NOTES ON AGENTIVITY AND CAUSATION*

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1.0 *The problem of agentivity*

There is a tendency in work on case roles, as elsewhere in linguistics, to assume that notions such as AGENT represent semantically discrete and unitary concepts. This tendency persists in spite of the notorious difficulties in developing a cross-linguistically or even intra-linguistically valid characterization of the concept of agentivity (problems to which we were alerted already a decade ago by Cruse (1973)). The problem with defining agent is that there are a number of semantic categories, notably control, volition, and animacy, which are widely attested as being involved in agentivity but which can be shown to vary independently of one another. This leaves any theory which uses a unitary definition of agent with an insoluble residue of clauses in which an NP has some but not all of the defining criteria of agentivity. Such NPs may be treated morphosyntactically as agents in some languages but not in others, or may in a given language show some but not all of the morphosyntactic characteristics of agents. The best-known problems of this kind involve natural forces such as wind and lightning, inanimates which, unlike "true" agents, lack volition, but, unlike instruments, are not under external control by an agent. Related problems arise in the case of the subjects of transitive verbs such as 'break', 'lose', etc., who, though animate and capable of volition, nevertheless act inadvertently, i.e. without volition (cf. DeLancey 1982, to appear, a).

Further problems arise from the association of agentivity with transitivity. There is a tendency to apply the term agent only to transitive subjects, even though active intransitive verbs ('run', 'jump', etc.) require of their single argument the same volition as agentive transitive verbs ('throw', 'build') do of their agents. The problems which arise here are complicated by the fact, recently demonstrated in considerable detail by Hopper and

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Thompson (1980), that the attempt to define the notion "transitive clause" is beset by the same kinds of problems as the attempt to define "agent", i.e. it requires a multifactorial definition of which no single factor or set of factors can be identified as universally criterial.

1.1 *Agentivity and causation*

The problems of defining agentivity and transitivity are closely related to the general semantic (and philosophical) problem of causation. Although it is well known that the notions transitivity and causativity cannot be conflated (see Shibatani 1976), it is clear that the fundamental sense of agentivity involves causation of an event, and it is this which builders, losers, runners, and the likes of wind and lightning have in common (see Givón 1979, Lakoff and Johnson 1980). The problems of volitionality and control encountered in work on agentivity are special cases of a more general problem in the analysis of causation and causativity, to wit the identification of ultimate and mediating causes. It is well known that many languages have alternate causative constructions which distinguish direct from mediated causation (see Givón 1975, 1979). Typically, mediated causation is coded by a periphrastic construction with a distinct causative verb, while direct causation is coded by a morphologized or even lexicalized distinction (Comrie 1981; see Haiman 1983 for a discussion of the significance of this association). An example is Jinghpaw (a Tibeto-Burman language of Yunnan and northern Burma), where a causative prefix *sha-~ja-* marks direct, and a causative verb *shangun* mediated, causation (Maran and Clifton 1976):

(1a)	*MaNaw*	*gaw*	*MaTu*	*hpe*	*ja-san*	*ai*	
		TOP		OBJ	CAUS-die	DECLARATIVE	
(1b)	*MaNaw*	*gaw*	*MaTu*	*hpe*	*san*	*shangun*	*ai*
					die	cause	

'MaNaw caused MaTu to die.'

(1a) describes the class of events typified by MaNaw's striking MaTu with a deadly weapon, etc.; while (1b) would be appropriate if, for example, MaNaw hired an assassin to eliminate MaTu, or he saw MaTu in danger and failed to come to his aid — Maran and Cliftons' example here is where MaNaw sees MaTu lying unconscious face down in a puddle and fails to pull him out, with the result that MaTu drowns. The common semantic characteristic of *shangun* sentences is that the ultimate effect is not a direct result of the action of the NP marked as agent/causer, but of some other force (i.e. the assassin's action, or

the drowning effect of water) which in its turn is occasioned or facilitated by the action or inaction of the ultimate agent.

A closely related distinction is marked in some languages, based on whether or not the causee's volition is relevant to the realization of the event (Givón 1975, Cole 1983). The distinction here is between sentences like (2a) and (2b):

(2a) I made him fall.
(2b) I had him fall.

The former, given the nature of the subordinate verb and the normal pragmatic inferences to which it will give rise, suggests that the causee fell in spite of himself, while the latter (like *have* causatives in general) requires that the act of falling be under the causee's direct control — the obvious context for such a sentence is some sort of stage direction, perhaps a crooked lawyer describing how he coached his client in staging an accident.[1] This latter causation schema can easily be interpreted as a subtype of mediated causation, the mediating event in this case being the act of volition on the part of the causee. Cole (1983) has noted that a common morphosyntactic device for marking this distinction is an alternation of case marking on the causee NP, with volitionally acting causees marked in ways suggesting some degree of causal force (typically with instrumental case) and non-volitional causees marked as patients (typically with accusative or dative case).

Discussions of such patterns as these in the literature have focused on the alternation in the causative construction of the verb and/or on alternation in the marking of the causee. In alternations such as the Jinghpaw example cited above, or the examples discussed by Cole, the morphosyntactic behavior of the agent/cause NP remains constant, being regularly treated like other transitive subjects. In the data to be discussed below we will see that similar semantic distinctions may also be reflected in the morphosyntactic treatment of the 'agent', in ways which show that ultimate causes which operate through or in conjunction with mediating causes are less agentive than those which bring about their effect through direct action.

Another distinction among transitive and potentially volitional events which is sometimes coded in morphosyntax depends on the volition or lack thereof manifested by the ultimate agent. It is the intuitively obvious semantic importance of this distinction which has led to the erroneous belief that animacy per se is a component of agentivity; in fact of course this association is an artifactual consequence of the real-world limitation of volition to animate en-

tities. This distinction too is part of the more general problem of ultimate causation. A volitional act can be traced back to an ultimate cause, an act of volition on the part of the agent, who is thus simultaneously ultimate and proximate cause of the event. When the agent (using the term loosely) does not act volitionally, however, he/she/it is only a mediating cause, since an act which was not volitional must have been instigated by something else.[2] (For further discussion of this rather complex area see DeLancey 1981, 1982, to appear a, b, and Givón 1979). It is well established by now that lack of volition on the part of the cause of an event constitutes a deviation from canonical transitivity (of the clause) and agentivity (of the cause); we will see examples of such deviance being reflected both in the morphosyntax of the verb and in the marking of the cause.

1.2 *Transitivity, agentivity, and prototype semantics*

My purpose in this paper is to shed some further light on the problem of defining agentivity by examining data from two languages, Hare (Athabaskan) and Newari (Tibeto-Burman), which illustrate some of the semantic conditions under which causes are marked as being something other than true agent. I am assuming as a theoretical framework a loose version of prototype semantics. In this approach to semantics, developed by Rosch (e.g. 1978; cf. Smith and Medin 1981), concepts are not the discrete, definitionally bounded sets assumed in other approaches, but rather are describable as "prototypes" from which actual exemplars may vary in numerous and sometimes ill-defined ways. Within such a view of meaning we do not expect that a properly constructed definition will tell us unambiguously whether a particular entity is or is not an example of a given concept. Instead, particular exemplars will be more or less, rather than either/or, instances of the concept. Thus, in probably the most celebrated example, both robins and penguins are birds, but for (at least) North Americans a robin is more of a bird than a penguin is. On the other hand, a bat, while not a bird at all in the technical sense, and certainly less of a bird than a robin, is nevertheless just as certainly more of a bird than a cow is. Rosch's work has been primarily concerned with the psychological investigation of conceptual categories which correspond to lexical semantic categories, but evidence such as that assembled in Hopper and Thompson (1980) argues for the applicability of prototype semantics to grammatical categories as well. Lakoff (1977) has presented a case based on English data for a prototype analysis of the categories of transitivity and agentivity essentially equivalent to the cross-linguistically based prototype analysis which I

am assuming here. The general claim is that there is a cross-linguistically valid prototype for true transitivity, which involves (among other things) a direct causation schema with proximate and ultimate cause both residing in the same volitionally acting causer. The prototype definition of agent is part of this schema, i.e. the prototypical agent is just such a volitional causer.[3] Deviations from this semantic prototype are coded by deviations from prototypical transitive morphosyntax; we will be particularly interested in cases in which a cause receives something other than ordinary agent marking when the event as a whole deviates from the prototypical transitive schema, and in the ways in which this morphosyntactic deviation may directly reflect the nature of the semantic deviation from the prototype.

