

THERE-INSERTION UNACCUSATIVES AND OTHER
COMPLEX INTRANSITIVES

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0. Introduction.

In the context of the framework considered in Hale and Keyser (1993, 1997), in the absence of any special provision to the contrary, a verb which manifestly selects as its complement a structure projected by a preposition is, by hypothesis, expected to be transitive and to exhibit the behavior of the English verb *put*, as in *put the book on the table*. This follows, in the unexceptional case, because the verb *put* locally c-commands the nominal argument occupying the Specifier position in the P-projection and is therefore in the position in which it must ordinarily assign Case to that argument, other things being equal. However, some verbs of English appear to select a P-projection without showing this supposed “necessary transitivity”. These include (i) unaccusatives of the type represented by *arrive (at the party)*, “there-insertion unaccusatives” in the terminology of section 1 below, which resist transitivity; (ii) patient-manner verbs like *splash (mud on the wall)*, and (iii) manner-of-motion verbs, like *run (into the corral)*. These latter two types have both transitive and intransitive uses. In this discussion, we will be concerned with the issue of transitivity in the grammar of verbs of these three types.

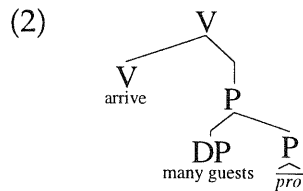
1. There-insertion unaccusatives.

There exists a class of English verbs whose members are customarily brought forth as paradigm examples of the unaccusative class. Unlike the much larger class of unaccusatives of the *break*-type, which enter freely into the standard transitivity alternation, verbs of the *arrive*-type at issue here do not transitivity; and in addition—to some degree, at least, but often with a tinge of reduced acceptability—they participate in the there-insertion construction, as exemplified in (1b):

- (1) (a) Many guests arrived(at the party).
(b) There arrived many guests (at the party).
(c) *Arrived many guests (at the party).
(d) *John arrived many guests (at the party).

Following Moro (1997), we maintain that the surface subject of (1a), and the postverbal subject in (1b), originate in the specifier position of a “small clause” complement to the verb *arrive*. In terms of the theory of argument structure being employed here, this verb heads the monadic, (a)-type lexical configuration and

takes as its complement the basic dyadic, (b)-type configuration (cf., Hale and Keyser, 1994, 1997):¹



The inner dyadic component in this construction can, of course, be a fully overt prepositional projection, as in *arrive (many guests) at the party*, but it is a particular lexical feature of the verbs of interest here that they can take a special pronominal element, *there*, construed either with an overt P-projection or with a non-overt locative pronominal, as depicted in (2).

English, as is well known, satisfies the Extended Projection Principle (EPP) with *overt* nominal subjects. Consequently, one of two things must happen in order to derive a well-formed English sentence on the basis of (2), avoiding the pro-drop variant (1c). The specifier DP may raise to sentential subject position, arriving ultimately in an appropriate specifier position in the functional matrix, giving (1a). Alternatively, the expletive *there* may be inserted in subject position instead, satisfying the English EPP in that manner. This overt element, we can assume, is inserted only where it is needed—hence only to satisfy the EPP (cf., Chomsky, 1988), and not in the base position dominated by P, where *pro* is evidently possible, perhaps by virtue of incorporation into V (as in Moro, 1997), a detail which we will not consider further.

Either of the two processes just outlined will prevent the ungrammatical (1c). But what prevents (1d)? Transitivity of *there*-insertion unaccusatives is, so far as we can tell, generally impossible:

- (3)
- (a) There arose a problem (in the reasearch design).
 - (a') A problem arose (in the reasearch design).
 - (a'') *We arose a problem (in the reasearch design).

 - (b) There appeared a blemish (on the surface of the vase).
 - (b') A blemish appeared (on the surface of the vase).
 - (b'') *We appeared a blemish (on the surface of the vase).

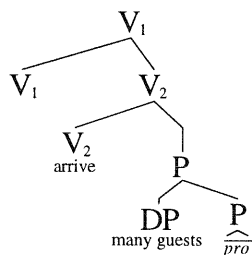
¹The (a)-type argument structure configuration is that projected by a head which selects a Complement but does not project a Specifier; the (b)-type, typical of English prepositions, for example, is the configuration projected by a head which selects a Complement and in addition projects a Specifier. The (c)-type, like the (b)-type, has both a Complement and a Specifier; in the (c)-type, however, the appearance of a Specifier is determined primarily by the Complement, typically an adjective, in English (cf., Hale and Keyser, 1997).

- (c) There occurred a riot (on the streets of Laredo).
- (c') A riot occurred (on the streets of Laredo).
- (c'') *They occurred a riot (on the streets of Laredo).

The acceptability of the *there*-insertion sentences (3a-c) is, to say the least, variable among speakers, but there seems to be no variation in judgments of the transitive (double prime) sentences, among adult English speakers, at least. They are judged ungrammatical uniformly.

These are not “ordinary” unaccusatives—unlike the familiar *break*-type of unaccusative, they do not transitivize “automatically”. This, at least, would follow straightforwardly from the structure assigned to them in (2) above. Automatic transitivization is freely possible by virtue of the head-complement relation. It is accomplished by inserting a dyadic structure into the complement position of the monadic (a)-type lexical configuration, and it is successful precisely because the inserted structure is dyadic, i.e., projects a specifier which functions as the surface object of the derived transitive verb. However, (2) is not dyadic in the relevant sense—it *contains* a dyadic structure, but it is not itself dyadic and, therefore, projects no specifier, hence the impossibility of (4) as a transitive of *arrive*:

(4)



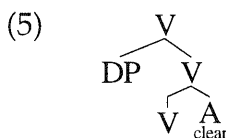
If this were all that needed to be said about the matter, we would have an explanation for the ungrammatical transitives of (1) and (3). But we must go further. What is to prevent the structure in (2) from simply appearing with an *external* subject in sentential syntax? Couldn't *John* in (1d) simply be an external subject, of which (2) is predicated in sentential syntax? This is precisely what happens with other verbs built directly on the monadic argument structure—canonical unergative verbs, for example, have external subjects (e.g., analytic *make trouble*, *build houses*, *have a puppy*, and synthetic *laugh*, *sneeze*, *pup*). And canonical location and locatum verbs—having a structure putatively very like (2)—are consistently transitive (e.g., *put the books on the shelf*, *fit the mare with racing shoes*, *shelve the books*, *shoe the mare*). So why can't (2) take an external subject, giving (1d)?

