LOCALISM, COMPARATIVES AND (HOPEFULLY¹) APPLIED LINGUISTICS²

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By a localist theory of language I mean a theory which seeks to describe and explain the semantico-syntactic systems of natural languages by means of an (underlying) set of linguistic categories and relations which, directly but perhaps not obviously, reflect our awareness of reality as (inter alia) a system of spatio-temporal coordinates. For such a theory to be valid it must, of course, be shown that the class of grammars predicted by it is sufficient and necessary for the description of natural languages. In this paper I shall try to show that for one area of linguistic description at least, i.e., comparative constructions, a localist analysis of the facts seems necessary. However, I hasten to add that this descriptive exercise is not the sole or even the most important aim of this paper. For if this were the case I could, with justification, be accused of attending a conference on applied linguistics under false pretenses. Rather, the main purpose of this paper lies in its wider implications, or lack thereof, for applied linguistics. If "the localist hypothesis" is indeed necessary for an understanding of the nature of language and hence for an understanding of individual grammars, the question of its applicability must be tackled sooner or later. The aim of this paper, then, is twofold. First, to examine the validity of a localist interpretation of comparative constructions and, secondly, to start a discussion on the usefulness, or otherwise, of localism (as exemplified,

¹ With apologies to all purists who campaigned to have this dastardly teutonico-american upstart banned from supplement H-N of the Oxford English dictionary and with commiserations to the editor of said supplement who wanted to but felt he couldn't.

² This paper was read at the 12th International English-Polish Contrastive Conference, Białowieża, December 1976.

The definite article in this phrase may give the false impression that there is or could only be one manifestation of this hypothesis; hence the inverted commas.

say, in its strongest and most comprehensive form in the work of J. M. Anderson). The general aim will, I hope, be pursued at the conference whereas the specific question of comparatives will be dealt with in the rest of this paper.

In order to make my general point and in view of the fact that the study of comparatives is a veritable mer à boire I shall confine myself to the following questions.

- (1) What are the necessary components of the semantic representations of comparative constructions of inequality (-CCI) such as:
 - (Ia) John is taller than Bill
 - (1b) i. Caesar maior est Pompeio
 - ii. Caesar maior est quam Pompeius
 - (Ic) i. Jean est plus grand que ne l'est Pierre
 - ii. Jean est plus grand que Pierre
 - (1d) John ware (be tall) sen (pass) Bill⁴
 - (1e) John bi (compare) Bill gao (tall)4
- (2) Are there any connections between the surface structures of CCI and their semantic properties wholly or partly predictable?

For a generalized semantic representation of CCI to be valid it must reflect the following semantic properties, stated informally in (3)-(6):

(3) The asserted existence of a difference over a constant dimension⁵ between two entities.6 This complex of properties consisting of assertion, difference

In this connection it is perhaps in order to remark that property (3) as it stands is necessary but not, I think, sufficient to explain the much-debated ambiguity of sentences such as (4.4) John thinks he is taller than he is. On the non-contradictory reading it is an act of comparison involving the asserting of a difference (over a dimension of height) between John's height as known by the speaker and John's height as assessed by John. On the contradictory reading it is, of course, not an act of comparison. Rather, it reports an act of comparison. The apparent insufficiency of (3) has to do with complications arising out of sentences such as (4.5) John thinks he's tatler than Bill says he is. Is this an act of comparison or not? On the one hand, "sentence" (4.6) John thinks he's taller than Bill says he is but I'm not comparing how tall John thinks he is with how tall Bill says he is, seems anomalous. Indeed, (4.5) is consistent with neither John nor Bill ever having made

and constant dimension correctly predicts the status of respectively

- (3a) *John is taller than Bill, but I don't think he is
- (3b) *John is taller than Bill, but there's no difference in height between them

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- (3c) John is taller than Bill, but there is no difference in intelligence between them
- (4) The constancy of the scular positions of the compared entities relative to each other:
 - (4a) *John is taller than Bill, therefore Bill is as tall as John
 - (4b) *John is taller than Bill, therefore Bill is taller than John
- (5) The truth-preserving nature of syntactic reversibility:
 - (5a) John is taller than Bill, therefore Bill is shorter than John
- (6) Norm-neutrality. That is, the following example is not a contradiction:
 - (6a) John is taller than Bill, but he isn't tall

It would seem to follow from facts such as (3b) that the central mechanism to be postulated for CCI is a complex existence predicate which should express on the one hand the existence of a difference over a constant dimension and which should on the other hand define the relative positions of the compared entities over that dimension. For reference, let us label this hypothetical complex predicate E-p. The crucial question is, what would E-p have to look like? Suppose we formulated it (informally) as follows:

(7) (I assert) there exists a difference over a dimension of height such that X's height is greater than Y's height.

This would not do for the good reason that (7) contains the very notion it is postulated to explicate i.e., the notion comparison of inequality. In other words (7) is vacuous because it leads to an infinite regress.