2.0 *Agentivity and causation in Hare*

In this section we will investigate certain semantic restrictions on eligibility for subject function with a transitive verb in an Athabaskan language, Hare, and the semantic significance of the grammatical mechanism used to attribute causal force to one class of causal entities which are ineligible for transitive subject status.

2.1 *Transitive and intransitive verbs*

A verb form in Hare, as in other Athabaskan languages, is formally either transitive or intransitive. This distinction is overtly marked morphologically by the possibility of prefixing object indices to the verb. Third person subjects are not indexed in the verb, and a third person (i.e. unmarked) verb form can occur without an overt subject:

(3) *Joe lánɻwe*
'Joe died.'

(4) *lánɻwe*
'S/he/it died.'

Third person objects are not indexed in the verb when subject is first or second person, but must be overtly present, either as a full NP or as an objective prefix, when the subject is third person:

(5) *Peter Joe wéhxɻ*
'Peter killed Joe.'

(6) *Peter ye-wéhxɻ*
'Peter killed him/her/it.'

(7) *Joe wéhxɻ*
'S/he/it killed Joe.'

(8) *ye-wéhxį*
'S/he/it killed him/her/it.'

Thus a transitive verb, unlike an intransitive, cannot occur in the unmarked third person form with no overt nominal or pronominal arguments:

(9) **wéhxį*

And while a single overt NP argument of a transitive verb or of a semantically related intransitive will always be interpreted as a patient, as in (3) and (7), the transitive verb in such a clause must be interpreted as making implicit anaphoric reference to a third person agent.

While many semantically related transitive/intransitive verb pairs are lexically unrelated, as for example the verbs 'kill' and 'die' in the above examples, many other pairs are related by a morphological diathesis system of Proto-Athabaskan provenience (usually misleadingly called the "classifier" system in Athabaskan studies; cf. Krauss 1968).[4] To interpret the data discussed here the reader will need to be able to recognize only the transitivizing *h*-morpheme exemplified in (10) (compare exx. 3-4):[5]

(10) *Joe lánį-h-we*
'S/he/it killed Joe.'[6]

2.2 *Restrictions on transitive subject*

As in many other languages, instruments are ineligible for subject position:

(11) *John yejai tá'enįse*
glass broke(tr.)
'John broke the window.'

(12) *John gofį hé yejai tá'enįse*
axe with
'John broke the window with an axe.'

(13) **gofį yejai tá'enįse*

As we have seen, use of the third person form of a transitive verb always makes implicit reference to an agent:

(14) *gofį hé yejai tá'enįse*
'S/he broke the window with an axe.'

Such reference can be avoided only by using an intransitive verb:[7]

(15) *yejai tá'ɨtǫ*
glass broke(intr.)
'The window broke/got broken.'
(16a) *gofɨ hé yejai tá'ɨtǫ*
axe with
'The window got broken by/with an axe.'
(16b) *gofɨ k'é yejai tá'ɨtǫ*
'idem.'

The (16) sentences assert only that the window is broken and that an axe was involved in the event, although there remains the pragmatic inference that a human agency was probably involved in imparting motion to the axe. These sentences would be appropriately spoken by someone who finds a window broken and an axe lying amidst the broken glass.

It is important to note that this does not constitute an absolute ban on inanimate or typically instrumental entites functioning as transitive subjects. Both (17) and (18) are conceivable sentences:

(17) *féku hé ye-wéhxɨ*
gun with 30bj-killed
'S/he killed him/her/it with a gun.'
(18) *féku ye-wéhxɨ*
'The/a gun killed him/her/it.'

However, they cannot both be true of the same event. (18) can only be used to describe an event in which a gun for some unknown reason goes off spontaneously and kills someone. Any degree of human involvement, however marginal, requires either (17) or a detailed description of exactly what happened.

This leaves us with the problem of identifying the difference between an axe and a gun which results in their differing eligibility for transitive subject. This is, clearly, the possibility/necessity of identifying an additional ultimate cause exterior to the chain of events specifically described. (18), with *féku* 'gun' as subject, forbids any interpretation which involves an external agent — the firing of the gun can be traced back no farther than to some inferred event within the gun itself. On the other hand, my informant was vocally sceptical of the possibility of an axe having such an ultimate causal relation to any event. Indeed, she finally validated my analysis by agreeing (albeit somewhat reluctantly) that in fact (13), 'The axe broke the window', would be acceptable in a fantasy about a magical axe which acts under its own volition.

2.3 *The marking of non-agentive causes*

In the previous section we saw that eligibility for transitive subject status is restricted to a broadly defined class of agents. Transitive agent need not be either animate nor in control, but it must be the first identifiable cause of the event being described. There is, however, evidence in the grammar for the importance of control as an attribute of causal entities. Another construction which expresses a causal relation between an NP and an event is an intransitive clause with the causal NP in an oblique postpositional phrase marked by *k'é*, as in (19):

(19) *kǫtúé' k'é lánįwe*
liquor died
'S/he died from/due to liquor.'

Since 'liquor' in this example is an ultimate cause and not an instrument, we would expect it to be eligible for transitive subject status, and it is:

(20) *kǫtúé' ye-wéhxį*
liquor 3Obj-killed
'Liquor killed him/her.'

However, not all transitive agents can occur in *k'é* phrases, as shown by (22):

(21) *sa ye-wéhxį*
bear
'A bear killed him/her.'
(22) **sa k'é lánįwe*

No animate NP can occur in a *k'é* phrase in this meaning (the meaning which does occur is discussed in section 2.4). Nor can true instruments (i.e. instruments actually manipulated by an agent); compare (14) and (23):

(14) *gofį hé yejai tá'enįse*
axe with glass broke(tr.)
'S/he broke the window with an axe.'
(23) **gofį k'é yejai tá'enįse*

However, as we saw in (16), both *k'é* and the instrumental *hé* can mark 'axe' as a causal force in an intransitive clause, which (by definition) makes no reference to the existence of a controlling agent. However, as noted above, the pragmatic inference of the involvement of a human agent in any event involving axes breaking things remains available. The rather peculiar status of 'axe' in this construction is evidenced by the fact that my informant was much more

comfortable with (16a), with *hé*, than with (16b), with *k'é*. This suggests that *k'é* rejects an instrumental interpretation which even in an intransitive clause remains at least inferentially available for *hé*. This interpretation is reinforced by the suggestion made by my informant that (16b) is much more acceptable if followed by *hurédi* 'it seems, it looks like', while (16a), with *hé*, is fine without it. This I would suggest is because the *hurédi* helps to ameliorate the implausibility of a statement which seems to attribute causal force to a totally inert object like an axe while excluding even implicit reference to an external manipulator.