Before answering, let us summarize. We can set aside the question of automatic transitivization of *arrive*-type unaccusative verbs. It is impossible, to be sure, given the argument structure proposed for them, but we are left with

another possible source of transitivity, simple predication of an external argument. However, while ergative and transitive verbs may function as predicates in sentential syntax, taking external subjects, *arrive*-type verbs cannot. This is unexplained as yet.

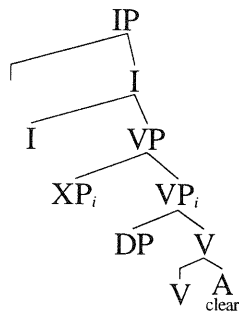
There is a natural temptation to appeal to Case Theory in explaining this asymmetry. If *arrive*-type verbs are simply unable to assign Case to a nominal which they govern, then sentences of the type represented by (1d) would be impossible on those grounds. The there-insertion variant is, in any event, possible by virtue of a Case-transmission mechanism assigning nominative to the post-verbal subject (cf., Safir, 1982:172 et passim). And the alternant with subject raised from Spec of P is derived in the usual manner associated with raising predicators lacking the capacity to assign accusative Case, like English *seem*, *be*, and the passive participle. However, while it is certainly true that *arrive*, and its like, do not assign accusative case, and are therefore “raising” verbs in the standard sense, this is probably a symptom, rather than the root cause, of the overall lexical and syntactic behavior which they exhibit. The verbs are simply “not transitive”, and their key property is that they do not take an external subject. If they were closet transitives, they might be expected to appear in the passive, circumventing the Case problem, contrary to fact (hence, **many guests were arrived at the party*).

Seen in this light, a somewhat more apt comparison is between the there-insertion unaccusatives and the “pure” unaccusatives—i.e., the inchoative alternants of the *break*-type unaccusatives. Intransitive *clear*, for example, appears in the composite dyadic lexical projection depicted in (5):



This shares with (2) the property that it cannot appear directly in sentential syntax with an external subject. Again, the reason could be Case, DP being unable to “get Case” if prevented from raising to Spec of the appropriate functional projection (Infl, or T). This is an idea which is worth exploring, but it is not actually clear that Case Theory, in and of itself, could rule out the use of (5) with an external subject. Suppose, for example, this structure were in fact to enter into construction with an external subject, as in (6):

(6)



Here we employ the conventional symbol VP to represent the maximal projection of V, an inconsequential notational deviation from the practice used in (5) above. The external subject (XP_i) is a “distinguished adjunct” to VP—it is the argument of which VP is predicated in sentential syntax, a relation indicated by coindexing (cf., Bittner, 1994, following Williams, 1980). The subject is external to VP, since it is not dominated by VP (i.e., it is not dominated by all segments of VP). But its structural position does conform in basic outline to what is generally termed the “VP-internal Subject Hypothesis” (as formulated in Koopman and Sportiche, 1991, for example), since XP_i is dominated by a segment of VP. In (6), we have also supplied VP with a relevant portion of its “extended projection” (cf., Grimshaw, 1991), which we symbolize I(nfl) projecting to IP.

The structure dominated by VP is the lexical structure defined by the heads V and A, the latter the complement of the former. It corresponds to (5) above. Thus, (6) is the structure which results if (5) is supplied with an external argument together with an appropriate extension by functional category. This structure cannot succeed, however. There is no well-formed issue from it. First, it cannot give us a transitive sentence like the well formed *John cleared the screen*. In that clause, the verb c-commands the object (DP); in (6) it does not. Any other theoretically possible output is simply ungrammatical. But why?

As suggested above, it is not clear that the business can be laid entirely at the doorstep of Case Theory. Not entirely. An uninteresting reason for this is that Case Theory is simply too much in flux at the moment, there are too many ways to “block case assignment” to one or another argument position. A more interesting reason is that (6) fails *in spite* of Case Theory. There are a number of theories of case in which Case Licensing is accomplished fully and naturally in configurations of the type represented by (6). These are theories according to which ergative-accusative typology is defined, in part, in terms of the ability of V to assign accusative case (e.g., Bok-Bennema and Groos, 1984; Bittner, 1994; Bittner and Hale, 1996).

Framing the matter in accordance with the principles of the Case Binding theory of Bittner (1994), an argument \mathcal{A} satisfies its Case Licensing requirements by one or the other of the following two means:

- (7) CASE LICENSING:
- (a) \mathcal{A} is Case Licensed if it is Case Bound.
 - (b) \mathcal{A} is Case Licensed if it is governed by a Case-like head (i.e., by K , a Case particle or affix, or by C (omplementizer)).

Simplifying, somewhat, Case Binding is a relation between a head \mathcal{H} and an argument \mathcal{A} standing in a structural relation characterized jointly by the following criteria:

- (8) CRITERIA FOR CASE BINDING:
- (a) \mathcal{H} delimits a small clause.
 - (b) \mathcal{H} locally c-commands \mathcal{A} .
 - (c) \mathcal{H} governs a (bare DP) Case Competitor for \mathcal{A} .

Looking now at (6), the candidate Case Binders are the two heads $I(\text{nfl})$ and V . The first delimits a small clause (i.e., a predicate with a distinguished adjunct, in this instance $[_{VP} XP_i VP_i]$). It does so by virtue of governing it—this is one of two ways in which a head can delimit a small clause. And V delimits the same small clause by virtue of projecting it. Hence both $I(\text{nfl})$ and V satisfy (8a). However, V fails in relation to the other two criteria; although it locally m-commands DP, a potential bindee, it does not c-command it—there is in fact no \mathcal{A} such that V locally c-commands it. And V fails (8b) as well, since, while both XP_i and DP are potential competitors (structurally), V governs only DP, since XP_i is beyond V 's governing domain. But $I(\text{nfl})$ fares better. As we have seen, it delimits a small clause. Furthermore, it locally c-commands XP_i . Now, in relation to (8c), if VP is a barrier, then $I(\text{nfl})$ does not govern DP, a potential Case Competitor. But if DP raises to Specifier of IP, then $I(\text{nfl})$ *does* govern DP and, therefore, satisfies all of (8a-c). In fact, DP must get into the governing domain of a Case-like head—this is accomplished by raising to Specifier of IP, within the governing domain of C . Thus, according to the provisions of the Case-Binding theory, both arguments in (6) are Case Licensed. The external subject is Case-bound, and the specifier DP is licensed by raising to the governing domain of C , a Case-like element.

