The Grammar of Existence

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I Introduction

The traditional transformational approach to existential sentences, such as 'There is a unicorn in the garden' is to derive them from corresponding sentences where no existential *there* is present; in this case, 'A unicorn is in the garden'. The rule in question, a transformation known as *There Insertion*, must be restricted to apply to sentences whose main verb is *be*, and whose subject is indefinite. Thus, from a sentence like 'A unicorn ate in the garden' we cannot derive *'There ate a unicorn in the garden'; likewise, 'The unicorn is in the garden' does not transform into *'There is the unicorn in the garden'. Accordingly, an early formulation by Ross (Lectures, MIT, 1967) set the form of *There Insertion* as:

(1) NP be X ⇒ there be NP X where NP is -DEF

There is a good deal to be said for this formulation. First, it represents the existential *there* as being derived from a non-deep structure source; the difficulties of trying to state the distribution of this *there* in DS would be formidable. Second, such a rule states an obvious generalization obtaining between existential sentences and corresponding nonexistential sentences of the same meaning. Third, it captures the fact that sentences with *be* undergo this rule, even though the *be* in question may not be of deep structure origin. A passive sentence with transformationally derived *be* such as 'A man was seen running from the scene' has an existential form, 'There was a man seen running from the scene' (although some evidence points to a derivation in which the latter sentence comes from 'A man who was seen running from the scene was'. Cf. Grinder, 1972).

The difficulties with the rule of *There* Insertion are, as with most known rules, insurmountable. It fails to explain why *there* is inserted and not, say, *chop suey*; or, whether the *there* that is inserted is the same as the deictic *there*, or what relation the two bear to each other. Further, the rule fails to encompass existential sentences that appear with main verbs other than *be*, verbs such as *enter, begin*, etc., as in 'There entered a white rabbit', or 'There began a great commotion'. The specification of this class of verbs is by no means obvious. E.G., although 'begin' is included, 'end' is not:*'There ended a riot' Also, the rule stumbles a bit on sentences like 'There is space in the manger', which, under the treatment discussed, has an ungrammatical deep structure,*'Space is in the manger'.

The rule might be made obligatory for such cases, and, in fact, there is an interesting characterization of the class involved.

Observe pairs of sentences such as the following:

(1) a. There is {space / corn} in the manger.

b. {*Space / Corn} is in the manger.

(2) a. There is {fire / a sty} in his eye.

b. {*Fire / A sty} is in his eye.

(3) a. There is {a pain / a splinter} in my arm.

b. {*A pain / A splinter} is in my arm.

It becomes immediately apparent from examples such as these that the cases in which only the existential form of the sentence is grammatical are those which involve inalienable possession (observed by M. Pryse). Thus the relation of space to the manger is different from that of corn. Let us say with Fillore, (1968) that A is inalienably possessed by B if A exists only insofar as it is possessed by B. Thus, the manger contains corn in a wholly different sense from that in which it contains space: the corn has an independent existence, the space has not. Likewise for the difference between having fire in one's eye or a sty in one's eye. Fire refers to personal quality, inalienably possessed, while sty does not. The same distinction applies to the case of a pain versus a splinter in the finger.

Another test for the difference between alienable and inalienable possession can be applied here. Alienably possessed NP's pronominalize with definite pronouns, while inalienably possessed NP's do not, as shown in the following:

(4) a. John had an umbrella yesterday, but someone else has it now.

b. *John had a cold yesterday, but someone else has it now.

c. John had a cold yesterday, and someone else has one now.

(5) a. There was a cow in the meadow, but now it's in the barn.

b. *There was space in the manger, but now it's in the kitchen.

The lack of pronominalizability by definite pronouns of inalienably possessed NP's is a consequence of the semantic fact that such NP's have no existence independent of their possessor.

Before considering how the difference between alienably and inalienably possessed NP's ought to be handled by There Insertion, it is of interest to digress to consider further the matter of the two types of possession. In particular, I shall try to show that events are inalienably possessed by their times of occurrence. When we say, 'The robbery occurred at 3 p.m.', we locate a certain event in time. In general it is the case that statements of location have closely corresponding statements of possession. Thus, we have pairs like, 'The cat is on the table' and 'The table has a cat on it'. One way of answering certain 'where' questions of location is with possessional statements: 'Where's the chalk?', 'The dog has it', although there is a difference between possession by virtue of location at and ownership, as in: 'Where's the farm', *'John has it'.

I shall try to show now that when an event is located in time, then, that point or stretch of time possesses the event (in the same general way that a location possesses something located at it), but that the possession is inalienable. To see this, we need only apply the two syntactic tests for inalienable possession outlined above: occurrence only in existential sentences with there , and failure to pronominalize with a definite pronoun. This can be seen in (6), (7).