The common feature which unites those NPs which cannot participate in the *k'é* construction is control. These *k'é* clauses are "inactive" in something close to the sense of Klimov (1977). The cause is neither in control of the event (in which case it would have to be coded as transitive subject) nor under external control (in which case it would be an instrument). Thus we find that the *k'é* construction is the ordinary way to speak about inherently non-agentive phenomena such as disease, as in (24), which do not *act* in such a way as to produce their effect, but produce it simply by existing and fortuitously coming in contact with a patient:[8]

(24) *'éyayi k'é lánįwe*
disease died
'S/he died from sickness.'

2.4 ***K'é*** *as a causal conjunction*

The semantics of *k'é*, and hence of examples like those we have been discussing, can be illuminated by a consideration of some other *k'é* constructions. Both *k'é* and instrumental *hé* occur in another type of construction where we find a clear semantic contrast between them. Both can be used as subordinating conjunctions indicating a causal relation between two clauses, as in (25):

(25) *Mary 'éyayi hįlį-i* $\left\{\begin{matrix} hé \\ k'é \end{matrix}\right\}$ *duye 'egháyeda*
sick is-NOM can't work
'Mary can't work because she's sick.'[9]

In this construction we find that *hé* can occur whenever *k'é* can, but not vice versa:

(26) *Mary 'éyayi hįlį-i* { *hé* / **k'é* } *raidi k'odeyǫwi ts'ę́ ráweya*

sick is-NOM doctor to went

'Mary went to the doctor because she's sick.'

The criterion for the use of *k'é* seems to be that the truth of the first clause is sufficient to ensure the truth of the second. Thus (25) with *k'é* suggests that it is impossible for Mary to work, because she is too sick. In the case of (26), on the other hand, there can be no such stringent causal connection between the two clauses: no degree of illness is sufficient to guarantee that the sufferer will go to a doctor.

Thus we can have *k'é* in (27) and (29), but not (28) and (30):

(27) *John Mary ghonayitį-i* { *k'é* / *hé* } *sǫdi hįlį*

kissed-NOM happy is

'John's happy because he kissed Mary.'

(28) *John ɬesasóné rayetǫ-i* { **k'é* / *hé* } *só'a-ye-h'į*

motor broke-NOM 3Obj-fix

'John's fixing the motor because it's broken.'

(29) *'elugu* { *k'é* / *hé* } *xa-ts'e-dedehlu*

cold Pl.-Impers.-freeze

'Everybody's freezing because it's cold.'

(30) *raidi yį'a-i* { **k'é* / *hé* } *gonezǫ araja*

medicine ate-NOM well got

'She got well because she took medicine.'

Obviously a number of messy factors such as belief systems, viewpoint, and prior knowledge are going to affect the decision as to what is and is not sufficient cause. Readers of this paper, for example, may be uncomfortable with my claim that such a relationship holds for (27) but not for (30). However, the analysis of the clear cases is reasonably straightforward, and the nature of the distinction which I am suggesting is such that the existence of questionable cases is inevitable. (It is worth pointing out too that the informant from whom I got the grammaticality judgments of (27-30) was openly sceptical about the efficacy of modern medical treatment).

2.5 *The meanings of* ***k'é***

K'é has still another use, not shared with *hé*,[10] which further clarifies its semantic function in its other uses. It translates one sense of English *after*, in sentences like:

(31) *'ɨts'é k'é 'ejidéhɬa*
moose ran
'He ran after a moose.'

(32) *John Mary k'é déya*
left
'John went after/followed Mary.'

Unlike *after*, *k'é* cannot code simple temporal succession; thus (32) cannot be interpreted as stating simply that Mary left and then John did. Rather, it necessarily asserts that John followed in Mary's path, so that someone who sees Mary coming will soon see John as well.

There is an obvious parallel between this sense of *k'é* and that described in the preceding section. *K'é* as a conjunction asserts that the first event will necessarily be followed by the second — exactly the same metaphor inspires the English expression *follow from*, where *A follows from B* asserts that the truth of B is sufficient grounds on which to confidently predict the truth of A.

There is a further pragmatic inference associated with sentences like (31-2), which is that the *k'é*-marked NP is the object of the subject's action — i.e. that the anaphoric subject of (31) is deliberately pursuing the moose, and that John in (32) is deliberately following Mary. (This inference is in fact unavoidable for (31), although it is apparently cancellable in (32)). This inference is the result of the interaction of the Gricean assumption that the speaker is using the particular morphosyntactic construction that he is for a reason with what Givón (1979) has called the "teleological imperative", i.e. the assumption that events have comprehensible ultimate causes, and the resulting tendency to try to trace at least all events involving human actors back to a conscious act of volition. (It is precisely this complex of inference which underlies the cross-linguistic tendency to ascribe agentivity to transitive subjects, and in many cases to bar non-agents from transitive subject status; cf. note 2 and secs. 4.1-2). On this interpretation, Mary and the moose in (31-2) play a role which is analogous to that of *k'é*-marked pseudo-agents like disease and liquor in (19) and (24), in that they are the occasion of the event without initiating it.

We can even find a parallel in the marking of quasi-agents to the distinction between *k'é* and *hé* as conjunctions. As pointed out in footnote 9, *k'é* can-

not be equated with English *because* or *because of*. A better translation for these in most contexts would be *xǫt'e*, as in

(33) *sa xǫt'e lánɬwe*
bear died
'S/he died because of a bear.'

As we would expect, this does not describe an event in which a bear kills someone; rather, it is appropriate in contexts where, for example, a hunter falls into a lake and drowns while chasing a bear. The causal relationship here between the bear and the event is similar to the causal relationship between events marked by *hé* in the previous examples, in that it is not necessary; most people who hunt bears manage to do so without getting killed. It is similar to the relationship between *k'é*-marked causes and events in that the effect does not come about as a result of the bear's volition, but differs in that the causal relationship is mediated rather than direct. As we have seen (exx. 21-2), when an animate, i.e. volition-possessing, cause does act directly to bring about an effect, it must be coded as a transitive subject; animates cannot occur in the *k'é* construction. Inactive causes, however, can be marked by either *k'é* or *xǫt'e*, and in such minimal pairs we find a revealing semantic contrast:

(19) *kǫtúé' k'é lánɬwe*
liquor died
'S/he died from liquor.'
(34) *kǫtúé' xǫt'e lánɬwe*
'S/he died because of liquor.'

Both (19) and (34) could describe an event in which a man drank himself to death, or got drunk and had a fatal accident. However, (34), but not (19), can also describe the death of someone who, though not himself a drinker, was killed by a drunk driver. The distinction here is between what I have previously described as direct and mediated causation; *k'é* is used only when the effect can be seen as a direct result of the action of liquor on the patient, while *xǫt'e* allows the possibility of extraneous or mediating causes. (In fact I can easily interpret the first two contexts suggested above, which allow either *k'é* or *xǫt'e*, as instances of either direct or mediated causation, and it may well be that the possibility of using either *k'é* or *xǫt'e* reflects this ambiguity; I have the impression that some speakers prefer one construction in such cases, and others the other, but I cannot make any more definite statement about the matter). It is significant that at least some of my informants expressed a marked preference for (35) over (36), although allowing that the latter was

not totally absurd:

(35) *'éyayi k'é lánɬwe*
disease died
(36)??*'éyayi xǫt'e lánɬwe*
'S/he died of disease.'

This is presumably because disease much more than alcohol is ordinarily a direct and unaided cause of death.