The scenario just presented is precisely what happens in a so-called “raising ergative language,” according to the Case-Binding theory. Raising ergative languages, like West Greenlandic Inuit and Jirrbal of North Queensland, are those in which the object achieves a prominent structural position, not unlike that of a subject—this prominent position is, by hypothesis, effected by raising from a position internal to VP (i.e., specifier or complement) into a specifier position in the matrix functional configuration (i.e., Specifier of IP in this case). So why can't (6) be realized as an ergative construction. An uninteresting answer is that English simply doesn't have an ergative case. But what prevents a sentence like (9), in which the Case-bound subject, XP , realizes its ergative Case as a preposition, say *by*?

(9) *The screen cleared by John.

Here, the DP phrase *the screen* functions as “surface subject”, being moved to sentential syntactic subject position from Specifier of VP. And *by John*, the ergative, is postposed, as is usual for prepositional phrases in English.

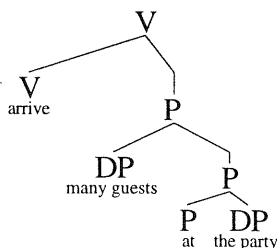
Curiously, (9) is “almost good” in English. However, we assume that it should in fact be taken as ungrammatical, on a straightforward ergative reading—the interpretation it weakly receives is, for us at least, one in which *by* is short for something like *by virtue of* or *by the good graces of*. In any event, (9) is not the grammatical equivalent of the standard transitive *John cleared the screen*, as it would be if it were a true ergative construction.

We will assume (though it is not quite true) that we have eliminated Case as the factor responsible for the inability of (5) to take an external subject. We are left, then, with the original problem. Why is this so? Why can't a simple dyadic argument structure appear with an external argument, as in (6)?

There is an intuitively clear reason for this, it seems to us. The fact is, (5) is “complete”, or “saturated”. All arguments that are required in order for (5) to enter directly into sentential syntax are present in the lexical projection itself. There is no “open position” in (5). Consequently, an external subject is entirely extranumerary and is precluded by virtue of the principle of Full Interpretation (cf., Chomsky, 1986:98 et passim). This is the explanation we favor for well-formed (5) and ill-formed (6).

Now let us reconsider (2), which we take to be representative of intransitive structures headed by verbs of the *arrive* type. Let us redraw the structure of (2) to include the full P-projection, instead of the *pro*-element depicted in (2). This gives a configuration of the type represented in (10):

(10)



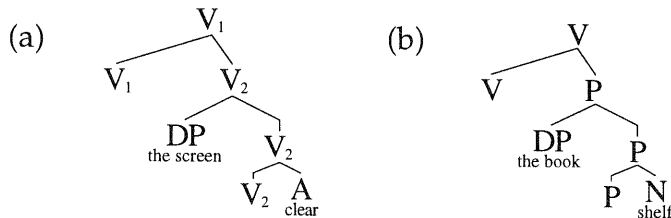
Automatic transitivity is excluded, given this structure, for the reasons already given. But we are still left with the question of why (10) cannot simply take an external subject in sentential syntax. As suggested above, Case Theory might be invoked to account for this; the idea is worth reconsidering in this instance, because Case might play a role here, in fact, though we will argue that it is not the sole determining factor. The Case-theoretic story would be that *arrive*,

and its fellow there-insertion unaccusatives are inherently intransitive, unable to assign accusative case. The specifier DP in (10) is unable to get Case in its base position and therefore raises to Specifier of IP (stopping first in the distinguish adjunct position, i.e., the “true subject position”). The established existence of a class of raising predicators (like *seem*, *be likely*, and so on) serves as a precedent for this, it could be argued.

Assuming the Case-theoretic explanation for the present, the failure of (10) to take an external subject results from the fact that that subject would occupy the very position into which the “internal” subject (the DP in Specifier of the P-projection) must move to satisfy its Case requirements. Of course, this smacks of the explanation given for (6), i.e., for the inability of (5) to take an external argument. That is to say, there are too many potential subjects around. This would follow if (10) were complete, or saturated, in essentially the way (5) is complete.

We think that this is part of the answer; more exactly, the effect at issue is due to an interaction of Case Theory and Argument Theory (the Theta Criterion, if you will). However, there is more that must be done, because the configuration represented in (10) is, in its essential structural details, precisely the configuration associated with the completely productive and fully well-formed transitives derived “automatically” on the basis of dyadic structures like *clear*, as in (5). And (10) is likewise identical in purely configurational respects to the structure assigned to location and locatum verbs (like *shelve* and *saddle*):

(11) TRANSITIVE *CLEAR*, AND LOCATION VERB *SHELVE*:



These structures take external subjects, of course. They are not complete, and they *must* take an external subject in sentential syntax. Why aren't these structures complete, the way (10) appears to be? In general, a verbal argument structure is complete (in relation to sentential syntax) if its apical V-node immediately dominates a specifier. While the dyadic subparts of (11a,b) are complete in this respect, the whole structures are not—the highest V does not immediately dominate a specifier.

So what is the fundamental difference between (11a,b) and (10)? Configurationaly, at least, they share the property that the apical V-node does not immediately dominate a specifier. Yet the first, being incomplete, accepts an external subject, while the second behaves as if it were complete, rejecting an external subject. In this respect, verbs putatively assigned the structure in (10)

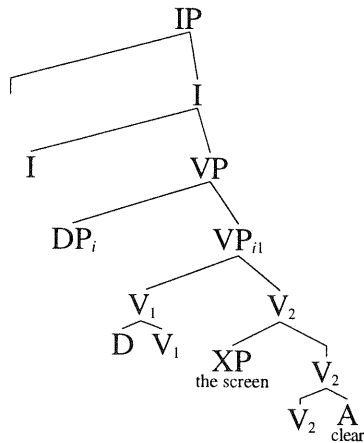
exhibit canonical “unaccusative” behavior, like the simple unaccusatives having the structure depicted in (5) above. The essential observational generalization about these “there-insertion unaccusatives” is that their sentential syntactic surface subject is linked to an internal position, either the specifier of the P-projection or the P-projection itself—in the latter case, the surface requirement is fulfilled by the “proxy” expletive element *there*. The same generalization holds of simple unaccusatives like *clear* and *break*, of course, but with the difference that with these the specifier is the sole internal source of the required sentential syntactic subject.

