin o tome-ta.*
'Taro stopped the engine.'

[6] Because of an ambiguity in the *-te i-ru* construction, (14b) also allows the interpretation 'Taro is putting a shirt on'.

Among Shibatani's reasons for this conclusion were the fact that a reflexive pronoun, which in Japanese must have the subject of a clause for its antecedent,[7] may have the hypothesized embedded subject as antecedent in the case of a productive causative but not in the case of a lexical causative:

(16) a. *Taroo wa Ziroo o zibun no kuruma kara*
TOP ACC self GEN car from
ori-sase-ta.
descend-CAUS-PAST
'Taro$_i$ made Jiro$_j$ get out of his$_{i/j}$ car.'

b. *Taroo wa Ziroo o zibun no kuruma kara orosi-ta.*
'Taro$_i$ let Jiro$_j$ out of his$_{i/*j}$ car.'

The possibility of interpreting *zibun* in (16a) as referring to Jiro confirms the claim that it has an embedded sentence *Ziroo$_j$ ga zibun$_j$ no kuruma kara ori-*, and the absence of such an interpretation for (16b) leaves the advocate of an analysis in which (16b) also has such an embedded sentence with the problem of explaining why *Ziroo* is not a possible antecedent of *zibun* in (16b).

Shibatani's original example in fact involved this sort of difference between *kise-* and *ki-sase-*:

(17) a. *Taroo wa Hanako ni zibun no huku o ki-sase-ta.*
'Taro$_i$ made Hanako$_j$ put his$_i$/her$_j$ clothes on.'

b. *Taroo wa Hanako ni zibun no huku o kise-ta.*
'Taro$_i$ put his$_i$/*her$_j$ clothes on Hanako$_j$.'

The fact that *kise-* is not a productive causative turns out to have no direct bearing on the facts recorded in (17), since *hame-sase-* and *hak-ase-* work the same way as *kise-* when they are used to mean 'put on (someone else)', i.e. (18) does not cover the case of Taro putting Jiro's gloves on Jiro, nor does (19) cover the case of Taro putting Jiro's shoes on Jiro:[8]

[7] The generalization that the antecedent of a reflexive must be a subject is not as clear as I have made it sound here; for further discussion, see N. A. McCawley 1976 and Oyakawa 1973 and 1974.

[8] It would be very nice if the subject of a stative use of *kiru, hameru,* etc., could not be the antecedent of a reflexive: then *kise-* and the 'manipulative' use of *hame-sase-* could be analyzed as causatives of the stative, and only the main subject (i.e. the underlying subject of *sase-*) would be a possible antecedent for a reflexive. Unfortunately, however, sentences such as the following are perfectly acceptable:

Taroo wa zibun no yoohuku o kite iru.
'Taro has his own suit on.'

Taroo wa zibun no tebukuro o hamete iru.
'Taro has his own gloves on.'

(18) *Taroo wa Ziroo ni zibun no tebukuro o hame-sase-ta.*
'Taro$_i$ made Jiro$_j$ put his$_{i/j}$ gloves on' **or** 'Taro$_i$ put his$_{i/*j}$ gloves on Jiro$_j$.'

(19) *Taroo wa Ziroo ni zibun no kutu o hak-ase-ta.*
'Taro$_i$ made Jiro$_j$ put his$_{i/j}$ shoes on' **or** 'Taro$_j$ put his$_{i/*j}$ shoes on Jiro$_j$.'

I turn now to another problem involving *hameru*. *Hameru* is of broader application than *haku*: while *haku* is restricted to putting things on one's own body, *hameru* is not:

(20) a. *Haha wa osanai otooto no te ni tebukuro o hame-ta.*
'My mother put gloves on my infant brother's hands.'

a′. *Haha wa osanai otooto ni tebukuro o hame-te yat-ta.*[9]
'My mother put gloves on my infant brother.'

b. **Haha wa osanai otooto no asi ni kutu o haita.*
'My mother put shoes on my infant brother's feet.'

b′. **Haha wa osanai otooto ni kutu o haite yatta.*
'My mother put shoes on my infant brother.'

It is not surprising that *hameru* is possible in sentences such as (20a/a′), since it occurs even in sentences where the object is not put on anyone's body:

(21) a. *Syoozi ni garasu o hame-ta.*
'He put (a pane of) glass into the sliding door.'

b. *Yubiwa ni kongooseki o hame-ta.*
'He set a diamond into the ring.'