(6) a. There was a thunderstorm yesterday.
b. *A thunderstorm was yesterday.

(7) *There was a thunderstorm in Toledo yesterday, and today it was (found lurking) in Dallas.

Another way of stating that events are inalienably possessed by their times of occurrence is that the same event cannot occur twice. If it did, it would be located at and thereby inalienably possessed by two different times. This is out in the same way that two people cannot have the same pain.

(Notice that we have here a proof of the impossibility of time travel on grammatical grounds. E.g., if someone traveled to the third century B.C., then we would be able to say things like, 'He's now eating olives in the third century BC', which would be to ascribe the same event to two different times. The impossibility of this is of the same sort as that of two people having the same pain, a grammatical (conceptual) impossibility.

Let us now return to the question of how the fact that inalienably possessed NP's can occur only in existential form might be treated in a framework which employed a rule of There Insertion.. For a sentence like 'There is space in the manger', it would be necessary to postulate a deep structure *'Space is in the manger', and to make the rule obligatory in this case. Notice, however, that unless the syntactic configuration of inalienables is different from that of alienables at the time at which the rule applies, for which there is no known evidence, then the rule must be made obligatory on the basis of purely semantic information. Although this is possible using more powerful formal devices than envisaged in the Standard Theory of Aspects, e.g., we do not thereby arrive at any deeper explanation of why it is the case that the inalienables must undergo this rule. An outline of such an explanation will be proposed later. It should be emphasized now, however, that even if we can construct different deep or semantic structures reflecting the differences between alienable and inalienable possession, access to which is allowed for determining obligatory application of the rule, we should still not know why the rule should be obligatory in this case.

It is clear, in any case, that even if there is a rule of There Insertion in English, much about existential sentences remains to be explained. In what follows I will discuss the above mentioned difficulties with There Insertion, and will attempt to formulate an account of existential constructions on the basis of semantic considerations. The first step in doing this consists of finding a characterization of that class of verbs other than be which may take the existential there.

II Coming into Being

A large class of verbs which allow existential there are the movement verbs, with some interesting restrictions which will be noted below. Thus, we have in English sentences like "There entered a squirrel." Likewise, we can have "There exited a squirrel," although in many dialects it is necessary that the speaker in such cases consider himself to be located outside of the enclosure from which the squirrel is coming. Existential sentences also occur with movement verbs like run, walk, etc., in certain circumstances. Thus contrast:

(8) a. There ran a man { into the room / from the building / *around the track }

The problem presented by sentences like (8) for a rule of There Insertion is almost insuperable--the rule would be able to operate when the verb run occurs with certain prepositional phrases, but not with others. It would be interesting if the characterization of the class of verbs with which the existential there can occur also included the characterization of those environments in which run could take the existential, and accounted for the peculiar restriction on speaker location of many dialects in the case of a verb like exit.

The proper characterization seems to be that the existential there can appear with a sentence if it expresses coming into being of some object, where this coming into being can include coming into the perceptual field of the speaker, i.e., coming into being for the speaker. The object which is said to exist is moving, but moving in the sense of coming into being. Thus, it is that the speaker must be thought of as being outside of the enclosure which is exited (correspondingly, inside an enclosure which is entered) in many dialects. This restriction on speaker placement can be relaxed to the extent that the speaker can be replaced by some point of reference, with respect to which the moving object is coming into being. Thus, we might have, "Sherry was sitting in the house when there entered a white dove," so with respect to Sherry the dove is coming into being. This semantic condition on coming into being explains why we get an existential with rise, but not sink, or with begin but not end. We have "There rose a green monster from the lagoon," but not* "There sank a green monster into the lagoon," (although this latter sentence might be acceptable if one thinks of oneself as hidden under the water watching the monster sink into view). Likewise, we get "There began a riot" but not, "There ended a riot." In the case of begin, the event is entering the time-space of the speaker. There is no possibility of saying,* "There ended a riot," as there was with sink, since the speaker cannot place himself outside of his time-space, as this is his inalienable possession, as described above.

Likewise, the coming into being characterization of existential sentences with verbs other than be accounts for those cases of run which can occur existentially. *"There ran a man around the track" is ungrammatical because there is no coming into being, but "There ran a man { into the room / from the building }" are grammatical and do involve coming into being.

Further evidence comes from the sentences like (9) (noted by Grinder).

(9) *There didn't begin a riot.

Such a sentence is ungrammatical in that the negation of a statement of coming into being is not a statement of coming into being. The essentially semantic nature of the characterization given above is pointed up by examples such as (9). A sentence like (10) is not a counterexample.

(10) There ceased being riots.