What is of interest in the present context about the range of uses of *k'é* is the fact that a morpheme which is used to mark a certain type of causal relation between clauses, i.e. between a cause and an effect coded as distinct events, also functions to mark certain types of quasi-agent. If we assume a scale of directness of causation, ranging from direct physical intervention by a volitional agent to distinct events which enable, but are not sufficient to compel, other events, we can take the range of uses of *k'é* as evidence that distinct events which necessarily entail certain effects on the one hand, and inactive entities which by their nature cause certain effects on the other, lie quite close to one another on the scale.[11] Both are marked with the same postposition, which for both types of cause contrasts with another (*hé* or *xǫt'e*) which indicates mediated causation thus with a sense of direct causation common to all causal uses of *k'é*.

The fact that such things as liquor can occur as transitive subjects points up their similarity to prototypical agents: they are nominal rather than verbal, they directly and often physically affect a patient, and they somehow generate their effect themselves rather than under the stimulus of an external force. The fact that, unlike prototypical agents, they can occur also in the *k'é* construction, indicates their similarities to non-agentive causes, and thus their important points of deviation from the agentive prototype: their action, while not externally generated, is not generated by internal volition, and is typically invisible — one cannot observe liquor taking its toll of a man's health the way one can directly observe a bear or a bullet disrupting his physical integrity. The use of *k'é* to mark this particular class of deviation from the prototype furnishes some insight into the relationship between agentivity and causation.

3.0 *Agentivity and causation in Newari*

In Newari, a Tibeto-Burman language of Nepal, we find a similar pattern of deviations from canonical transitivity being directly reflected in morphosyntactic coding. Again we can interpret these deviations as being particu-

larly concerned with the nature of the agent or agent-like NP, and we see clearly the interrelationship of agentivity and causation.

3.1 *Direct and non-direct causation in Newari*

Newari, like Jinghpaw, formally distinguishes direct from mediated causation. Direct causatives are formed with a partially lexicalized causitive suffix *k^hal*; this contrasts with a periphrastic causative constructed with a suffix *k^he* (cognate with *k^hal*) and the verb *yat-* 'do':[12]

(37) *məca cahil-ɔ*
child walk-PERF
'The child walked.'

(38) *misa-nɔ̃ wo məca-yatɔ cahi-k^hal-ɔ*
woman-ERG the child-DAT walk-CAUS-PERF
'A/the woman walked the child.'

(39) *misa-nɔ̃ wo məca-yatɔ cahi-k^he yat-ɔ*
woman-ERG the child-DAT walk-CAUS do-PERF
'A/the woman made the child walk.'

The essential difference between (38) and (39) is the relevance of the child's volition to the fact of his walking. (38) evokes a picture of the woman dragging the child down the road, while the most normal sense of (39) involves the woman ordering the child to walk, and the child's complying with the order. However, (39) can be appropriate for situations involving direct contact and physical coercion, as long as the child's volition is ultimately involved. For example, a scene in which the child stubbornly refused to walk and the woman then twisted his ear until he obeyed would be more appropriately described by (39) than by (38), for the direct cause of the child's action is his own decision to walk. The characteristic of scenes most appropriately described by (38) is the complete irrelevance of the child's volition; most likely even the motive force which impels him is provided from outside.[13]

3.2 *Transitivity and the* ***-yana*** *construction*

Almost any simple transitive clause can be contrasted with a corresponding clause with an intransitive verb and the agent (for want of a better term) marked by both ergative case and a following *-yana*, as in:

(40) *wo misa sit-ɔ*
the woman die-PERF
'The woman died.'

(41) *harsa-nɔ̃ wo misa-yatɔ siat-ɔ*[14]
H.-ERG the woman-DAT kill-PERF
'Harsha killed the woman.'

(42) *harsa-nɔ̃-yana wo misa sit-ɔ*
die-PERF
'Because of Harsha the woman died.'

(Note the intransitive verb and absence of dative marking on the patient in (42)). As suggested by the glosses, the semantic difference between (41) and (42) has to do with the directness of the causal chain linking Harsha with the woman's death, although the chain described by (42) need not be quite as indirect as the English gloss implies. A consideration of the circumstances which select (42) as more appropriate than (41) will provide us with a more complete understanding of what is involved in the direct/indirect distinction. Since the added morphological material which marks the causer in (42) clearly indicates that it is something other than a true agent (which would be marked with simple ergative case and occur with a transitive verb) our investigation will also reveal something about the parameters of agentivity.

My informant suggested as contexts for (42) situations in which the woman who died was clearly dangerously ill and Harsha delayed calling a doctor until too late, or in which the woman had had a weak heart and Harsha brought her news which affected her sufficiently so as to precipitate a fatal heart attack. (42) could never be used to describe deliberate murder perpetrated by Harsha, although it could describe a situation in which Harsha told a third party news which led to the third party's murdering the woman. This last possibility is fairly typical mediated causation, and the heart attack scenario can be interpreted similarly; but the first context suggested above is slightly more complicated. It deviates from prototypical causation in that it involves another causal factor, but in this case that causal factor is not itself caused by the first. Here as in the Jinghpaw case discussed in sec. 1.1 we see that the periphrastic construction codes a range of deviations from the direct causation prototype, rather than mediated causation in a strict literal sense.

As noted above, only (41) could be used to describe an event in which Harsha, intending to cause the woman's death, acts directly upon her in such a way as to kill her. But (41) is not restricted to such cases of perfect prototypical direct causation; it would also be a possible description of an event in which a physical assault by Harsha precipitates a fatal heart attack in the victim, even if he had no intention of causing her death. Thus in Newari a causer can qualify as a true (i.e. ergative marked) agent by committing an intentional act which

directly impinges upon the patient, even though there may still be an intermediate event connecting this act with the final result. To complicate matters further, we can show that intention is not a necessary prerequisite for prototypical transitive agent coding. Consider the general event schema involving Harsha driving a car which strikes the woman and kills her. If the accident is entirely the woman's fault — say she deliberately leaps out in front of the car — neither (41) nor (42) is appropriate. Such an event could be described as:

(43) *tʰa mʰɔ-nɔ̄-yana wo misa sit-ɔ*
self-ERG the woman die-PERF
'The woman died through her own fault.'

If, on the other hand, the accident involved negligence on the part of both Harsha and the victim, (42) but not (41) is appropriate. This is analogous to the case described above in which the woman's illness and Harsha's negligence combine to cause her death. However, if the accident was clearly Harsha's responsibility, then (41) is the appropriate description, even in the absence of intention on his part. The distinction between these last two cases is between shared and sole responsibility — Harsha is more of an agent if he alone caused the event, even if he did so unintentionally.

Thus we find that what we first labeled as a distinction between direct and mediated causation in fact requires a more general characterization. The simple transitive clause codes prototypical direct causation, in which a volitionally acting agent acts upon a patient in order to cause a change of state. Minor deviations from this prototype can remain eligible for simple transitive coding, but major deviations require the *-yana* construction. (Obviously the difference between "minor" and "major" deviations cannot be strictly defined). Deviations which require the *-yana* construction include the existence of mediating events in the chain of causality, but also include the existence of other contributing causes, even if they are not in turn caused by the quasi-agent's act (cf. here the discussion of Hare *hé* and *xǫt'e* in secs. 2.4-5). Thus we should describe the *-yana* construction and the periphrastic *yat-* causative (and analogous constructions in many other languages) as coding nondirect rather than mediated causation, for they are used for several different event schemas the common element of which is simply deviation in some direction from the direct causation prototype.

3.3 *Ergative and instrumental*

We have seen in the previous section that intention is not a necessary

parameter of true transitivity in Newari. This is clearly shown by the occurrence of inanimate NPs with normal transitive agent behavior, as in (44):

(44) *cikul-ɔ̃ wo misa-yatɔ siat-ɔ*
cold-ERG the woman-DAT kill-PERF
'Cold killed the woman.'