The problem is to explain why in a simple sentence with an article of clothing

[9] This example involves the benefactive construction, in which a verb of giving (here, *yar-u*) is used with a participial complement. The underlying structure is something like:

Haha ga osanai otooto ni [*haha ga tebukuro o hame-*]$_S$ *yar-ta.*

(20b') is acceptable with the interpretation 'My mother did my infant brother the favor of putting shoes on' (=on her own feet). (20a') is in fact ambiguous as to whether the mother put the gloves on the child's hands or on her own hands; it says only that she did the child the favor of putting gloves on an unspecified object. The explanation given below for the interpretation of (23a–b) also provides an explanation of why (20a') is interpretable with the mother putting the gloves on either her own or the child's hands, whereas the putative embedded sentence *Haha ga tebukuro o hameta* can be interpreted only with the mother putting the gloves on her own hands.

as object and no indirect object, *hameru*, just like *haku*, is interpreted as referring to an agent putting clothing on his own body:

(22) a. *Taroo wa tebukuro o hameta.*
'Taro put gloves on.'

b. *Taroo wa zubon o haita.*
'Taro put trousers on.'

I propose that (22a) receives such an interpretation for the same reason that (23a) is interpreted as referring to my taking the hat off MY head, whereas (23b) can be interpreted with either me or Bill as the person from whose head I remove the hat:[10]

(23) a. *I took my hat off.*
b. *I took Bill's hat off.*

The interpretation that (23b) does not receive, that in which I remove the hat belonging to Bill from the head of some person other than me or Bill, is marked in two respects: The agent is removing clothing from someone else's body rather than from his own, and the wearer of the clothing is someone other than the owner. The two allowable interpretations of (23b) are marked in only one of these two respects: either owner=wearer≠remover, or remover=wearer≠owner. No less marked interpretation is possible, since *Bill's hat* must be either the hat that Bill is wearing or the hat that belongs to (or is associated with, etc.) Bill, and Bill is not the speaker. (23a), on the other hand, not only allows an interpretation that is unmarked in that both owner=wearer and wearer=remover, but allows ONLY that interpretation.[11]

The reason that (23a) and (23b) allow only as unmarked an interpretation as possible lies, I claim, in the realm of conversational implicature: Reference to one of the more marked situations requires comment, and if the speaker does not provide the addressee with warning that the marked situation is intended, the addressee is justified in assuming that one of the less marked situations is intended. [Of course, in an example like (23b), conversational implicature need not provide any clue as to WHICH of the minimally marked interpretations is intended.] To make this claim intelligible, I must clarify what I mean by 'unmarked interpretation'. I wish to explicate the

[10] To the interested reader, I throw out the following puzzle: Why is it that, while *take off* and *doff* are usually interchangeable, *I doffed Bill's hat* must refer to my removing the hat from my head, not from Bill's head?

[11] The problem under discussion here has no exact analogue in Japanese, since *nug-u* 'take off', just like *hak-u* 'put on the legs', is restricted to cases where agent=wearer. The interpretation of (23b) in which Bill is the wearer would be rendered in Japanese as *Bill no boosi o nug-ase-ta,* and that in which I am the wearer would be rendered as *Bill no boosi o nuida.*

notion of 'interpretation' in such a way that one could not argue, by analogy with what I have just said about (23b), that the sentences in (23b) must be interpreted as meaning that I took off a brown felt hat, on the ground that any other kind of hat is more marked than a brown felt hat and thus would require comment on the speaker's part. The following two observations provide at least some clarification of the relevant notion of 'interpretation'. First, the semantic representations of sentences involve referential indices, and in particular, the various possible interpretations of (23b) correspond to semantic structures involving something like *(x CAUSE (BECOME (NOT (y's hat ON z's head))))*. (23b) is ambiguous, not unspecified, with regard to coreferentiality between *z* and *x* or *y*, since the identity of *z* with *x* or with *y* (or with neither) constrains the possibility of deleting the repeated VP in:

(24) *John took Bill's hat off exactly an hour after Syd did.*

That is, (24) can report events in which John and Syd both removed a hat from Bill's head, or events in which each of them removed a hat of Bill's from his own head, but not events in which one removed a hat from Bill's head and the other removed Bill's hat from his own head. On the other hand, the color, material, and style of the hat do not figure in the semantic representation of (23b), as is shown by the fact that (24) is neutral as to whether the hats agree in color, material, or style, in a case in which two distinct hats are involved.