In such cases the existential there originates in the lower sentence, and is raised.

(NB: We have with (9) an interesting proof of the existence of a difference between the so-called internal and external negations on the basis of grammaticality. Notice that the external negation is acceptable, 'It is not the case that there began a riot'. Likewise we can use the same difference to distinguish constituent negation. E.g., 'There didn't begin a riot, but rather an insurrection'; this sentence is a statement of coming into being, and so the existential is possible.)

III Existentials as Locatives

In the following I will argue that existentials have a locative origin. The idea is not new in linguistics; it has been discussed by Kahn (1966), Fillmore (1968), Lyons (1968), Christie (1970), Thorne (1971), Kuno (1971), and, no doubt, others. The evidence for such a proposal discussed in the literature concerns the obvious alternations between locative and existential forms in many sentences: 'A unicorn is in the garden' and 'there is a unicorn in the garden'. Kuno and Fillmore argue that the existential there is in fact just the usual pronominal form of a locative, and is formed by pronominalization after some copying operation produces two identical locatives in a sentence. The origin of there sentences in such as 'There is no even prime number greater than five' in which there is no overt locative is ascribed to a covert locative element, say Loc, which is present in the underlying form but has no surface content.

There is some reason to object both to the notion that existential there is a pronoun, which it is not by most speakers' intuitions, and to the postulation of a needed but missing Loc. I shall attempt to outline an approach that does not suffer these difficulties.

Before dealing with the syntax of existentials, it is worthwhile to explore further the semantic connection between locatives and existentials. Consider first sentences like (11), which have a double reading.

(11) Condors are in the Andes.

Under the first reading, (11) is a generic statement about the habitation of condors. In the second, (11) is synonymous with (12a,b).

(12) a. Sm condors are in the Andes.

b. The Andes have condors in them.

The (12) reading leaves open the possibility that condors live elsewhere.

The difference in readings of (11) is not a difference of emphasis or focus. That is, if heavy stress is given to either condors or Andes, the result is still ambiguous, but the stressed item is read contrastively. E.g., when Andes is stressed, (11) still means either that condors generally inhabit the Andes (as opposed to some other place) or that more than one condor is in the Andes (as opposed to some other place).

This sort of difference has been discussed in the literature, under the term "syntactic orientation" by Hale (1968) and Dixon (1970). Their discussion is confined largely to transitive sentences, which, they claim, exhibit a difference in meaning depending on whether the sentence is subject oriented or object oriented. The reality of this difference is evidenced overtly in Australian languages, where it has morphological consequences. They claim, correctly, that ordinary transitive sentences of English, such as (13), exhibit the same difference in orientation, and thus in readings.

(13) Joe killed the deer.

This difference shows up in certain embedded contexts, as noticed by Kac (1972), e.g., (14).

(14) That Joe killed the deer surprised Mark.

Under one interpretation, Mark is surprised that Joe's act was successful--under the other he is surprised that Joe should have acted as he did. The difference is also brought out when almost is inserted in (13): 'Joe almost killed the deer'; which McCawley and others have taken as evidence for lexically decomposing kill into cause to become not alive. McCawley (1972) notes Kac's objection, but claims that the difference is one of "topic." I will not go further into the dispute, but will claim that this difference of orientation, whatever it may be, is what is responsible for the difference in readings of (11).

This difference is relevant to the discussion of existentials in that only under the case where (11) is synonymous with (12) does it have an existential variant (15).

(15) There are condors in the Andes.

It should be evident from this sort of example that no syntactically based rule can correctly derive existentials from locatives, for to apply such a rule blindly to (11) would allow generating (15) in that case also when (11) does not carry the existential reading. Such a case is relevant here because it shows the connection between locatives and existentials. That is, a sentence like (11) which is generic or locative in reading depending on orientation allows an existential paraphrase only when it is read as a locative sentence. Interestingly, when this locative interpretation is present, the subject condors automatically is read as sm condors rather than as generic.

The concept of existence is, I claim, formed semantically (and grammatically) as the perfective of coming into being. On this Kahn writes:

> Instead of an antithesis to Becoming, exsistentia provides as it were the perfect of gignesthai: the state achieved as a result of the process of coming-to-be. And in fact the sense of existence was originally acquired by the verb in the perfect: the existence was conceived literally as what has emerged (1966, p. 256).

In terms of semantics, this claim is that existence (being) is not a prime, but that only the inchoative and the perfective are semantic primes. Existence, then, is the perfective of the inchoative, in the same way as the ordinary have got of English, as in 'She's got a lollypop', is the idiomatic lexicalization of the perfective of the inchoative of possession, i.e., perf (come to have). (See Kimball (1973) where this analysis of have got is

defended). In this way the use of the existential there with the coming-into-being cases discussed above and in straight existentials can be seen to be uses in the same environment.