(45) *ciku-nɔ̃-yana wo misa sit-ɔ*
die-PERF
'Because of the cold the woman died.'

Both (44) and (45) are perfectly good sentences, although (45) seems to qualify as a particularly vivid description; my informant suggested that it seems to "personify" the cold to some extent, though not to the extent that the sentence enters the realm of fantasy.[15] Other than this, however, neither my informant nor I were able to find any real difference in sense between (44) and (45). As with the English equivalents, (45) would be possible and (44) barred in cases of clearly mediated causation, as for example if the weather led to a famine, and the woman's death was actually directly caused by starvation. However, in contrast to the case with (41-2), there seem to be no contexts which admit (44) and forbid (45). Both can describe the same direct causation schema, in which the woman died because she froze to death. From what we have seen so far, it would seem that the use of (44) to describe this situation is not problematic, but the appropriateness of (45) for the same situation is perhaps unexpected. It is, however, consistent with the characterization of the *-yana* construction given at the end of 3.2, i.e. that *-yana* indicates a deviation from the causative prototype. In this case the deviation is absence of volition, or even the possibility of volition, on the part of the causer.

This contrast between (41-2), with animate causer, and (44-5), with inanimate, is reminiscent of the relationship in Hare between the ordinary transitive clause and the *k'é* construction. Again in Newari we see that while volition/intention is not a prerequisite for transitive subject status, it is a disqualification for the construction used to code deviant causation. The fact that the most normal sort of causation effected by cold qualifies for both constructions is evidence for its ambiguous status, exemplifying the ambiguous status which case theory has always had to accord natural forces in attempting to define agentivity.

Inanimate causes such as cold occur also in another, more problematic construction. In Newari, as in many Tibeto-Burman languages, ergative and instrumental case are marked identically, as exemplified in (46):

(46) *wo misa-nɔ̃ caku-nɔ̃ la dhen-ɔ*
the woman-ERG knife-INSTR meat cut-PERF
'The woman cut meat with a knife.'

Certain inanimates can occur with this ergative/instrumental case marking and an intransitive verb, as in (47) (cp. (44-5)):

(47) *cikul-ɔ̃ wo misa sit-ɔ*
cold the woman die-PERF
'The woman died from cold.'

I have found no examples of this construction which do not have a corresponding transitive sentence, and I have not been able to find any clear difference in meaning between them. (The difference between, for example, (44) and (47) seems to correspond to the difference between the meanings of the English glosses which I have supplied for them, but even as a native speaker of English I am not certain how to characterize that difference). Almost all of these occur also in the *-yana* construction, but there is one intriguing class of exceptions, reminiscent of oddities in Hare (fn. 8) and English (sec. 4.2): diseases occur in both the transitive and intransitive constructions with ergative/instrumental marking, but cannot occur in the *-yana* construction:

(48) *jɔr-ɔ̃ wo misa-yatɔ siat-ɔ*
fever-ERG the woman-DAT kill-PERF
'Fever killed the woman.'

(49) *jɔr-ɔ̃ wo misa sit-ɔ*
die-PERF
'The woman died of fever.'

(50) **jɔr-ɔ̃-yana wo misa sit-ɔ*

The obvious question concerning this construction is whether to consider the case marking on the cause as representing ergative or instrumental case. Ergative case, of course, should by definition be restricted to transitive clauses. On the other hand, not only true agents but also true instruments are barred from this construction:

(51) **harsa-nɔ̃ wo misa sit-ɔ*
Harsha die

(52) **bɔ̃duk-ɔ̃ wo misa sit-ɔ*
gun die

The only events which can be coded in this construction are those involving inactive causes such as disease, cold, or poison, which produce their effects in-

visibly (and which are themselves for the most part invisible). Like Hare *k'é*, this construction seems to be restricted to events which I would classify as direct causation, for events with causes which can only be indirect cannot occur with the intransitive ergative/instrumental construction. For example, (53), which on the most likely interpretation describes a death caused by a quarrel over money, has no counterpart (54), in spite of the fact that money is indisputably an inactive cause:

(53) *dhewa-nɔ̃-yana wo misa sit-ɔ*
money the woman die-PERF
'Because of money the woman died.'

(54) **dhewa-nɔ̃ wo misa sit-ɔ̃*

We have, then, three different types of cause which can be marked with the *-nɔ̃* postposition and nothing more: active direct causes (i.e. true agents, more or less), true instruments, which are manipulated by agents, and inactive direct causes, which are grammatically distinguished from active causes by the fact that they can occur with intransitive verbs. These have in common the fact that they directly affect a patient. I suspect that the apparent problem of what to call *-nɔ̃* when it marks inactive causes in intransitive clauses is, like many seemingly intractable problems, a false issue. (We will return to this briefly in sec. 5.0). I have suggested elsewhere (DeLancey 1981) that syncretism of ergative and instrumental is better viewed as polysemy than homonymy, and the facts presented here provide support for that argument. I would argue that we can describe a single morpheme *-nɔ̃* in Newari, which marks NPs referring to causal entities (including those further marked with *-yana*, which further specifies that the causation is indirect). (This abbreviated discussion seriously oversimplifies the problems associated with the distinction between polysemy and homonymy, which must be seen as points on a continuum rather than discrete phenomena. Cf. Diehl 1981a,b, Langacker 1982-3ms.)[16]

3.4 ***Yana*, *yat-*, *and the iconicity of morphosyntactic coding***

There is, on this analysis of the data, considerable isomorphism between the semantic analysis of various types of situation and the linguistic means of reporting them. Deviations from the semantic transitive prototype are coded by clauses which deviate from canonical transitive morphosyntax. Particularly striking is the iconicity of the *-yana* construction, in which deviations from the prototype in the form of extra information — mediating or exterior

contributing causal factors — are coded by clauses which include extra morphosyntactic material.[17] In this context we can adduce further information about the nature and history of *-yana* which will constitute an interesting study in grammaticalization.

The form *-yana* is transparently[18] a participial form of the verb *yat-* 'do'. *-Yana* sentences can thus be analyzed as being structurally isomorphous with the very common participial subordinate clause construction exemplified in (55):

(55) *bɔ̃duk-ya goli la-na wo misa sit-ɔ*
gun-GEN bullet get-PART the woman die-PERF
'Having gotten [hit by] a bullet from a gun, the woman died.'

This construction is frequently used when a causal relationship is being attributed to the two clauses, as in (55), but the existence of such a relationship is a matter of pragmatic inference and not part of the essential meaning of the participial chain. The essential meaning of this participial construction is temporal succession (there is a distinct participial morpheme which marks simultaneity of the two clauses) which, as is well known, universally tends to be interpreted as cause-effect succession whenever possible. Examples can easily be found of participial chains in which a cause-effect interpretation is unavailable, as in:

(56) *misa la na-ya won-ɔ*
woman meat eat-PART go-PERF
'The woman, having eaten the meat, left.'

This suggests an analysis of sentences like (42), repeated here, as having the literal translation 'Harsha having done something, the woman died.'

(42) *harsa-nɔ̃-yana wo misa sitɔ*

Such an analysis provides a syntactic explanation for the ergative marking on *-yana*-marked NPs, and allows a very neat account of the mediated causation sense of the *-yana* construction; on the participial interpretation of *-yana* these sentences are even more clearly isomorphic with the structure of the event schema which they encode. We could then describe a semantic continuum coded by sentences like (57-9):[19]

(57) *kica-nɔ̃ ɲa-na wo misa sit-ɔ*
dog-ERG bite-PART the woman die-PERF
'The dog having bitten her, the woman died.'

