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TOWARDS A BETTER UNDERSTANDING OF ENGLISH CAUSATIVES

1. Introduction

The grammar and pragmatics of actions and their participants has attracted great interest in recent years as it constitutes what Hopper and Thompson (1982:5) aptly call "a core area of language."

As early as 1963 Werner and Kaplan recognized that in Indo-European languages the model used for connoting states of affairs and articulating them linguistically is the "human action model." This involves registering an event in terms of an 'agent' performing an 'action' which affects an 'object,' in other words a subject/causer who brings about a change of the state or location of an object/patient. Such a basic model is obviously of interest to different areas of investigation. It is accepted as such and extensively analysed from the point of view of the relation between language and perception in Miller and Johnson-Laird (1976:472 ff.). It underlies a lot of 'purely' linguistic research carried out in the 70s and early 80s focusing on different morphological, syntactic and semantic aspects of causative constructions and causative verbs, i.e. cases where the notion of causation is contained in the predicate (e.g. Fodor 1970, Givón 1975, Shibatani 1973, 1976, McCawley 1976, Talmy 1976, Gruber 1965, 1976, Comrie 1976, 1981). Not a small part of such research was triggered by the controversy between interpretivist and generativist semanticists, which largely concentrated on the analysis of English causatives and in particular on the 'famous' relation between a causative verb 'kill' and the corresponding explicit causative expression 'cause-to-die.' A number of important issues relating to causatives have been therefore highlighted perhaps more than problems concerning any other type of predicate. Nevertheless, it is still a fact that a lot of the questions raised remain unresolved.

Recent linguistic research has shown that transitivity and agentivity are graded phenomena (Hopper and Thompson 1980, 1982, Givón 1984, DeLancey 1984). It is conceivable that the gradable nature of transitivity depends entirely on the gradable nature of agentivity. This paper will argue, however, that causativity is also a gradable phenomenon and that the gradable nature of transitivity derives from that of both agentivity and causativity. Specifically, the following points will be raised. It will be demonstrated that previous classifications of English causatives have been inadequate in two respects: (a) they have failed to draw a line between the notions of causativity and agentivity, and (b) they have not given recognition to the fact that each of these notions involves a continuum, i.e. that

causativity is not to be understood as a yes-no question, as a criterial property which some verbs possess and others do not, but rather as a graded phenomenon, a question of more/less.

Theoretical arguments and specific examples will be offered in order to show that the set of English verbs which are high on a causativity scale (i.e. possess this property to a large degree) is not identical to the one comprising verbs high on an agentivity scale.

2. The Interrelation between Causativity and Agentivity

2.1. A clear understanding of what the relevant notions involve and in particular of the relation between causativity and agentivity seems indispensable before any attempt at a categorization is made.

Probably one of the least controversial and most concise accounts of a causative construction is that offered in Shibatani (1976a:240). Causativity is stated as a relation between two events which holds if the following conditions are satisfied:

- "a. The relation between the two events is such that the speaker believes that the occurrence of one event, the 'caused event,' has been realized at t_2 which is after t_1 , the time of the 'causing event.'
- b. The relation between the causing and the caused event is such that the speaker believes that the occurrence of the caused event is wholly dependent on the occurrence of the causing event; the dependency of the two events here must be to the extent that it allows the speaker to entertain a counterfactual inference that the caused event wouldn't have taken place at the particular time if the causing event hadn't taken place, provided that all else had remained the same."¹

This is perhaps as far as agreement on this issue goes. The relationship between causativity and agentivity is philosophically controversial and linguistic discussions of causative verbs ignore the distinction between causers and agents in practice, even when they recognize its existence in theory.

Causative verbs express a relation between two (or more) arguments one of which is the cause and the other the effect. The first argument (cause) of such two (or three) place predicates need not be an agent in the traditional understanding of the term, a fact rarely paid enough attention. Dowty

1. This is entirely in keeping with the common philosophical view that in order to assert that an object's actions caused some event to happen, a speaker must believe that the event happened and that it would not have happened on that particular occasion if the object had not acted and all else had been the same (cf also Stalnaker 1968, Dowty 1972a, Miller and Johnson-Laird 1976).

(1972b), for instance, states that the notion of agent should be identified with the first argument of such two place predicates and Lyons uses the observation that agents are interchangeable with other kinds of causers (e.g. 'The umpire stopped play' or 'Rain stopped play') as evidence for the existence of a "natural and perhaps universal tendency to identify causality with agency" (Lyons 1977:490).

The link between the two notions is admittedly very strong. Nevertheless, it is important to recognize that causativity hinges on the *result* (effect), i.e. the situation of the recipient of an action, not on the qualities of the causing event as such. The extent to which the causing event involves an agent i.e. an animate, volitional, responsible entity who is in control of the situation and has authority over it will be decisive in considerations of the 'agentivity' of a predication (and finally of the verb it involves). Although these observations are not contradicted in theory in any analysis that I know of, it can be shown that specific categorizations of predications (and verbs) in relation to these basic properties conflate them in practice and are consequently more confusing than illuminating. The clearest examples of this conflation are probably Lyons (1977) and Miller and Johnson-Laird (1976) as both works provide excellent theoretical accounts of the relevant notions and relations. They will be therefore considered here in some detail.