Second, the addressee is not merely constructing the semantic representations of the sentences that he hears but is constructing a mental picture of the events, etc., that form the content of what the speaker is saying. As Schmerling (this volume) has shown, this often involves the filling in of information that was not present in what the speaker said but which is necessary for the construction of a coherent mental picture. I am not prepared to say precisely what information is necessary for the construction of a coherent mental picture, and I conjecture that it will vary from one context to another. However, coreference and noncoreference are generally essential to the construction of the mental picture. Suppose that, as a first approximation, an 'interpretation' of a sentence in context is identified with a semantic representation,[12] supplemented with information that the speaker adds to his mental picture of the events being related, on the basis of (i) their importance to the coherence of the mental picture being constructed, and (ii) the assumption that the speaker is being cooperative. Then the hearer would assume that the coreference relations were as unmarked as was consistent

[12] In actuality, the 'interpretation' need not involve the entire semantic representation: The hearer will generally not subject the utterances to much more processing than is needed in order to extract what he needs from them.

with what he was given, but would not assume that the color and style of the hats referred to were unmarked.

Recall now the claim that 'lexical causatives' such as *kill* and transitive *open* refer to direct causation, whereas corresponding periphrastic causatives such as *cause to die* and *cause to open* are unspecified as to the kind of causation, since the cooperative principles would dictate the use of the lexical causative when direct causation is involved. It is reasonable that there should be simple lexical items for direct causation and productive syntactic or derivational patterns for general causation, rather than the other way round. As George Lakoff (personal communication) has observed, the prototypical causative situation (i.e. that which children are first aware of and which serves as the basis for the learning of other causal relations) is that in which there is direct physical contact between the agent and the affected object and also an immediate effect on the affected object. If the identification of causal relations, like the identification of purported referents, is an essential part of the hearer's construction of a coherent mental picture of what is being related to him, then syntactically unmarked causative constructions (i.e. lexical causatives) will be interpreted as referring to minimally marked causal relations (i.e. some kind of direct causation). This account of the difference between lexical and periphrastic causatives can also be used to provide an explanation of the difference in interpretation between (25a) and (25b):

(25) a. *John went from the kitchen to the living room.*
b. *John ceased to be in the kitchen and came to be in the living room.*

In cases of normal locomotion, (25a) is normal and (25b) abnormal; (25b) would be a normal thing to say only if, say, John had by magic been made to disappear from the kitchen and reappear in the living room. Once again, the syntactically unmarked alternative is reserved for reference to an unmarked causal relation, though it is noncommital as to whether the event referred to might have been marked with regard to things other than the causal relation (e.g. it does not exclude the possibility that John went on crutches or on a skateboard).

In this chapter, I have sketched somewhat programatically several ways in which the principles of cooperation constrain the speaker's choice among the alternative expressions of a given semantic structure. I have argued that, in the cases discussed, a lexical item and a syntactically complex 'equivalent' of it may make different contributions to the interpretation of a sentence without making different contributions to its semantic structure. In particular, I have argued that the lack of interchangeability between the lexical item and its periphrastic equivalent are due not to idiosyncratic

restrictions that must be incorporated into the relevant dictionary entries, but rather are consequences of general principles of cooperative behavior. This means that analyses involving lexical decomposition are both harder to confirm and harder to refute than has so far been thought the case: While the approach adopted here shows that a lexical decomposition is not refuted by the mere lack of interchangeability between the item and a complex expression matching its decomposition, it leaves up in the air the question of what counts as evidence in favor of a particular decomposition. Previous attempts to justify specific decompositions (e.g. Postal 1970 and J. D. McCawley 1973) have concentrated on parallelisms between the behavior of the item and the behavior of complex equivalents. But we have shown above that we cannot expect complete parallelism between the item and the complex equivalent. It thus remains to be determined what kinds of parallelism must be attributed to (partial or total) semantic identity and what kinds of lack of parallelism must be attributed to semantic disparity.

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