(58) *kica-nɔ̄-yana wo misa sit-ɔ*
'The dog having acted, the woman died.'

(59) *kica-nɔ̄ wo misa-yatɔ siat-ɔ*
DAT kill-PERF
'The dog killed the woman.'

All of these could be descriptions of the same event;[20] the first traces the chain of causation in some detail, while the second explicitly refers to a chain of causation but focuses on the end result and the dog's responsibility for it. (57), the simple transitive sentence, ignores the internal structure of the event chain and treats the whole as a single unitary event.

However, while this account of the syntax of *-yana* must certainly be historically correct, it is clearly oversimple as a synchronic description of the data which we have discussed. To begin with, we should note that *yat-* 'do' is an obligatorily transitive verb, that is, it ordinarily must have an overt or a contextually recoverable object. However, in the *-yana* sentences which we have seen, there is no explicit or contextually recoverable object for *-yana* if we choose to interpret it as simply the participle of *yat-*. Thus, if we choose this analysis of *-yana*, we will need to mention in the grammar that in this use it has idiosyncratic behavior — i.e. that in this construction *ya-na* has been at least partly grammaticalized.

The semantics of some *-yana* sentences will be equally problematic for this analysis. Even leaving aside the problems associated with the contributing cause as opposed to the mediated causation sense of the construction, and those associated with inactive natural causes such as cold in (45), there would appear to be insurmountable problems with the literal interpretation of *-yana* as 'having done something' in sentences like (53), repeated here:

(53) *dhewa-nɔ̄-yana wo misa sit-ɔ*
money the woman die-PERF
'Because of money the woman died.' (e.g. in a quarrel over money)

Here we have a fairly straightforward case of mediated causation — the money is the ultimate cause of the death, but the death is actually brought about by an action performed by a true agent. On the literal reading of *-ya-na* such a sentence should be impossible, since the money actually does nothing.

Thus, while the origin of the *-yana* construction remains synchronically transparent, it has acquired both syntactic and semantic idiosyncracies which require special description. This amounts to saying that this particular participial form has begun to be grammaticalized, so that it is no longer describable

as simply an unexceptional case of the participial construction. Thus we have here an example of the process of grammaticalization in its early stages. A construction which originated as an explicit reference to an intermediate event in a causal chain is gradually being bleached of this concrete sense and becoming an abstract marker of reduced transitivity. We can see already one characteristic aspect of grammaticalization, the gradual loss of semantic transparency.

The answer to the question of whether or not *-yana* is in fact still a form of *yat* must, however, remain ambiguous. Recall the parallel suggested in sec. 3.2 between the mediated causation sense of the *-yana* construction and the similar sense associated with the periphrastic *yat-* causative (sec. 3.1). This parallelism, even if historically accidental, represents a synchronic generalization which is certainly accessible to the native speaker. (At least to the native speaker who, like my informant, sees the relationship between *-yana* and *ya-na*; given the transparency of the relationship I would expect this to include all native speakers, but this is an empirical question to which I do not have an answer). Thus there is additional evidence available to the native speaker (and the linguist) for the relationship of *-yana* to *yat-* aside from the transparent morphological and syntactic similarity between *-yana* and *ya-na*. Nevertheless, as we have seen, this similarity falls short of identity, and it is clear that *-yana* has taken at least the first steps toward lexical independence.[21]

4.0 *Some notes on English*

The general pattern evidenced by the data discussed so far is one in which simple transitive morphosyntax encodes only events that fit fairly closely the direct causation prototype, while events which deviate from that prototype — i.e. have some but not all of the features of the prototype — are coded by constructions which share some but not all of the morphosyntactic features of the simple transitive clause. I would predict that data conforming to this general pattern could be adduced from any language. (The same prediction is made, with considerable supporting evidence, by Hopper and Thompson (1980)). Most of the voluminous literature on transitivity and causativity in English can easily be so interpreted, and there is no point in reviewing familiar data here. There are, however, some facts concerning the English treatment of two areas treated in the preceding discussion — instrumental subjects and the case marking of inactive causes — which merit brief examination here.

4.1 *Instrumental subjects*

It has been widely noted since the discussion in Fillmore (1968) that English differs from many other languages in allowing instruments to function as transitive subjects. (Note that we are using "instrument" in the strict sense; many languages allow inactive causes but not true instruments in this function). This implies that a significant difference between English and some other languages (including Hare and, arguably, Newari) is that it allows sentences like (60):

(60) The axe broke the window.

This is true up to a point. All Hare speakers whom I asked were quick to reject sentence (13), the translation of (60), while among English speakers few if any trained linguists and not many others will object to a sentence like (60) when presented as a contextless linguistic specimen. Note, however, that (60) is quite limited in its possibilities of occurrence. It would be totally unacceptable, for example, in a context in which my wife comes home, finds the kitchen window broken, and asks what happened. In this kind of context the sentence is simply bizarre, and it is bizarre in exactly the same way as the corresponding Hare sentence: it can only be taken as attributing prototypical agentivity to an entity which by its nature is incapable of independent action.

If asked to provide a plausible context for such a sentence, I and others whom I have asked tend to make it the second clause of a compound like:

(61) The axe fell off the shelf and broke the window.

or place it in an even more syntactically complex environment like:

(62) As I was swinging the axe over my head it hit the window and broke it.

An interesting similar case involves instruments which provide at least some of their own energy input. In response to my wife's question about the broken window, (63) would be as absurd as (60):

(63) The lawn mower broke it.

But, given the well-known propensity of power lawn mowers to propel small stones and other such objects from underneath themselves with considerable force, it would be perfectly reasonable to answer:

(64) The lawn mower threw up a stone and broke it.

What distinguishes the acceptable from the unacceptable descriptions of these events is that the acceptable sentences provide an explanation of the

precise role played by the inanimate object. The simple transitive clauses, on the other hand, provide no such explanation, and thus by default leave the listener to infer an absurdity, i.e. that the inanimate object acted as a true agent. This suggests that in English, as in Hare and other languages, the most normal interpretation of a transitive subject is as a prototypical agent, i.e. that the most normal interpretation of a simple transitive clause is as a report of a prototypical transitive event. Thus essentially the same *semantic* constraints exist in English as in Hare, although the syntacticization of those constraints differs,[22] and for our purposes the differences in this respect between Hare and English are relatively superficial.

4.2 *The marking of inactive causes*

From the preceding discussion we should expect that non-instrumental inactive causes should be able to function as transitive subjects, but that clauses with such subjects should be the pragmatically marked case. This is precisely what we find; while sentences which provide their own context, such as (65), are unexceptionable, in general transitive clauses with inactive subjects are grammatical but somewhat unnatural, e.g. (66-8):

(65) The air bubble reached his heart and killed him.
(66) Lightning struck him.
(67) Hunger killed him.
(68) The flu kept him in bed.

The most natural equivalents to (66-8) are (69-71):[23]

(69) He was struck by lightning.
(70) He died of/from hunger.
(71) He was in bed with the flu.

With lightning, the most agentlike of the three, as cause, we have straightforward passive morphosyntax, with its clear relationship to transitive structure (clear in particular because the verb must be a morphologically marked form of a lexically transitive verb). For the hunger and flu events, however, the passive form is hardly less unnatural than the active intransitive. As noted by Grimes (1975:131-2, where our "inactive" cause is labeled "noninstigative" cause), what we typically find instead is an intransitive verb with the cause in an oblique prepositional phrase, just as in Hare and Newari.