As suggested above, Case Theory has a role to play here; at least it is implicated in the context of the theory of Case briefly outlined above. But in order to show this, it is necessary to say something about how accusative case is assigned, under the assumptions of the Case Binding theory.

Consider again the structures in (11), in which the dominant V locally c-commands the DP in the inner specifier position. This arrangement is one of the primary ones in which a verb is properly poised to assign Case to a DP, or to Case-bind it, in our terms. The verb in question delimits a small clause (by projecting it) and it locally c-commands the potential bindee, i.e., the specifier DP, since there is no closer head which also c-commands that argument. Hence, two of the requirements set out in (8) are met by the dominant V in (11a,b). But if the verb is to Case-bind DP there, it must have within its governing domain a Case Competitor, completing the essential set of requirements.

Most theories of Case attribute to certain nuclear categories (e.g., V, P) the ability to “assign Case”. Moreover, assignment of structural case is generally held to be a capacity which may be present or absent in a given head. In the Case Binding theory, the ability of a head to Case-bind an argument is dependent in part on the presence of an appropriately situated Case Competitor. In an accusative language, like English, the verb is said to “assign” accusative Case—by Case-binding an argument which it locally c-commands. It is a claim of the Case Binding theory that the ability of a verb to Case-bind an argument is due to the presence, within the verb itself, of a nominal element which serves the function of Case Competitor. Being a part of the abstract morphology of the verb, this element is often non-overt, as in English, where its presence is discernible only by virtue of its syntactic effect. But it is often overt, where it is realized in “object agreement” on the verb (cf., Bittner and Hale, 1996b). This V-borne Case Competitor, in the typical accusative language, is categorially a determiner (D), hence pronominal in nature, and it is adjoined to the verbal head, as shown in (12), a modified version of (11a):

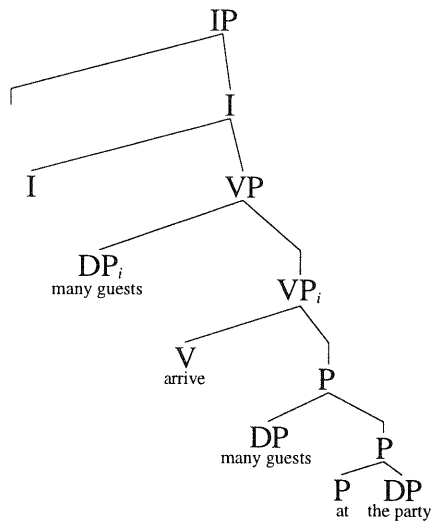
(12)



The relation of interest here is that which holds between V_1 and XP. That verb projects, and therefore delimits, a small clause. It locally c-commands XP, a potential bindee, and it governs a Case Competitor. The subject, DP_i , cannot be the Case Competitor here, obviously, since that argument is beyond the governing domain of the verb. By assumption, it is the V-adjoined D which fulfills this role—that is the only other possibility. The upper verb, V_1 , therefore Case-binds XP, the specifier projected by the inner verb in accordance with the basic lexical property of its complement, the adjective *clear*. It is the so-called accusative Case which is realized (overtly or covertly) on an argument in the structural position of XP in (12), i.e., in which the Case-binder is a verb. In contrast, as mentioned earlier, the ergative Case is associated with an argument Case-bound by I(nfl).

We can return now to a consideration of the structure assigned to there-insertion unaccusatives like *arrive*. Let us begin with the structures assumed for them, as represented in (2) and (10). In those structures, there is a verb appropriately positioned to Case-bind an argument occupying an internal specifier position, exactly as in the case of (11a), the transitive configuration based on the simple unaccusative. But the there-insertion unaccusatives cannot transitivize, as we have seen, because their sentential syntactic subjects must come from an internal position. This result is obtained if we simply assume that V in (13), modified from (10), lacks the adjoined D which would otherwise function as a Case-competitor and force the verb to Case-bind the DP in the specifier position which it locally c-commands:

(13)



Since that DP is not Case-bound, it must, so to speak, "satisfy the Case Filter" by moving to a position in which it is governed by a Case-like head, i.e., C. This is accomplished by moving first to the external subject (distinguished adjunct) position, as shown (leaving a copy in its base position), and then to Specifier of IP (not shown), where it is governed by C.

This "works", but it is unsatisfactory, since it fails to relate the apparent intransitivity of there-insertion unaccusatives to There Insertion itself. We will attempt to make a connection. However, what we will suggest is provisional and, at present, somewhat clumsy.

The V-adjoined D of (12) is sometimes overtly realized as object agreement, as noted. Many languages have "locative" or "areal" agreement in addition to conventional person and number agreement. Navajo is such a language:

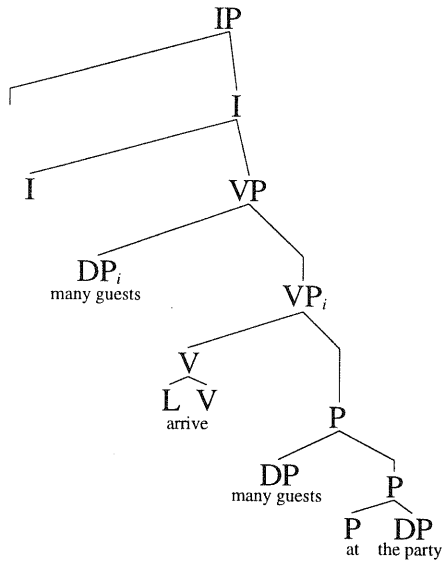
(14) NAVAJO AREAL AGREEMENT:

(a) Béégashii yish'í.
cow 3o.YPERF.1s.see.PERF
'I see the cow.'

(b) Bikooh-góyaa hweesh'í.
arroyo-down.along AREALo.YPERF.1s.see.PERF
'I see down along the arroyo.'