2.2. Lyons' (1977:491-494) categorization of verbs in relation to causativity will be taken up first. Lyons envisages a tripartite division of verbs into 'factitives,' 'operatives' and 'operative-factitives.' In his system 'factive' verbs are said to denote a situation where a cause produces an effect:

(a) PRODUCE (CAUSE, EFFECT)

'Operative' verbs are said to denote an operation performed by an agent and affecting a patient:

(b) AFFECT (AGENT, PATIENT)

'Operative-factive' verbs are characterized by a combination of the elements appearing in (a) and (b):

(c) PRODUCE (AGENT, EFFECT)

All three schemata are said to be relevant in "paradigm instances of agentive situations (i.e. those in which the action results in a change in the physical condition or location of the patient)" (ibid: 491). A distinction is drawn, however, between instances of 'kill' where the cause is a first-order nominal ('John killed Bill') and those where it is a second-order nominal

(‘Excessive drinking killed Bill’). In the former case ‘kill’ is understood as closer to (c) while in the latter it is a ‘factive’ verb, i.e. it relates directly to (a). Finally, since the proposition expressed by ‘*x* killed *y*’ can also be understood as saying that *x* did something to *y* ‘it can be understood as an instance of AFFECT (AGENT, PATIENT)’ (ibid: 492), i.e. ‘kill’ can be also an ‘operative’ verb. This sort of categorization results in two distinct understandings of ‘kill’: an agentive one corresponding to (b) and (c) and a non-agentive interpretation corresponding to (a). Besides, in so far as affecting a patient is not equivalent to producing an effect, an agentive but non-factive understanding is also predicted as a possibility for ‘kill.’ It seems to me that the facts in connection with ‘kill,’ causativity and agentivity can be accounted for in a simpler way, provided the two notions are kept separate. What we know to be true of all instances of ‘kill’ is that it is a causative verb. *He was killed in a bomb explosion* and *He was killed during the last earthquake* involve perfectly literal instances of ‘kill.’ An external cause is unequivocally required (unlike in the case of ‘die,’ for instance). In this respect, i.e. in anything that concerns causativity, both examples belong together with *John killed Bill* where unlike either a genuine agent is involved. Therefore, ‘kill’ is undoubtedly a causative, but it is not equally certain that it is also ‘completely’ agentive, since it does not necessarily require an animate volitional causer, being responsible for the situation, having authority and control over it. Such factors (which will be discussed separately in the relevant section) have to be taken into consideration only in order to decide the extent to which ‘kill’ is an agentive verb and it is easy to see that it will not feature at the top of an agentivity scale, unlike a verb such as ‘murder,’ for instance.

It looks as if a tripartite categorization is at the same time both redundant and insufficient to account for the facts of ‘kill.’ For, besides the examples already discussed, the same verb may receive additional interpretations in cases like: *John killed Bill by accident* and *John killed Bill in order to steal his cocaine*. None of these interpretations hinges on the effect, the result of the causing event, i.e. none of them affects the ‘causativity’ issue. They all bear on the extent to which the causer is an agent, i.e. they all depend on properties of the causing event and affect the ‘agentivity’ issue.

Consider now the other example Lyons discusses, i.e. ‘hit’ and his explanation of why the verb is not ‘operative-factive.’ His specific sample sentence is *John hit Bill* and the explanation is worth looking into rather carefully:

“we can, of course, say that in so far as some change is wrought in the condition of Bill, John’s action results in a new state. But English does not provide us with a monovalent predicator denoting such states” (ibid.: 492)

This means that while in the case of 'kill' there exists an intransitive verb 'die' which refers to the result brought about, no such intransitive verb exists in the case of 'hit.' Therefore, for Lyons 'effect' equals 'lexicalized new state' and therefore 'absence of lexicalized new state' implies 'no effect.' In short, 'hit' is not 'operative-factitive' for the same reason that it is not just 'factitive' either, presumably (since 'factitives' also require that an effect be produced). What is 'hit' then? Lyons does not tell us how it is to be characterized, but we may attempt to call it an 'operative' verb. 'Operatives,' however, involve a 'patient.' In an example like *John hit the wall with his fist and hurt himself* nothing happens to the wall. It is not therefore evident that the wall is indeed a 'patient.' Is it consequently true that we do not know anything about 'hit' in connection with agentivity and causativity? The answer is negative, because we do know that in both examples 'hit' is an agentive verb. The extent to which the subject possesses the relevant characteristics to qualify for an 'agent' can be worked out (in a specific way which will be presented later), but the fact remains that some of these relevant characteristics are always present in all instances of 'hit.'

It can be argued, of course, that 'patient' is to be defined as the entity which is on the receiving end of an action and in that case the wall in the *hit the wall* example is a patient. Notice, however, that the crucial element once again is 'action'; if that notion is also absent we are saying nothing more about 'hit' than that it is a transitive verb and that is not much of a categorization. Clearly 'action' implies presence of an 'agent.' Hence, irrespective of the exact definition of 'patient' the decisive, constant factor in all cases of 'hit' exemplified here remains agentivity. A categorization which mixes up elements crucial for causativity and elements crucial for agentivity seems to miss the point.

2.3. A consideration of Miller and Johnson-Laird's (1976) views on causativity will be restricted to their discussion of the facts of English causatives of motion as they present, at first sight at least, one of the clearest cases for causatives. In very simple terms, motion verbs can be classified as causatives if they describe the motion of an object which can be safely attributed to the interference of some other entity, i.e. an external factor. This common sense view is not as widely accepted in practice as one might have expected. Miller and Johnson-Laird's characterization of motion verbs with respect to causativity rests on an alternative assumption which seems to add to the confusion of the notions of causativity and agentivity.