The nature of this prepositional marking is of some interest. The most general preposition used here is the ablative *from*,, which is one of many examples of the semantic connection between the category of cause and that

of spatial source (cf. Anderson 1971; DeLancey 1981, 1982). However, diseases and certain other physical or emotional conditions frequently occur with one or both of two other prepositions, *with* and *of*. The case of *with* is interesting, but not directly relevant here; as in (71), it marks conditions which persist over time, and thus for a certain time are co-locational with the patient.[24] The case of *of* is of more direct interest, since there is no obvious semantic distinction between *of* and *from* in sentences like (70), where they seem to be interchangeable.

It turns out that while, as far as I can see, *from* is always substitutable for *of* in this use, the opposite is not true, i.e. the use of *of* is restricted to a subset of inactive causes. It finds its widest range of use with the verb *die*, and is fairly rare with other predicates:[25]

(72) He died from/of hepatitis.
(73) He is weak from/*of (his bout with) hepatitis.

But whatever the predicate, *of* marking is limited to diseases and a handful of similar conditions (hunger, thirst):

(74) He died of/from hunger.
(75) He died ?of/from exhaustion.
(76) He died ??of/from overwork.
(77) He died *of/from the heat.[26]

While I have not been able to check extensive lists of inactive causes in Hare or Newari, it is clear that the set of causes which qualify for *of* in English is very similar to the set which can occur in the intransitive construction with the ergative/instrumental marker in Newari, and the set which strongly tends to occur in the *k'é* construction rather than the ordinary transitive construction in Hare. Like the corresponding Newari construction and the Hare *k'é* construction, this *of* construction seems to be limited to direct inactive causation. This I would suggest as the explanation for the difference between (79) and (80):

(79) He died from/of starvation.
(80) He died from/*of fasting/a fast.

The difference is that fasting ought not to lead to death, so that for (80) we expect some contributing or mediating cause. If this is provided, *of* becomes more acceptable:

(81) He died of fasting to excess.
(82) He died of fasting too often without medical supervision.

The restriction of a particular morphosyntactic construction to a particular set of NPs, particularly when it occurs in more than one language, demonstrates the semantic distinctiveness of the set, and it is not hard to see at least some of the ways in which these particular causes are different from others. Taking disease as the prototype of the category, which it clearly is at least as far as the English data is concerned, we can note that it is invisible, immaterial, of unknown origin, and produces its effects by imperceptible means. Indeed, the effects are the only perceptible aspect of the event; language labels the effect and then applies the label to the inferred cause. (This is the source of the ambiguity noted in footnote 11). There is, then, some semantic motivation for the precise form of the Newari construction which specifically encodes such phenomena: the verb is intransitive because there is no perceptible transitive event, but the inferred cause is labeled as a causal agent.

For the English construction I cannot find any such motivation. This use of *of* is obviously a relic of the older ablative sense of that preposition, which in earlier stages of the language could mark a much wider range of causes. What seems to have happened is a typical case of semantic specialization: as *from* supplanted *of* in various ablative and ablative-derived (e.g. causal) uses, the two prepositions came into competition as the marking for inactive causes. The ascendancy of *from* as ablative destined its success in the competition, as the retention of identical marking for spatial source and cause preserves the transparency of the latter (cf. Diehl 1975, DeLancey 1982, to appear b). However, the existence of a semantically distinct subset of inactive causes provided a use for the moribund causal *of*, the availability of which provided the necessary morphosyntactic resource to allow morphosyntactically distinct encoding of semantically distinct event schemas. In other words, although there is no synchronic motivation for the choice of *of* to code diseases and their like as inactive causes, there is motivation for the use of something other than the more general *from* in order to make a semantically relevant distinction, and there is a historical explanation for why it is *of*.

5.0 *Agentivity and causation*

We have seen that languages will treat causal entities as agents or as something other than true agents on the basis both of properties inherent in the entity (i.e. volition) and aspects of the overall causation schema being coded. As suggested in sec. 2.5, we can best interpret the data presented here in terms of a scale of directness of causation, with volitional agent directly effecting an event at one extreme and distinct enabling causes at (or toward) the

other. It is possible to interpret agentivity entirely in terms of such a scale, properly interpreted.

I have tried throughout the paper to avoid an extended discussion of instrumentality, the relationship of which to agentivity must be the subject of (at least) another paper. We must note, however, that in terms of the discussion so far true instruments represent something of an anomaly. In a transitive event involving an instrument the instrument is, in a sense, a mediating cause of the event — but such clauses are, cross-linguistically, perfectly good transitive clauses (cf. exx. 12, 14, 46) with full transitive morphosyntax and unexceptionable agents. (Cf. Lakoff 1977, where the possibility of an instrument is explicitly included in the transitive prototype). This forces us to refine our description of the prototype. The behavior of instrumentals and clauses containing them is consistent with a description of the prototypical transitive event as involving *unified* control. An instrument does not count as a mediating cause because it makes no independent contribution to the event — it functions only as an extension of the agent's will. (This interpretation of instrumentality is, of course, consistent with our decision to exclude inanimate but non-manipulated causes such as natural forces and disease from the category). With this tightened definition we can now present the implications of the previous discussion in a single unified scheme: the prototypical transitive event[27] is one which can be traced back to a single cause from which an unbroken chain of control leads to the effect. This ultimate cause can only be an act of volition on the part of a (thus defined) prototypical agent.[28] This act of volition directly engenders an action on the part of the agent, which may in turn be extended through an instrument, and then impinges directly upon the outside world. Both non-direct causation and inactive causation are deviations from this prototype: non-direct causation because the chain of causation leading from the act of volition to the effect is broken by the introduction of other causal factors (ancillary causes or a separate act of volition on the part of an intermediate or ultimate causee), and inactive causation because the chain of causation cannot be traced back to a comprehensible ultimate cause. Thus poison, for example, is an identifiable cause of death, but it is not a satisfactory ultimate cause, since some external cause must be sought for its entry into the victim's system. The conceptual problems posed by disease, which have been alluded to already, are even more difficult.

Although it is not yet quite uncontroversial, there is nothing terribly novel in the suggestion that agentivity, like case roles in general, must be defined in terms of event schemas. But once we realize that event schemas must

be defined as prototypes rather than discrete conceptual categories, it necessarily then follows that the same must be true for case roles. And from this it follows that a debate about, for example, whether or not lightning counts as an agent is addressing an incorrectly formulated question. Lightning in a sentence like (83) is a direct rather than a contributing, enabling, or mediated cause, and it is an ultimate cause in the sense that no prior cause can be identified. It is this which qualifies it for transitive subject position in the Hare equivalent (84):

(83) Lightning killed him.
(84) *'idikóné' ye-wéhxį*
lightning 3Obj-killed

It is not, however, a fully satisfactory ultimate cause, since it cannot be traced back to an act of volition, and this is at least part of the reason why English prefers (85) to (83), and Hare prefers (86) to (84):

(85) He was killed by lightning.
(86) *'idikóné' k'é lánįwe*
lightning died

Lightning is, in other words, like an agent, but not a perfect exemplar — it is, perhaps, "sort of" an agent, but not "technically" an agent (cf. Lakoff 1975).

The consequence of this result is that it will always remain, as it has always proved, impossible to give an explicit definition of the notion agent which will enable us to unambiguously identify agents and non-agents either in general or in particular language.[29] It is relatively easy to identify prototypical agents,[30] but the nature of reality and human perception of it is such that we will always be left with a residue of quasi-agents, causes which deviate from the agentivity prototype but certainly can't be identified as anything else.