English is not normally thought of as having this type of agreement, but we would like to suggest that this is exactly what is involved in constructions based on the there-insertion unaccusatives. In place of the V-adjoined D, there-insertion unaccusatives have an adjoined locative determiner (L), as depicted in (15):

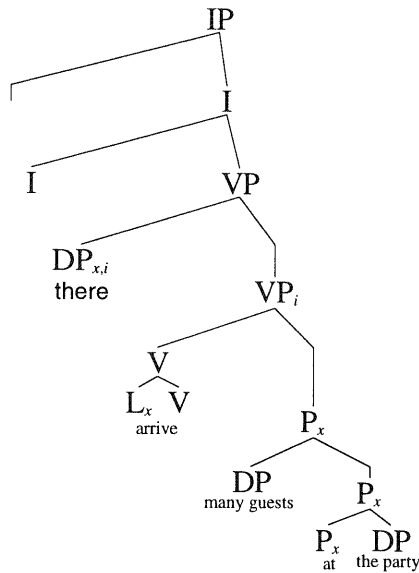
(15)



The adjoined L is not, strictly speaking, nominal, belonging rather to the category normally associated with extended projection of P, rather than the N. If this is true, then V in (15) cannot Case-bind the DP which it locally c-commands. This circumstance permits, and other things being equal, forces that DP to raise in order to satisfy its Case requirements, giving (1a).

There is, however, another alternative available, as we have seen—namely, the There Insertion structure itself, as in (1b). We take the V-adjoined L to be construed with the complement of the verb, i.e., with the P-projection. This is consistent with the notion that it is locative, or areal, agreement. There Insertion, however it is actually achieved, is quite possibly a mechanism whereby the P-projection can be “represented” in subject position. Let us assume that There Insertion involves insertion of *there* in subject position and coindexation of *there* with the V-adjoined L. The latter is, of course, coindexed with P by virtue of agreement. The proposed structure for (1b) is, accordingly, that set out in (16):

(16)



The subject, *there*, is an expletive heading a "chain" of coindexed elements whose foot is P. Ultimately, it raises to Specifier of IP, where its Case requirements are presumably met through its proximity to C.

But how is the DP in Specifier of P licensed? We think it is licensed by the same governing head, namely C. The Case Binding theory recognizes two types of languages within each of the two large classes belonging to the typology of Case. Both ergative and accusative languages can be classified as either transparent or raising. Transparent ergative languages, for example, are those in which the object (the absolutive, or nominative argument) is licensed *in situ*, unraised. These are the so-called "morphologically" ergative languages, so termed because the object does not give evidence of being in a prominent or high structural position. They are in the majority among ergative languages, evidently. In contrast, raising ergative languages are those in which the object must raise to satisfy the requirement that it be governed by a Case-like head. The difference depends on transparency to government—if IP and VP are barriers to government from C, then raising is necessary, as in Inuit and Jirrbal. If these categories are transparent, i.e., do not function as barriers, then raising is not necessary (and precluded, presumably)—as in Warlpiri, Mayan, and ergative Polynesian. The same division among languages is found in accusative languages—if IP is a barrier, raising of the nominative subject is required, as in English; if IP is transparent, the nominative subject is licensed *in situ*. One way in which transparency can be induced is by verb-raising (V to I(nfl) and then to C), creating, in effect, a composite head. This establishes a head-to-head dependency which effectively removes the barrierhood of the maximal projection of each head. Another circumstance which gives rise to transparency is the presence of an *a priori* dependency across maximal projections (cf., Bittner and Hale, 1996b).

We suggest that the DP in specifier of P in (16), and generally in structures of this type, is licensed *in situ*. It is governed by C by virtue of transparency. The transparency relation is established by There Insertion, which creates a chain extending from Specifier of IP to P. We assume that this removes the barrierhood of both IP and VP, at least for the purposes of licensing the argument in question—i.e., DP in Specifier of P. This argument is, so to speak, parasitic on *there* for its Case requirements.

2. Patient-manner verbs.

The verbs of (17) below are termed patient-manner verbs because they include, as an integral part of the verbs themselves, an adverbial feature which describes the physical motion, distribution, dispersal, or attitude, of the entity denoted by the argument occupying the specifier position in the P-projection which functions as the complement of the verb:

- (17) (a) Mud splashed on the wall.
 (a') The cars splashed mud on the wall.
- (b) Ice cream dripped on the sidewalk.
 (b') The child dripped ice cream on the sidewalk.
- (c) Water spilled on the floor.
 (c') The puppy spilled water on the floor.

From the point of view of the syntax of argument structure, verbs of this type demand attention because of the fact that they enter into the standard transitivity alternation, having both intransitive and transitive alternants. As mentioned in section 1 above, verbs whose internal component is a P-projection are expected to be steadfastly transitive, like those in (18):

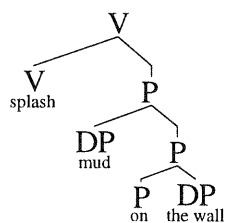
- (18) (a) *Mud smeared on the wall.
 (a') They smeared mud on the wall.
- (b) *White pipeclay daubed on the dancers' bodies.
 (b') The kurdungurlu daubed white pipeclay on the dancers' bodies.
- (c) *Quarter moons stamped on the leather.
 (c') The saddle maker stamped quarter moons on the leather.

The term “agent-manner” might be appropriate for these, since they they can be said to include an adverbial feature which describes the action of the entity denoted by their external arguments—to “smear X on Y” requires an “agent” which executes the gestures that the “encyclopedia” (Marantz, 1997) defines as necessary in performing the action so named; similarly for “daubing X on Y”, and so on. One might propose that some agent-manner feature, F_{ex} , is by

definition linked to the external argument. From this it would follow that verbs of the type represented by (18) are necessarily transitive, since the syntactic position assumed by the subject of such verbs would always be that assumed by the external argument (except in the passive and the middle). And it might be proposed, by contrast, that a patient-manner feature, F_{in} , is necessarily linked internally, with the specifier. This requirement would be satisfied in both transitive and intransitive alternants, permitting both, and accounting therefore for the alternation seen in (17).