On their account, if the moving object and the one responsible for its motion are one and the same, the verbs describing the motion in question are also understood as 'causatives.' Clearly these verbs are not transitives any longer but intransitives of motion; moreover the issue of coreferentiality (i.e. whether the moving object and the one responsible for its motion are

one or not) can only be raised in those cases where the moving object is an agent: in the understanding of the proponents of this view, the moving object must in such cases be capable of voluntary action.

As an illustration of this point it is sufficient to notice that in the light of this approach *The car rose* is non-causative while *John rose* is vague: if John is also an agent (in the sense of voluntarily causing his own motion) the sentence receives a causative interpretation (along with an agentive one); if not, it receives a non-causative interpretation (along with the non-agentive one). How is this conclusion arrived at? Within this system causative verbs are understood as expressing a relation between two events, the first of which is something that an *agent* does, the second an event that his *action* causes (ibid: 475). This is precisely the point at which causativity and agentivity are conflated with what seem to me to be undesirable results.

The assumption that the causing event involves an agent is used in order to distinguish between 'kill' which implies bringing about a change in the condition of its logical object and 'see' which does not imply any such thing. The distinction in question is however related to causativity, not agentivity. So, invoking the latter notion as well, in trying to account for it, is rather misleading. The fact that 'see' does not qualify as a causative has nothing to do with the intentionality or non-intentionality of the event. Notice, at any rate, that even if it does involve a volitional subject in a case such as 'He saw the film in order to decide for himself whether the new actor was any good,' nothing changes concerning causativity: the film's condition remains the same.

These facts are too simple to have been overlooked by such a thorough analysis as the one under discussion. The question therefore arises as to the reason why Miller and Johnson-Laird (1976) opt for the alternative approach just mentioned. It seems to be the case that neat formalization lies behind their analysis. The most economic solution for causative / non-causative members of pairs is certainly the one which incorporates the intransitive schema into the transitive one and offers a single formula in the case of phonologically identical pairs e.g. TURN ((*x*), *y*). The first argument (*x*) being optional in this formula, the schema allows both for causative and non-causative uses. Consequently in the case of phonologically non-identical pairs a similar method can be applied. Hence sentences such as *He raised the car* and *The car rose* are lumped together as describing "the same event" (ibid: 475). Since the motions described are precisely the same in both uses, Miller and Johnson-Laird postulate one sense of the verb. The causative component is said to appear when there is an agent at least implicitly present and to disappear when s/he is absent. But their diagnostic question for singling out causatives from non-causatives: "What properties of *y* are changed by *x*'s action" cannot be asked in the case of *The car rose*,

they claim, "because the verb is intransitive." Now this is either false or in contradiction to their other claim that intransitives may well be analysed as causatives. Notice that a causative understanding is postulated both for *The man rose* and for *Melissa travelled* although the verbs involved are also intransitive. So in reality *The car rose* cannot be submitted to the diagnostic test because of a prior (unadmitted) recognition of the fact that the subject is inanimate and therefore no candidate for an agent (in their own understanding of the term at least). This being so the question of coreferentiality cannot be raised as it is raised in the case of *The man rose* and *Melissa travelled*. It is this therefore, that is at issue and not intransitivity as is claimed.

In essence the difference between *The car rose* and *The man rose* is a question of agentivity (i.e. properties of the subject-causer) and not causativity (i.e. properties / situation of the object of change). The undesirable results of the approach criticized here consist in distinguishing between different interpretations of 'rise' (a causative and a non-causative one) for the sake (it seems to me) of bringing together 'raise' and 'rise' as causatives. For consider a case like *Smoke rose from the chimney*. There is clearly no corresponding transitive sentence here: **somebody raised smoke from the chimney*. Neither does the possibility of vagueness exist as it does in the case of *The man rose*. Since smoke is incapable of "voluntary action" the question of coreferentiality cannot be raised. If we adhere strictly to the principles of Miller and Johnson-Laird we can only conclude that we are faced with a third kind of 'rise' this time. This solution seems more counter-intuitive than distinguishing between a causative 'raise,' and a non-causative 'rise,' the relation between which cannot rest on considerations bearing on agentivity. Different interpretations of 'rise' which depend on the sort of subjects it can accept ('the car,' 'the man,' 'smoke,' etc.) need to be investigated separately to discover where the verb stands as to agentivity. The relation between 'raise' and 'rise' constitutes an important problem which requires special attention but it is a problem of causativity and cannot be solved by reference to the properties of the causing event and the extent to which it involves a genuine agent.

2.4. To sum up the arguments already presented, notice the following points: I have argued so far that causativity and agentivity can be considered separately to some extent. This can be effected if causativity is understood as centring around the question of whether something that happens (event or process) is due to some external intervention or not, i.e. is brought about by an external cause. Approaches attributing a causative component to sentences like *Melissa travelled* on the grounds that "she did something that caused herself to move" (Miller and Johnson-Laird 1976: 544) are here considered inappropriate as blurring the distinction between causativity and

agentivity. Melissa using her own forces to travel can be hardly called an 'external' factor, so the verb in question is no candidate for a causative. The suggestion made here is that causativity depends crucially on 'patientivity' of the object rather than agentivity of the subject, i.e. on the effect rather than the nature of the cause. Therefore the degree of agentivity of the causer is not directly decisive in characterizing a situation as more or less typically causative.