NOTES

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1) The facts of English, and no doubt of many other languages, demonstrate that, like most semantic distinctions, the distinction between volitionally and non-volitionally acting causee is scalar rather than dichotomous. With a subordinate verb which pragmatically implies control on the part of its subject, a *make* causative will ordinarily not be interpreted as direct causation. A sentence like

My wife made me sell my motorcycle.

for example, can only be interpreted as involving some degree of volitional action on the part of the causee, however much external coercion may be involved. It is clear, however, that such a sentence suggests more coercion than does

I had my wife handle the sale.

which contrasts with

I made my wife handle the sale.

in terms of the degree of unwillingness on the part of the causee which had to be overcome. The semantic question is not so much whether the causee's volition is involved as the degree to which it is relevant: *have* causatives suggest that the causee's cooperation must be sought, *make* causatives that it can be forced. English lexical causatives suggest not that the causee's volition is not present, but only that it is automatic; in examples like

John marched the prisoners across the yard.

the event cannot come about without the prisoners' cooperation; they could (and sometimes do) simply refuse to march, and accept whatever unpleasant consequences John might arrange for them.

2) Here we verge on (but will avoid becoming bogged down in) a morass of semantic and philosophical problems which occasionally have interesting linguistic reflections. For some involuntary acts, external ultimate causes can easily be identified; for others they cannot — and human beings tend to find the latter circumstance somewhat discomforting. In general, we are using the terms "ultimate" and "proximate" cause in what a philosopher might find a rather loose sense, for it is generally possible to extend a chain of causation farther back, and analyze it into smaller and more numerous subparts, than speakers generally find necessary.

3) All of the data which we will be dealing with involves events with two entities, one of which undergoes a change of state somehow induced by the other. Thus we will be able to avoid the problem, mentioned in sec. 1.0, of agentivity in intransitive clauses. Cole (1983) notes that languages which mark the distinction between volitional and non-volitional causees tend to do so only with transitive caused events, and suggests that this is because intransitive verbs are prototypically non-volitional. This is not easy to reconcile with the observation that many active/stative languages, which mark intransitive subjects for volitionality, treat all transitive subjects as agents — suggesting that intransitive verbs distinguish volitionality, but that transitive verbs are prototypically volitional. In any case, this sort of problem, while it does not disappear in a prototype semantics framework, becomes much less bothersome — we might argue that, just as bats are not really birds, but are birdlike enough for some purposes, so intransitive subjects cannot be perfect agents, but if they act volitionally they have enough in common with the agent prototype to count as agents for certain purposes.

4) The system is no longer fully productive in Hare, but there remain numerous lexical pairs which are clearly related by it. See Rice (1977) for details.

5) There are minor semantic differences between the two verbs glossed in these data as 'kill', but as far as I am aware they are irrelevant to the present argument.

6) All verb forms in the Hare data are polymorphemic. Morphemic analysis is indicated (by hyphens) only where and to the extent that it is specifically relevant to the issues at hand.

7) The meaning of the *k'é* morpheme in (16b) will be discussed in the following sections.

8) The words for at least some diseases can occur only in this construction, and cannot function as transitive subjects. In an earlier version of this paper I interpreted this as evidence for a ban on invisible agents. There are, however, counter-examples to this generalization which I cannot explain, so that this explanation cannot be maintained. This peculiarity of diseases is reminiscent of their odd grammatical behavior in Newari (sec. 3.3) and English (4.2), but my Hare data are not sufficient to completely explicate the matter.

9) The glosses provided for exx. 25-30 are far from satisfactory. Note in particular that the subordinate clauses in the Hare examples are all nominalizations, and that *k'é* has no satisfactory English gloss, but certainly should not be considered an equivalent of English *because* or *so*, although in some contexts it is an appropriate translation for them.

10) *Hé* likewise has a more concrete use, as a comitative marker, which is undoubtedly related to the other uses which I have mentioned.

11) This suggests an interesting line of speculation on the peculiar behavior of diseases alluded to in footnote 8 and further exemplified in the discussions of Newari (sec. 3.3) and English (4.2) below. The nature of disease is somewhat ambiguous, being interpretable (and interpreted in linguistic coding) as either an entity or a state. It is interesting to note that the Hare noun *'éyayi* 'disease', which in at least some contexts cannot function as a transitive subject, is etymologically deverbal (K. Rice, p.c.).

12) In DeLancey (1983) I cited examples of a periphrastic causative construction with *yat-* and the unmarked form of the caused verb. When I rechecked these data the informant insisted on using the causativized form of the verb with *yat-*, as presented here.

13) This is in apparent contrast with some aspects of the English pattern mentioned in footnote 1. Such divergences are inherent in the nature of language, where scalar conceptual fields must be coded into a finite set of discrete patterns.

14) In spite of appearances the similarity of the verbs 'kill' and 'die' is at least synchronically coincidental.

15) For me the English equivalent has a similar flavor. Some of my Hare informants made similar comments about sentences like (20), with 'liquor' as transitive subject.

16) I have, of course, already managed to skirt this same issue in the discussion of Hare *k'é*, and will do so again when I deal with English *from* and *of*.

17) This is precisely parallel to the widely attested tendency in causative constructions for analytic constructions to code non-direct causation when they contrast with synthetic constructions.

18) This was more transparent to my informant than to me; I cannot say whether it is equally tranparent to all speakers, but the morphological identity is striking.

19) These English glosses obviously should be taken as crude attempts to encapsulate translation and analysis together, rather than legitimate English equivalents of the Newari sentences. In

particular, note that my informant, who was perfectly fluent in English, was quite insistent on translating *-yana* as 'because of'.

20) They could not be descriptions of the same interpretation of the same event, as demonstrated in sec. 3.2.

21) Jim Matisoff (p.c.) has pointed out to me that the dative/accusative postposition *-yatɔ* looks very much like a grammaticalization of the perfective form of *yat-*. If this is the correct etymology, then this descendant of *yat-* has gone much further in this direction than *-yana*.

22) It is quite possible that this difference is at least as much cultural as linguistic. Most English speakers are fairly accustomed to the idea of discussing contextless sentences as abstract objects, and hence are capable of judging the structural soundness of a sentence without worrying about its utility. Most of the Hare speakers that I have worked with find this a strange and pointless activity.

23) I have discussed similar data from a different perspective in DeLancey (1981). A good deal of work remains to be done on the relationship between these two approaches.

24) Thus one cannot **die with pneumonia*, because at that point the disease and the individual are no longer co-locational.

25) I am excluding from consideration here lexicalized collocations like *sick of*, *tired of*, *ashamed of*, which are independent offshoots of the older general *of* construction (see below and note 26).

26) *Of* is marginally acceptable here and in ex. (80) as a deliberate archaism; as noted below, the causal use of *of* was far more widespread in earlier stages of English.

27) This phrasing ("outside world" rather than, for example, "patient") leaves room for the attribution of some degree of transitivity to volitional intransitive events/clauses; the necessity for this is argued for in Hopper and Thompson (1980) (cf. also fn. 3 and DeLancey 1982, to appear a).

28) Cf. here Wilks' (1977) discussion of an algorithm for determining the type of responsibility to assign to the subject of an English transitive sentence, and Givón's (1979) "teleological imperative".

29) It is entirely conceivable, of course, that some languages might strictly grammaticalize the notion of agentivity, and require that inactive causes be treated morphosyntactically just like agents, or that they be consistently treated like instruments. I would be surprised, but not astonished, to find a language in which there was no ambiguity in the coding of diseases and similar phenomena.

30) This statement may well be overly sanguine, but it seems easy so far.

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