The proposal just outlined is perhaps plausible, but there are at least two reasons why it should be tempered. First, the internal vs. external association of the putative manner features, F_{in} and F_{ex} , correlates with the observed distinction in transitivity behavior. This could of course mean that the manner feature associations are the “cause” of this behavior, as suggested above. On the other hand, it could be that the feature associations are a consequence of the principles, whatever they are, that account for the transitivity behavior—that is to say, it could be that the manner feature associations are predictable from some more fundamental aspect of the theory of argument structure. Second, we need to have an account of the intransitive variants of verbs like those of (17)—we do not have an account of this. How, for example, does the specifier manage to extricate itself from the c-command domain of the verb, assuming, as we have consistently done that the basic argument structure configuration of the verb of (17a), say, as shown in (19)?

(19)



Raising is not a trivial matter here, since in the ordinary case, the verb of (19) is poised to take the lower specifier DP as its sentential syntactic object. What aspect of the verb *splash* (and others of its kind) determines that the DP it governs can raise to sentential subject position, giving the intransitive alternant?

Again, principles of Case Theory must ultimately be considered in sentential syntax, and it is possible as well that they are involved here. In fact, there is an attractive story which suggests itself. Suppose the verbs involved here (*splash*, *smear*, etc.) are allowed the free option of carrying an adjoined D, the abstract nominal element which determines the “ability” of a verb to assign Case. When present, this element would function as a Case Competitor, in the sense of (8) above, and would therefore force the verb to Case-bind its object, assigning it accusative case. When this element is present in a verb of the *splash*-type, the transitive variant must result; accordingly, in that case, the verb Case-binds the

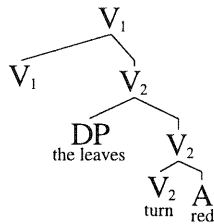
DP in the Specifier of its PP complement, and in addition it projects a structure which takes an external argument in sentential syntax. If a verb of the *splash*-type lacks the V-adjoined D, then the intransitive variant results—the verb cannot Case-bind the DP it governs (i.e., Specifier of PP) and the latter must consequently raise to an appropriate functional projection to be Case-licensed in sentential syntax. With the *splash*-type just considered, the presence of the V-adjoined D is apparently an option. With verbs of the *smear*-type, however, this is not an option; the presence of V-adjoined D is obligatory, since these verbs are consistently transitive and accordingly Case-bind the DP they govern. We can maintain the idea that the D element is freely present or absent in the verbs at issue by appealing to the requirement that the agent manner feature F_{ex} be linked to an external argument; this will require that the verb Case-bind the internal DP (Specifier of PP), preventing raising of that argument and preemption by it of sentential subject position.

We perceive a conceptual problem with this solution—a problem which, to be sure, exists primarily because of our view of argument structure as a system of syntactic projections rooted in the lexicon. By this we mean that the structures we are considering are the projections of *lexical* categories (e.g., V, P, A); by contrast *functional* categories (e.g., I, K, C, D) are for the most part absent from the configurations which we associate with lexical argument structure, being associated with the extended projections of lexical categories and visible only in sentential syntax. This means that we expect the Case-binding capacity of a lexical item (i.e., presence in it of a V-adjoined D) to be largely predictable from the argument structure configuration, once that is determined. Thus, Case is not something that itself *determines* the argument structure properties of an item. That is our expectation, and it could of course be wrong; but we wish to precede along these lines nonetheless, eschewing the appeal to Case Theory as long as possible. We are encouraged in our intuition that Case does not belong to the realm of argument structure by abundant evidence coming from the cross-linguistic study of Case systems (cf. Bittner and Hale 1996)—while truly lexical phenomena like the head-complement relation are universal, the relation implicated by the formula “the verb assigns accusative case” is parametric (*yes* in some languages, *no* in others; *yes* in some constructions, *no* in others). The universal features of Case are matters having to do with sentential syntax and the functional projections which extend the lexical projections of concern here.

It should be pointed out that there is an inherent chink in the structure of the Case story. To be “free and non-stipulative” it must appeal to a lexical property of the verbs—namely, the manner features attributed to them, representing aspects of their “encyclopedic” content. This observation recalls the “feature”-based solution briefly suggested earlier, making us mindful of the possibility of a solution more firmly grounded in the elemental principles of lexical argument structure. In this connection, there is another conceptual problem with the Case-based account of the contrast between the *splash*- and *smear*-type verbs. The transitivity alternation of *splash*-type verbs is not

assimilated to that of other verbs which participate in the alternation. We have maintained that transitivity originates directly from the fact that the Head-Complement relation is effected freely, as a natural consequence of the manner in which argument structure configurations are defined. A successful transitivity involves the appearance of a dyadic structure in the complement position of a verb, as in (20), the structure defined for the transitive VP *turn the leaves red*:

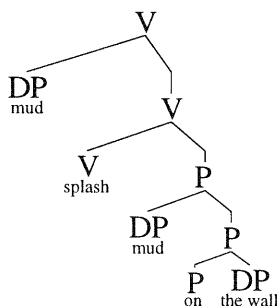
(20)



The transitive alternant is simply a function of “embedding,” a free option within the configurational theory of argument structure. The intransitive (e.g., *the leaves turn red*) represents the case in which the embedding option is not taken. Our expectation is that the *splash*-alternation would involve the same fundamental principle. But, in the Case-based account, this is not so; instead, principles alien to the domain of argument structure determine the transitivity effects.

We will consider a “lexical” solution along the following lines. We simply appeal to the two properties which may be possessed by a head, noting that a head may have the fundamental property that it project a Specifier. If patient-manner verbs of the *splash*-type have that property, then the structure they define conforms to the following pattern, the same as (19) above with the difference that the verb projects a specifier:

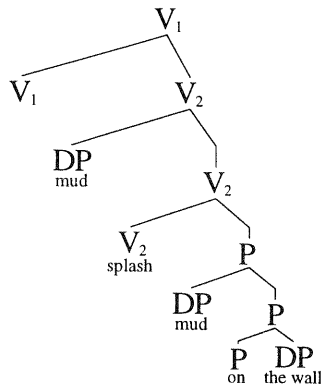
(21)



This is the intransitive variant of *splash on the wall*. The DP in the upper Specifier assumes that position not through selection from the numeration (Chomsky, 1995) but through Move, its copy being in the lower Specifier position, as indicated. The transitive variant (*splash mud on the wall*) is the result of

“embedding” (21) as the complement XP in the standard transitive superstructure [_v V XP], giving (22):²

(22)



This solution promises to help answer the question posed earlier concerning the observation that the internal vs. external association of the putative manner features, F_{in} and F_{ex} , correlates with the observed distinction in transitivity behavior. The answer suggested is that in both cases, the manner feature is linked to the “nearest c-commanding argument”—i.e., the first argument which c-commands the constituent consisting of the verbal head and its complement (V' , in the “bar-notation”). This will always be the specifier in the case of patient-manner (*splash*-type) verbs, hence an internal argument; and it will be the external argument in the case of agent-manner (*smear*-type) verbs.