If the above claim is correct, then it follows automatically that the set of causative verbs is not identical to that comprising agentive ones. This means that even if we are not operating with a notion of gradation concerning these phenomena, but stick to traditional classifications of verbs requiring them to either possess or not possess such properties, we should be in a position to distinguish between the two types (of verbs) in question, on the basis of the theoretical assumptions already made. As an illustration of this point, consider the following cases:

- I. Intransitive verbs (monovalent predicates) which require that their subject (first argument) be animate (and often human) and that it participate intentionally in the process/event referred to by the predication are agentive but not causative, e.g. 'run', 'jump', 'swim', 'walk', 'exercise', 'concentrate', 'think', 'invigilate', 'experiment', 'meditate', 'talk', 'whisper'.
- II. A more interesting class of agentive, non-causative verbs involves cases of bivalent or trivalent predicates (i.e. transitives). The second argument may be either a first or a second order nominal, which is not however affected by the action of the subject (the first argument). Once again the subject does possess the properties traditionally considered as characterizing agents, i.e. animacy (and humanness in particular) and intentionality. Examples of such verbs are: 'look', 'listen', 'watch', 'read', 'observe', 'notice', 'photograph', 'bet', 'search/look for', 'imagine', 'reflect', 'ponder', 'contemplate', 'suppose', 'study', 'inquire', 'consider', 'estimate', 'consult', 'attend', 'scrutinize', 'scan', 'indicate', 'stress', 'emphasize', 'check', 'analyse', 'compare', 'demonstrate', '(mis)interpret', 'miscalculate', 'illuminate', 'highlight', 'emphasize', 'affirm', etc. A subcategory of such agentive non-causatives involves transitives of motion where the direct object is an NP of Location (source or goal), e.g. 'climb (the mountain)', 'abandon (one's native town)', or an animate entity who may even be unaware of the intention of the agent and is in any case not 'caused to change location' as a result of his/her activity/action, e.g. 'chase (a thief)', 'hunt (deer)', 'follow (the person in a white jacket)', 'approach (a policeman)', 'accompany (a friend on a tour)'.

- III. Clear cases of non-agentive non-causative verbs also exist, naturally, such as: 'see,' 'know,' 'hear,' 'fear.'
- IV. Clear cases of agentive causatives are, for instance, 'murder,' 'execute,' 'assassinate,' 'create,' 'write,' 'construct,' 'build,' 'invent.'
- V. The remaining logical possibility involves non-agentive causatives. A number of verbs may function as such, a fact which can only be demonstrated with specific sample sentences, since few of the relevant verbs allow only the possibility of a cause which cannot be an agent (e.g. 'absorb'): 'the heat melted the ice/evaporated the water,' 'low temperature hardened the metal,' 'clouds hid the sun,' 'the frost destroyed the olive trees,' 'the puzzle intrigued him,' 'the film saddened her,' 'show/mud covered the car,' 'a fire burned the house down,' 'the last earthquake ruined the church,' 'the noise scared the birds away,' 'radiation / liquor / hard work killed Jonathan,' 'the 'Queen Mary' brought them to New York,' 'blood soiled his shirt,' 'the towel absorbed the liquid,' 'a stone broke the window,' 'the roots of the tree broke the cement.'

A number of equally plausible interpretations of such constructions have been offered. Some subject-causers may be instruments ('a stone'), others are in fact 'reasons' rather than 'causers' (hard work, noise); a large number of them are natural phenomena / entities and 'quasi-agents,' (the heat, the last earthquake). The point is what brings them together rather than what differences they exhibit. It is quite evident that although they function as first arguments of causative verbs, they are characterized neither by animacy nor (consequently) by intention, the sole features considered as constituting necessary and sufficient conditions for an entity to qualify as an agent by most traditional accounts of agentivity, e.g. Fillmore (1968: 24), Ross (1972), Dowty (1972b), Gruber (1976: 165), Jackendoff (1976), Morley (1983).

The verbs allowing such subjects are in direct contrast to those of the first two categories, as they do not *require* that the position of their first argument (as predicates) be occupied by a characteristic agent, although most of them *may* accept typical agents in that position (e.g. 'John killed Bill in order to steal his cocaine' already mentioned). In this sense they are not completely non-agentive, i.e. they are not non-agentive in all their instances.

3. Transitivity and Agentivity as Clusters of Scalar Properties

3.1. It seems necessary to consider models of description other than the ones already discussed, in order to accommodate the attested phenomena of fuzzy boundaries between agentive and non-agentive verbs, in the hope of

achieving more descriptive (if not also explanatory) adequacy. Such models are adopted, for instance, in Hopper and Thompson (1980, 1982) and Givón (1984), which treat agentivity and transitivity as continua, as clusters of scalar properties — whose aggregate results in the paradigm / core / prototypical instances of transitive clauses and agentive predications, respectively. They are consistent with Lakoff's (1977) suggestion that the 'agent-patient' sentence is a prototypical concept (in the sense of Rosch and Mervis 1978). The 'core' instances involve typical agents affecting typical patients and non-paradigm cases are accounted for in terms of their distance from the former. This can be effected through identifying the points of the scalar cluster of properties ('parameters' in Hopper and Thompson) at which non-paradigm instances differ/deviate from the prototypical ones.