On the relation between existentials and locatives Kahn writes:

> For example, nearly all the uses of the verb in Homer which we would recognize as existential are at the same time statements of place, and it might be urged that the distinctly existential value of the verb derives merely from its emphatic position in the sentence. On this view, a statement of existence is as it were an emphatic . . . statement of place . . . (257-258).

I have argued that events have no independent existence, but are inalienably possessed by their times of occurrence. For this claim there seems to be ample syntactic evidence. I would like to make the analogous argument for objects: an object is inalienably possessed by its place of location. A philosopher would accuse me of doing a piece of metaphysics here, for inalienably possessed things have no independent existence of their own, but exist only insofar as they are possessed. To claim that objects are inalienably possessed is to say that places are metaphysically more ultimate than objects. Although the real metaphysical claim I would like to make is somewhat deeper than this, having to do with the origin of the notion of location, I shall rephrase the claim as a claim about language; namely, that grammatically objects are inalienably possessed by their places of location. It follows from this claim that any statement of existence is necessarily a locative, for inalienably possessed NP's semantically and syntactically occur only with their possessors. E.g., there is only 'the space in the manger', or 'the space in this room'; space in general means something like 'the space in the universe'; so space cannot be without its inalienable possessor, the space of something. In any case, I have rephrased my claim as one about statements about existence instead of one about existence itself.

This treatment of existentials bears on an old philosophical question as to whether existence is a predicate , i.e., whether sentences like 'tame tigers growl' are of the same logical form as 'tame tigers exist', (cf. Moore, 1934). The problem has this character: If existence is a predicate, then seemingly a sentence like 'Joe exists' must be either true or without truth value, but never false. For if Joe fails to exist, then the referring term in subject position will have no referrent, and a presupposition of the sentence will be violated rendering the whole without truth value. (Under Russell's theory, it would simply be false if Joe doesn't exist.) For Frege existence was a predicate, but of a special sort. It was a second order predicate, a predicate of predicates, not a predicate of objects. To say 'tame tigers exist' for Frege was to say of the concept 'tame tigers' that something fell under it. Thus, the logical subject of such an utterance was not any tame tiger, but the concept itself.

I will conclude this paper with a suggestion concerning the possible origin of locatives (and, thus, existentials). Most writers on the subject I think suffer from supposing that locative statements had to contain a locative constituent and this led to several objections to the thesis that existentials are locatives, e.g., the awkwardness in finding an origin for 'There is an odd divisor of 15'.

A reasonable hypothesis is that a sentence like (16) comes from a underlying source such as (17a), which is then passivized into (17b). By dropping the main verb, (16) will result.

(16) A bird is in the tree.

(17) a. $\left\{\begin{matrix}\text{I}\\\text{One}\end{matrix}\right\}$ locate(s) a bird in the tree.

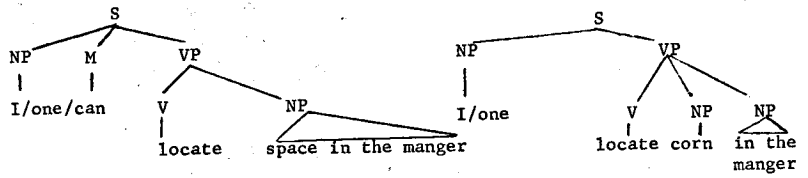
b. A bird is located in the tree.

Under this account, a locative sentence is, literally, one which contains the verb locate in its underlying structure. The troublesome (18a) would then find a reasonable source in (18b).

(18) a. There is no even prime greater than two.

b. $\left\{\begin{matrix}\text{I}\\\text{One}\end{matrix}\right\}$ cannot locate an even prime greater than two.

This proposed source for locatives explains some of the facts about existentials noted by Horn; in particular the close connection between existence and possibility (paralleling that between universality and necessity). A statement of existence which does not overtly specify a location is, by this analysis, still a locative assertion, but one which contains a modal of possibility. That is, 'There is a God' would come from 'I/one can locate a God' (and not the embarrassingly ungrammatical* 'A God is' as required by the There Insertion analysis. Notice, further, that under this account the source for 'There is space in the manger' would be 'I/one can locate space in the manger', where 'space in the manger' is one constituent. That is, this sentence has a different underlying form from one like 'There is corn in the manger' which would come from 'I/one locate corn in the manger'. The difference is brought out diagrammatically below.



So the second places corn in the manger; the first doesn't say where the space in the manger is. This automatically explains the ungrammaticality of the (passive) form *'Space is (located) in the manger', as promised above.

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