The internal vs. external association, therefore, follows from the structure, and need not be stipulated. And this is fortunate, for it is highly unlikely in any event that there is any entity, i.e., feature F , which could even be tagged internal or external. This is because the effect we are concerned with here is not a *feature* but an aspect of the encyclopedic content of verbs, a part of the “definition”—e.g., the aspect of *splash* which has to do with a characteristic and prototypical motion and dispersal of particulate matter, or the aspect of *smear* which has to do with the particular gesture involved in successfully causing a substance to be distributed on a surface in the manner referred to as “smearing”. These are not matters of grammar, but matters relating to the highly variable knowledge—sometimes full, sometimes quite imperfect—which speakers have of the reference and appropriate use of vocabulary items. The use of the notion “feature” (F) for this aspect of lexical knowledge is a mere expository convenience.

²It should be mentioned that the structures we cite here are merely the embodiments of certain properties of the heads involved; there is, in reality, no point in the derivation of transitive *splash* which actually “looks like” (22). Actual derivations involve the processes of Merge and Move (Chomsky, 1995). Thus, there is no stage (apart from the numeration) at which V_1 is an “empty” verb, since upon its appearance as the sister of V_2 , it is in substance a copy of the head of the latter, by Move. That is to say, the derivation of transitive *splash* has the latter verb in V_1 -position at the very point at which V_1 and V_2 merge. We continue to use diagrams like (22) for expository convenience, bearing in mind their fictitious character.

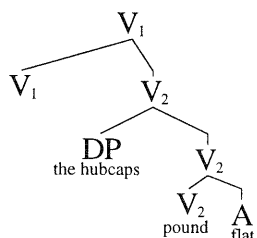
This solution also gives a reasonable account of the syntax of the argument which is constant between the transitive and intransitive variants of the patient-manner verbs, e.g., *mud* in *mud splashed on the wall* and *splash mud on the wall*. This argument is a Specifier, as expected on the basis of standard alternating verbs. The fact that it assumes the upper Specifier position by movement (from the lower Specifier position) is a natural option in the theory of constituent structure. In this, however, there lurks a problem, which we will state without further comment at this point. The problem can be stated in the form of a question. What prevents insertion of a distinct DP in the upper Specifier position of (21), i.e., from the numeration rather than by Move?³

Before concluding this section, we wish to mention another problem. For all that the manner components of verbs are not “features” or “morphemes”, in the usually understood sense, it is important to bear in mind that they do comprise an element of the lexical make-up verbs and have tangible effects on argument structure. Consider, for example, the verbs of (23):

- (23) (a) *The hubcaps pounded flat.
 (a') The boys pounded the hubcaps flat.
- (b) *The tackroom painted red.
 (b') We painted the tackroom red.
- (c) *My head shaved bald.
 (c') They shaved my head bald.

These verbal constructions, like *turn green* in (20) above, are based upon the dyadic configuration in which an adjective appears as the complement of a verb, the latter projecting the Specifier required to satisfy the fundamental lexical requirement of the adjective:

(24)



³The effect of this prohibition is reminiscent of the effects of the Function-Argument Biuniqueness principle of Lexical-Functional Grammar (Bresnan, 1982) and the Stratal Uniqueness Law of Relational Grammar (Perlmutter and Postal, 1977). Apparently, no lexical argument structure may contain two distinct Specifiers.

Unlike *turn green*, however, verbs of the type represented by *pound flat* do not freely enter into the transitivity alternation. Instead, they are consistently transitive. We assume that this is due to the “manner component”, which must be linked to the external argument, the agent—“pounding”, for example, is a manner of action which must be attributed to an agent. The encyclopedic “entry” setting out what it means to “pound,” as in *pound something flat* necessarily includes reference to an entity, an “agent,” representing the author of the actions and effects attendant on prototypical instances of “pounding.” Whether or not this is strictly speaking an aspect of grammar, it surely determines to some extent the relative acceptability of the hypothetical transitive and intransitive variants of these verbs. Only the full transitive structure shown in (24) will permit the “agent manner component” to link to the external argument, given our assumptions. If V_1 were absent, there could be no external argument, accounting for the unacceptability of (23a); similar remarks apply to (23b,c) and to other hypothetical intransitive alternants of the same type.⁴

3. Manner of motion verbs.

Many verbs of “manner of motion” have both intransitive and transitive variants, as exemplified in (25), where they appear with PP complements:

- (25) (a) The cows ran into the corral.
 (a') We ran the cows into the corral.
- (b) My horse jumped over the cattleguard.
 (b') I jumped my horse over the cattleguard.
- (c) She danced down the hall.
 (c') He danced her down the hall.

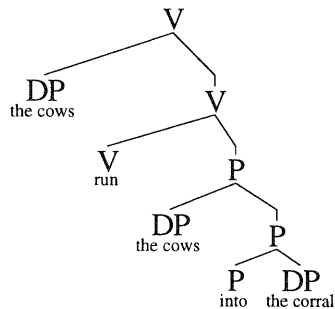
There is an interesting difference between verbs like *run* in (25a,a'), for example, and verbs like *splash* in (17a,a'). While one can say *I dropped the ball and splashed mud on the wall*, one cannot ordinarily say *I dropped the ball and ran the cows into the corral*, with anything like the same “causative” force, although the situation described could in fact transpire—e.g., if the cattle were somehow spooked by the ball dropping and consequently ran into the corral. Similarly, firing a gun can incidentally *break a pot* (the report itself might cause a pot to break, for example), but firing a gun does not incidentally *jump a horse over a cattleguard*. At least that does not conform to our conventional use of *jump*, in the

⁴It should be noted that some speakers allow the intransitive variant of some of these verbs, and in general, the boundary between the type represented by *pound flat* and that represented by *turn green* is somewhat fragile, unsurprisingly. In some cases, however, an apparent intransitive variant is in reality a middle, and hence fundamentally transitive. Our suggested analysis of the verbs of (23) requires modification of the proposal that “manner components” link to the “nearest c-commanding argument”. Perhaps they are free to link to *any* c-commanding argument, producing nonsense in some cases but also giving all of the well-formed cases.