3.2. The consequences of such approaches for the issues under investigation can be appreciated following a presentation of Givón's (ibid) cluster of properties jointly amounting to a characterization of the notion of a prototypical agent:

- a. Humanity: human > animate > inanimate > abstract
- b. Causation: direct cause > indirect cause > non-cause
- c. Volition: strong intent > weak intent > non-voluntary
- d. Control: clear control > weak control > no control
- e. Saliency: very obvious/salient > less obvious/salient > unobvious/non salient

It seems reasonable to assume that the higher the degree of these properties present in a predicate's first argument, the closer that predicate is to what we can call 'cardinal agentivity.' In practical terms this means that all the verbs included here in categories I, II and VI are high on an agentivity scale, while those of categories III and V are fairly low. What is more important, however, is that we are now in possession of a tool which can help in identifying the relative position (degree of agentivity) of less clear cases. These can be best estimated if one compares verbs which are closely related in meaning. Comparing 'kill' to some of its hyponyms such as 'murder,' 'execute,' 'assassinate,' it becomes immediately obvious (on the basis of what has been said so far) that it is less agentive than they are, although they all produce the same effect (cause-to-die). A number of verbs like 'approach,' 'travel,' 'arrive' are clearly less agentive than 'swim,' 'jump,' or 'walk,' for instance, as they need not involve either 'intentionality' or 'control,' while hyponyms of 'walk' like 'saunter,' or 'swagger' may be considered as more agentive than their inclusive term as they are commonly restricted to human actions. For similar reasons verbs like 'conceive,' or 'invent' are probably very high on an agentivity scale, although it is not yet clear how they fare in terms of causativity. Others like 'break' and 'strike' are also less agentive than 'punch,' 'slap' and even 'hit' (Lyons' example,

already mentioned) which normally require a 'typical' agent. Intransitives like 'slip' and 'sink' are probably at the bottom of an agentivity scale as typical cases of absence of 'intention' and 'control,' as are also 'roll (down)' and 'fall down.' Differences of degree between them will probably depend on which ones allow human subjects more typically than others.

Notice also that 'talk' is less agentive than 'lie' which normally requires 'strong intent' and 'full control': 'He was talking in his sleep' is a perfectly acceptable sentence, contrary to '??He was lying in his sleep.' Both 'chase' and 'hunt,' already (roughly) classified as non-causative, are indisputably very high on an agentivity scale as they imply 'strong intent,' unlike 'follow,' for instance.

In this illustration of how Givón's criteria can be applied to provide more descriptively adequate accounts of the facts of agentivity, I have deliberately left out property (b), i.e. causation, for two reasons: firstly in order to draw attention to the feasibility of the task of keeping the notions of causativity and agentivity separate (to the extent that this can be achieved) and secondly because the characteristics of direct vs indirect causatives require special attention and will be therefore treated separately.

3.3. The accounts of transitivity which are of interest here can be said to rest somehow on the assumption that it comprises properties linked both to agentivity and causativity. In Givón's terms two prototypical conditions are necessary to identify the transitive prototype:

- (a) The presence of a volitional, visible, controlling cause (i.e. a prototypical agent) as subject.
- (b) The presence of a clearly visible result-registering effect or a patient-of-change as object.

Clearly prototypically transitive events are here collapsed with prototypically agentive ones. Thus a sentence like:

- (1) Priscilla saw a book

is to be interpreted as less-than-prototypically transitive not only because its object NP is a non-prototypical patient, but also because its subject is a non-prototypical agent since it is non-volitional. This can be contrasted with:

- (2) Priscilla picked up a book

where the opposite conditions hold. There can probably be little objection to this if one considers the overwhelming importance of the human action model, already pointed out at the beginning of this discussion. What is perhaps more problematic is the relation between prototypically agentive and prototypically transitive sentences on the one hand and prototypically causative ones on the other. This is not discussed in Givón, but on the basis

of what has already been said one may assume that all three coincide. Consider, however, a third example which is to be compared to the ones already offered:

(3) Priscilla looked at a book

Considering transitivity, causativity and agentivity separately, (2) can be thought of as prototypically transitive, causative and agentive; (1) is less prototypically transitive than the other two, also less agentive than either and non-causative; (3) is more transitive and more agentive than (1) since it has a volitional subject and less so than (2). However, precisely because (3) contains a volitional subject it is not equally non-agentive with (1), although they are equally non-causative. In short, distance from the prototype does not seem to me to be at parallel points along the three dimensions in question. Transitivity constitutes a conflation of the separate dimensions of agentivity and causativity, but the degree of causativity of transitive verbs depends mainly on the degree of deviation from the prototype of the patient: obviousness of change in the object is at issue and Givón's analysis has little to say on how this is to be worked out, in non-paradigm instances. We seem to know a lot on how to compute degree of agentivity but little on how to compute degree of 'patientivity.' It is therefore necessary to consider carefully Hopper and Thompson's parameters of 'cardinal transitivity' and isolate the points relevant to how affected the object is, i.e. its degree of patientivity and, by implication, the relative positions on a causativity continuum of different English verbs.

4. Causativity as a Graded Property of English Verbs

4.1. Hopper and Thompson's (1980:252, 1982:3) parameters of 'cardinal transitivity' involve the following points:

	High transitivity	Low transitivity
A. PARTICIPANTS	two participants or more (A and O)	1 participant
B. KINESIS	action	nonaction
C. ASPECT	telic	atelic
D. PUNCTUALITY	punctual	nonpunctual
E. VOLITIONALITY	volitional	non-volitional
F. AFFIRMATION	affirmative	negative
G. MODE	realis	irrealis
H. AGENCY	A high in potency	A low in potency
I. AFFECTEDNESS OF OO	totally affected	O not affected
J. INDIVIDUATION OF OO	highly individuated	O nonindividuated

Characteristics of whole predications are obviously at issue and two of these (F and G) do not bear directly on lexical semantics. It can be demonstrated, however, that some of the remaining parameters are relevant for the semantics of English causative verbs and in particular for determining the degree of salience/obviousness of change in the object. The objection raised right from the start of this discussion, namely that properties of the causer are best seen separately from those of the causee has to be repeated in connection with Hopper and Thompson's transitivity hypothesis. Their example of E. VOLITIONALITY involves 'I wrote your name' which is juxtaposed to 'I forgot your name' on the basis of presence vs absence of volition. They claim that "the effect on the patient is typically more apparent when the A is presented as acting purposefully" (1980:252).² This claim has already been refuted at the beginning of this paper and it is unnecessary to bring in more counter-examples. In answer to Hopper and Thompson's specific example, notice that the difference between 'write' and 'forget' in terms of the effect on the object hinges on the fact that in the former case the verb takes what we call 'an effected patient', i.e. something which is brought into existence as a result of some external intervention (e.g. 'create,' 'build,' 'construct,' 'paint'), while in the latter case the verb does not even qualify as a causative. Notice that if 'remember' is substituted for 'forget' where 'intention' may be implied as in 'I tried very hard to remember her name and finally succeeded in doing so' the effect registered is no more salient than in 'As I was looking at the sea I suddenly remembered the name of my first lover' where intentionality is absent. The same applies to H. AGENCY.

4.2. Hopper and Thompson's parameters which seem to be most relevant to the issue at hand have to be looked at in detail. Parameter A. PARTICIPANTS restates the fact that unless two participants are involved no transfer can take place; in anything that concerns us here, this reinforces the traditional view also accepted in the present study that intransitives (one-argument predicates) cannot qualify as causatives.

B. KINESIS, C. ASPECT and D. PUNCTUALITY can be directly linked with the division of situations into states, processes and events (and points within these traditional categories). It is fairly evident that stative verbs involve typically non-affected objects, e.g. 'know,' 'resemble,' 'like,' 'understand.' In terms of affectedness of the object these verbs need not be separated from others which refer to events (at the other end of the scale) but which are equally non-causative, e.g. 'remember,' 'forget,' 'see,' 'hear,' 'fear,' 'notice,' 'observe,' 'read,' 'approach.' They all involve typically non-affected objects whether they be stative (normally implying absence/low

2. 'A' stands for 'agent' and 'O' for 'object.'

degree of agentivity) or actions (events implying an agent's involvement and therefore high degree of agentivity).

C. ASPECT refers to the difference between completion and non-completion of a change-of-state-of-affairs. Completion is linked to more/less typical events rather than processes which are characteristically 'atelic,' i.e. no 'culmination point' is envisaged (Mourelatos 1978). A telic action, e.g. 'I ate it up,' is considered by Hopper and Thompson to be more effectively transferred to a patient than a comparable atelic one, e.g. 'I am eating it' where no end point is provided. Similarly D. PUNCTUALITY which focuses on the duration of an event can be shown to link directly to the distinction between events which are 'accomplishments' and those which constitute 'punctual occurrences.' Hopper and Thompson contrast (punctual) 'kick' to (non-punctual) 'carry' and consider the former as referring to a more transitive action since there is no obvious transitional phase between inception and completion which implies (in their view) a more marked effect on the patient.³

'Punctuality' however, which is the end-point of the states-processes-events continuum (Antonopoulou 1987) is more immediately relevant to the present issue. Hopper and Thompson's analysis raises certain problems at this point. It has to be compared to alternative approaches which have the merit of concentrating on causativity and the semantics of individual causative verbs but the disadvantage of not recognizing the existence of a continuum. It is necessary at this point to consider the differences between 'punctual' and 'non-punctual' verbs other than the ones Hopper and Thompson use as examples. The purpose of this 'exercise' is to show that their specific examples of 'punctuality' are misleading if taken at their face value and strictly applied for the purposes of establishing the relative distance of causatives from the 'causative-prototype.'

A lot of discussion about causativity carried out in the seventies (already mentioned at the beginning of this paper) involved the difference between sentences like:

- (5) John melted the metal but it took him months to do so
and
(6) * John killed Mary but it took him months to do so.

3. The overall issue of the states-processes-events distinction is a very complex one and lies outside the scope of this investigation. For our present purposes, suffice it to note, for a start, that ASPECT by itself is not always relevant to a categorization of verbs. The difference between 'I lifted the book' and 'I am lifting the book' bears obviously on an assessment of whole predications rather than on the semantics of individual verbs; in both cases the object is caused to change location as a result of external intervention.

Lakoff and Ross (1972) attempt an explanation of such differences in acceptability along the following lines: the acceptability of (5) is attributed to the morphological relation between causative and corresponding non-causative ('melt,' 'harden,' ...), while the unacceptability of (6) is claimed to be due to the fact that "the lexical item and the antecedent one are not morphologically related" (p. 122).⁴ Notice, however, that (7) is acceptable while (8) is not, although the opposite facts hold as regards morphological relation (phonological identity, in fact):

- (7) John transported his trunks to Uzbekistan,
but it took him a month to bring it about
- (8) ??John turned the switch to the left,
but it took him a month to bring it about