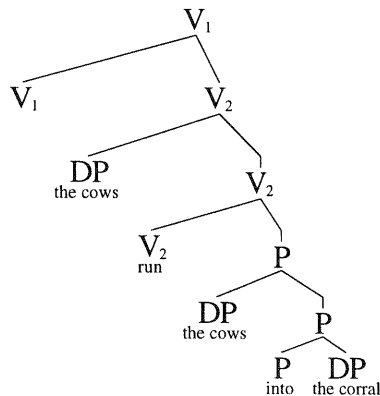
sense of (25b,b'). To be sure, as a real world situation, firing a gun might in fact bring about the circumstance that a horse jumps a cattleguard. In each of (25a'-c') the object is in a real sense "agentive", able to act under its own control or will; this is not true of the objects in (17a'-c'), clearly.

The question we wish to address now is whether the distinction just mentioned is one of argument structure, as understood here, or rather a matter having to do with the "encyclopedic" content of the items involved. If we assume the latter, then we can take these verbs to have the structure suggested in the preceding section for alternating verbs of the type represented by *splash*—i.e., verbs which take PP complements and project a Specifier (occupied by DP raised from Specifier of PP):

(26) (a) INTRANSITIVE:



(b) TRANSITIVE:



If we attribute these argument structure configurations to the verbs of (25), we must suppose that the "agentive" character of the intransitive subject, and the "agent-like" character of the transitive object, are a matter of interpretation. That is to say, this is not the "structural" agentivity typically associated with external arguments. The intransitive subjects of the (a)-sentences of (25), for example, are not external arguments; they are a Specifiers, and therefore occupy a structural position normally associated with an interpretation corresponding to the notion "theme". But the subjects of (25a-c) are commonly, and perhaps correctly, associated with the semantic roles variously termed "agent" or "volitional actor". Most important, however, is the fact the objects of the corresponding transitive

sentences (26a'-c') can also receive an "agentive" interpretation. It is for this reason, presumably, that *jumping a horse* entails "coercing" it to jump, by riding it, or guiding it over a hurdle at the end of a saddlerope, or by arranging for its trainer to jump it in a show (with a rider, in the conventional way); in short, properly speaking, *jumping a horse* is not effected as an incidental concomitant of some accidental event—by contrast *breaking a pot* can be such an incidental concomitant.

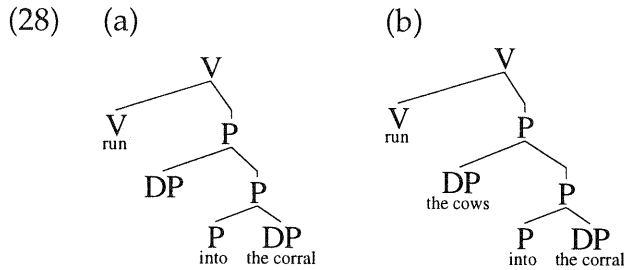
If we take this "agentivity" to be a matter of interpretation, as opposed to structure, then its considerable intuitive salience presumably has to do with satisfying the entailments and expectations embodied in the characterizations of actions like *running*, *jumping*, *dancing*, and the like, expressed in the encyclopedic definitions associated with the corresponding lexical items. The idea that this is strictly an interpretive matter is not unreasonable, in fact, since the verbs involved here are quite variable in relation to the putative agentivity factor. It depends, among other things, on the arguments. Consider the following examples:

- (27) (a) Water ran into the beanfield.
(a') They ran water into the beanfield.
- (b) The fire jumped over the stream.
(b') The wind jumped the fire over the stream.
- (c) Droplets danced off the bough.
(c') A sudden jolt danced droplets off the bough.

While it takes active and conscious coercion to run cattle into a field, incidental opening of a gate can run water into a field. It is reasonable to suppose that this is a matter of knowing what it means for cattle to run and what it means for water to run. If one incidentally causes cattle to run into a field (by leaving a gate open, for example), one ordinarily says "I *let* the cattle (get) into the field," or some such thing, not "I *ran* them into the field." But one can accidentally trip on an irrigation gate and say "I ran water into the field." Moreover, virtually any of these situations can change—cattle bunched up in a corral can accidentally be "run into a squeeze chute", and firefighters can intentionally "jump a fire over a road" to extend a firebreak; and so on.

In view of observations of this nature, we take the aspects of meaning which appear to distinguish the verbs of (25) from those of (17) to be matters of "encyclopedic meaning" and of ordinary knowledge of the relevant features of the corresponding event-types and participant entities. That is to say, they are not aspects of meaning which must be expressed structurally; accordingly, verbs of the types represented in (25) have the same structure as those in (17).

It may be possible to prove that the position just announced is correct, in the sense that an alternative that suggests itself is not possible. Of course, any claim of this sort is theory-dependent and, consequently, rests on certain assumptions. What is the alternative? It has to do with the structural representation of agency, or “cause”, to use the more apt terminology of Pesetsky (1995). We have assumed generally that the external argument, is associated with that semantic role. This suggests the possibility that both the transitive and intransitive alternants of the verbs of (25) have external arguments, as would be the case if they had the following structures, corresponding to (25a) and (25a’):



The intransitive variant would in fact be *transitive*, by hypothesis, with an empty DP(Specifier of PP) bound to the external argument, in the manner of conventional anaphora—cf. “the cows ran themselves into the corral”. This would capture the alleged agentive interpretation of the intransitive members of (25). It fails, however, to express the “agentive” character of the objects of the verbs of (25)—the intuition that “coercion” or “direct and active causation” is involved in the transitives presumably remains a matter of interpretation and reference to the “encyclopedic meanings” of the verbs and their arguments, as in the analysis implied in (26).

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