In short, the 'punctuality' or synchronicity of the causing and caused event is at issue rather than the morphological relation between transitive and intransitive members of a causative/non-causative pair. Now, within Hopper and Thompson's framework, punctual-synchronic 'kick' should be considered as registering a more marked effect on the patient than non-punctual 'melt' (on the basis of parameter D.) since nothing changes in terms of punctuality and the non-acceptability of (6) if 'killed' is replaced by 'kicked' and 'melt' by 'carry.' On the other hand, synchronicity requires some extra machinery to be used in order to link the two members of such pairs, namely time indices. This problem does not arise with 'melt' or 'harden' for instance (although it does arise in the case of other causative members of phonologically identical pairs). In fact this is one of the principle reasons why bi-conditionality is secured in the case of 'melt_{CAUS}-cause-to-melt_{NON-CAUS},' but not in the case of 'kill - cause-to-die.' In practical terms this means that 'melt' could be considered a more clear-cut case of a causative than 'kick' on the basis of criteria such as bi-conditionality, which have been carefully elaborated on (although for different purposes) in the past. What is more important, the results of adopting such an alternative are not in the least counter-intuitive. Notice, for instance, that at least on intuitive grounds, the effect on the object is certainly more salient in (9) than in (10):

- (9) John melted the iron pole
- (10) John kicked the iron pole

This brings us back to the question raised when discussing Lyons' (1977) classification concerning the causativity of verbs like 'hit,' 'kick' and the like. It can be safely claimed that phonologically identical pairs ('melt,' 'harden,'

4. Interpretations of the type 'John tried over and over again' are ignored as irrelevant.

'turn,' 'roll,' etc.) have the advantage of facilitating identification of the two members. This is of importance for the purposes of retrieval of omitted information and accounts for the difference in acceptability of (11) and (12):

- (11) John tried to melt the glass, but it wouldn't
 (12) *John tried to kill Mary, but she wouldn't

It need not, however, imply that the former type of verbs (see Comrie 1981:163) are as a *class* more obviously causative than verbs not exhibiting this characteristic. Similarly, there is no a priori reason why in all cases where a monovalent predicator (intransitive verb) corresponding to a bivalent one (transitive verb) exists, the latter should be a clearer case of a causative as Lyons seems to suggest. I can see no difference in terms of degree of causativity between (13) and (14), although the verb in (13) does not only have a corresponding intransitive counterpart, but a phonologically identical one, while 'lift' in (14) does not even have a corresponding monovalent predicator registering the result of the causing event:

- (13) John rolled the ball under the table
 (14) John lifted the book from the floor.

It is suggested here that the difference may be simply one of relative facility of retrieval of information as in examples (11) and (12). Taken in isolation, Hopper and Thompson's criteria just discussed do not provide an adequate answer to the problem of relative causativity of individual transitive verbs, any more than Lyons' did.

4.3. The last two parameters of 'cardinal transitivity,' namely I. AFFECTEDNESS and J. INDIVIDUATION of object are, however, extremely relevant to the issue at hand. The former involves directly the degree of how completely the patient is affected. As has been repeatedly emphasized, this is precisely the point of interest for relative causativity of individual verbs. Having excluded wholly or partly most other considerations (e.g. phonological identity, agentivity, lexicalized new state, punctuality), we can attempt to 'place' some of the verbs already mentioned along a causativity continuum as follows: a high degree of causativity can be claimed for verbs which take completely affected or effected objects such as: 'kill' and its hyponyms ('assassinate,' 'murder,' 'execute,' etc.), 'break' and all verbs of 'impairment of physical integrity' (such as 'smash,' 'tear'), verbs marking change of physical state, such as 'melt,' 'evaporate,' verbs with 'effected patients' ('create,' 'draw,' 'construct,' 'write,' 'build') and verbs functioning as their antonymous class, e.g. 'demolish,' 'erase,' 'destroy,' 'pull down,' 'extin-

guish, 'move' and all causatives of change-of-location (e.g. 'lift,' 'raise,' 'lower,' 'transfer,' 'carry,' 'take (to),' 'remove,' 'put,' 'insert,' etc.).⁵

A lesser degree of causativity is presented by indirect causatives which exhibit a close link between agentivity and causativity. Consider the sentences:

She galloped her horse
The guard marched the prisoners
Annita walks her dog

Such examples reflect situations where the causer is attributed responsibility for the caused event, yet the causee also participates actively in it, i.e. s/he is no typical patient. Evidently, in these cases the mere fact that the patient is less than typical indicates that the causer is also less than typical: if the caused event requires the active participation of the causee as well, the causer cannot be said to be in absolute control of the situation. In other words, the affectedness of the object can be seen as a function of the agentivity of the causer. The most intriguing point here is that the subject of indirect causatives possesses the properties of animacy (s/he is actually human in most cases) and volition and the object is at least animate. Besides, the latter is evidently marked both for 'intention' and 'control,' since the actions in question cannot take place unless the causee uses his/her own self-moving mechanism.

Furthermore, within the set of indirect causatives, a considerable amount of gradation can be detected. In a sentence like:

John took/drove his mother to the doctor as she had asked him to

even the initiative is attributed mainly to the causee. The same applies to cases like:

The Prime Minister led President Gadaffi into the Conference Hall according to his wishes.

The differences between the relevant verbs in such examples lie again in the type of object each one allows. Notice that 'take' may well be highly causative as well, since it allows for typical patients, e.g.

John took the clothes to the launderette

This is rarely the case with 'drive' and hardly with 'lead.' On the other hand, purely indirect causatives such as 'march' and 'walk' can only function as much less than 'completely causative.' As a further example of an 'in-between' case, which shares a lot of the characteristics of indirect

5. There are clearly differences of degree within this set some of which will become apparent when INDIVIDUATION and the problem of direct vs indirect causatives are discussed.

causatives, consider 'feed' and its relation to 'force-feed.' Contrary to the latter verb, 'feed' does imply active involvement of the causee, and is therefore much less causative than 'force-feed,' although they have a common intransitive counterpart, i.e. 'eat.'

Verbs whose object can be seen as absorbing the impact of the event such as 'hit,' 'kick,' 'beat,' 'bite' can be described as more or less causative not on the basis of 'lexicalization of new state' (Lyons criterion) but rather depending on the type of object they allow. In all cases they probably involve less affected objects than those of the first type presented here, but animate and in particular human objects can be regarded as more affected (see INDIVIDUATION of object below).

A distinct class can be set up comprising cases where causativity is possible but not secured. A much lower degree of causativity, lower to that of indirect causatives, is to be attributed to such predications. Consider, for instance, verbs like 'teach' and 'sell': *John sells his pictures* may imply nothing more than John's intention to sell; even if nobody buys the pictures, the sentence is still valid; causativity is not necessarily implied. *Eleni teaches her students phonetics* may well be equivalent to an intransitive construction such as: *Eleni teaches*. The link of 'teach' to the direct object is loose as there is no guarantee that the students actually learn what is taught.

At the bottom of the scale are clearly verbs already classified as non-causatives, e.g. 'look,' 'hear,' 'watch,' 'see,' 'observe,' 'notice,' 'read,' 'approach,' 'cost.' Differences within this category may be detected in the cases of certain verbs which take human objects. Arguably human objects can be said to be affected by the subject's state described by verbs like 'love,' 'hate,' 'admire.'

Such differences may be accounted for in terms of Hopper and Thompson's last parameter (INDIVIDUATION) which refers to the distinctness of the object from the subject and from its own background. In anything that concerns us here this means that an object is viewed as the more affected the higher it is in terms of the following properties:

proper, human, animate, concrete, singular,
count, referential, definite.

In this sense 'kill,' for instance, can be said to be very high on the scale. Specific hyponyms of the same verb, e.g. 'assassinate' would be considered even higher as they commonly involve not only animate but human objects in particular and often individuals designated through their proper names. On the other hand, 'write,' 'build,' 'construct' and the like, as well as 'break,' 'erase,' 'extinguish' would be lower as non applicable to animates while 'spill' or 'pour' are considered lower than any of the above verbs as they involve objects marked as 'mass' rather than 'count.'

5. Conclusion

The present paper argues that in order to arrive at a better understanding of English causatives, two major conditions must be fulfilled. The notions of agentivity and causativity are to be understood as distinct properties linked through transitivity. All three properties are graded rather than criterial, i.e. verbs can be regarded as possessing each one of them to a greater or lesser degree. The fact that agentivity and transitivity involve continua has already been recognized and discussed in the literature. An attempt is made here to demonstrate that similar considerations are also applicable in the case of causativity. Those particular features of transitivity which can be shown to bear directly on the relative causativity of English verbs are identified and modified accordingly.

The most acute problem which emerges quite inevitably is that we are still short of a measure of the *relative importance* of these criteria, some of which are clearly clashing if considered separately (i.e. with the proviso: 'all other things being equal'). Stating that they have to be understood as a *cluster* is sufficient in an appreciation of whole predications but inadequate for the purposes of classifying individual verbs which allow a number of possible environments. One way out seems to be to isolate those particular instances of each verb which are representative of its use, i.e. which correspond to its prototypical image. This has not as yet been attempted for any set of verbs, as far as I know. The feasibility of the task does not require demonstration (see Rosch and Mervis 1975, Rosch and Lloyd 1978, Mervis and Rosch 1981). The importance of such results for the overall issue of causativity and agentivity from the point of view of lexical semantics is equally evident.

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ΠΕΡΙΛΗΨΗ

Ελένη Αντωνοπούλου-Βαφέα, *Τα μεταβιβαστικά ρήματα της Αγγλικής*

Το άρθρο αυτό εξετάζει τα μεταβιβαστικά (causative) ρήματα της Αγγλικής από την πλευρά της γλωσσολογικής λεξιλογικής σημασιολογίας. Για την ανάλυση των ρημάτων αυτών είναι αναγκαίες δύο προϋποθέσεις: (α) η καθαρή διάκριση μεταξύ μεταβιβαστικότητας και δραστικότητας (agentivity), (β) η αναγνώριση του γεγονότος ότι οι ιδιότητες αυτές είναι διαβαθμισμένες. Αυτό σημαίνει ότι ακόμη και ρήματα με μεγάλη εννοιολογική συγγένεια διαφέρουν κατά το βαθμό μεταβιβαστικότητας που εμφανίζουν.

Το θεωρητικό μοντέλο που χρησιμοποιείται είναι η θεωρία των «Πρωτύπων» (Prototype Theory), που έχει δώσει ικανοποιητικές λύσεις στο χώρο της σχετικής μεταβατικότητας (transitivity) των προτάσεων και της σχετικής δραστικότητας. Η συμβολή της εργασίας αυτής έγκειται στη διάκριση των εννοιών της μεταβιβαστικότητας και της δραστικότητας και στην περαιτέρω επεξεργασία του μοντέλου ώστε να γίνει δυνατή η αναγνώριση διαφορετικών βαθμών μεταβιβαστικότητας των ρημάτων της Αγγλικής.