A radical way out of this dilemma might seem to be to scrap the idea of an

⁴ I owe example (ld) from Twi to Keith Brown. Note that ware is an adjectival verb and sen a verb. Example (1e) is from Mandarin Chinese.

⁵ There are, of course, "two-dimensional" CCI such as John is broader than Bill is tall, but these will be ignored.

⁶ Note that this complex property is necessary for statements about the illocationary force of CCI. That the sentences listed under (1) are acts of comparison is clear from (4.0) *John is taller than Bill but I'm not comparing them in any way. Now the verb compare could hardly be categorized as a performative verb since it lacks the necessary qualifications. Note in this respect (4.1) *I compare John is taller than Bill. However, to assert that there exists a difference over a constant dimension between two entities is to perform an act of comparison. In other words, comparing is a special form of asserting. Note in addition that (4.2) the boy I saw is taller than John represents an act of comparison whereas (4.3) I saw the boy who's taller than John does not: it presupposes a (previous) act of comparison.

comparative statements about John's height. Given that, what is the origin of the CCI if not the speaker at the time of utterance? On the other hand, (4.5) does not seem to be as straightforward an act of comparison as the examples in (1) in that the speaker uttering (4.5) would not be comparing "states of affairs" but, rather, propositions about states of affairs. Note that (4.5) is consistent with the speaker never having met John or Bill, whereas (1a) John is taller than Bill would be "unwarranted" in such a situation. In other words, (3) makes no distinction between, for lack of better terms, "first-order" and "second-order" acts of comparison. Whether this distinction is real or spurious I am in no position to state at the time of writing. It should be noted, however, that in second-order comparison, unlike first-order comparison, the speaker commits himself to nothing as regards the true state of affairs. Utterance (4.5) is perfectly consistent with the continuation clauses ... and he's right ... but he isn't and ... but I couldn't say whether he's right. The only thing the speaker commits himself to in (4.5) is the truth of his assertion that John's proposition about John's height involves a greater number on the arithmetic scale than Bill's proposition about John's height.

existence predicate altogether and to leave greater than as a semantic primitive. The question is, how would we rule out (3b) (here repeated as (8)):

- (8) *John is taller than Bill, but there's no difference in height between them. That is, how would we get from the primitive term greater than (in respect of dimension D) to difference over a dimension D. The facile answer to that question would be: define the latter by metarule. But this would not do for two reasons. First the metarule would be either totally unexplanatory or infinitely regressive itself. Secondly, it would have to apply in a very ad hoc manner when invoked to rule out such variegated structures as:
 - (9) *John is much taller than Bill but there is absolutely nothing between them as regards height
- (10) *John ranks above Bill in intelligence but they are equally intelligent Another way out might be to equate the semantic relation greater/smaller than with the 'mathematical function' greater/smaller than. The linguistic forms (-er, more, less, and the like) would then simply be mapped onto this (underlying) mathematical function. But this solution seems to put the mathematical cart before the linguistic horse in that it derives from the (surely erroneous) assumption that natural language is (in this respect) determined by mathematical concepts and not the other way round. Moreover, and even more seriously, this solution precludes in principle the study of non-arbitrary connections between semantic representations and corresponding surface structures.

Let me sum up the theoretical dilemma with regard to the generalized semantic representation of CCI. On the one hand, *E-p* as formulated in (7) or something very much like it seems to be necessary to predict the semantic facts. On the other hand, (7) is vacuous as it stands. What is needed, evidently, is an existence predicate free from both infinite regress and mathematical reduction.

Now given a localist theory of language, the clue to a solution seems to be in reducing the concept difference over a constant (labelled) dimension not to a mathematical concept but to a perceptual or spatial one, i.e. distance. There is, however, at the outset an apparent difficulty with this reduction, as illustrated by (11)-(14):

- (II) There is a distance of 400 miles between E. and L.
- (12) *There is a difference of 400 miles between E. and L.
- (13) *There is a distance in height of 5 inches between J. and B.
- (14) There is a difference in height of 5 inches between J. and B.

Why, if difference is reduced to distance, is (13) impossible? This turns out to be the wrong question for the following reason. It is evident from examples (11)—(14) that the 'lexical items' difference and distance are in complementary distribution. But nothing follows from that as regards non-reducibility at a more abstract level. What, then, is the precise characteristic of the linguistic environment in which the two items in question differ? On examination it turns out to be the presence or absence of the category constant labelled dimension (in this case height. Note that the word dimension is not used without good reason; it correctly implies measurability and/or gradability).

It seems in order, given these facts, to create a theoretical distinction between two underlying linguistic categories, 'distance' and 'abstract distance', which have predictable connections with surface linguistic categories. On this hypothesis, which is of course a special manifestation of the localist hypothesis in general, the following underlined surface forms come as no surprise:

- (15) It is true that J. is taller than B. but there is hardly anything between them.
- (16) John is far below Bill in intelligence
- (17) John ranks above Bill in general ability

(It should be noted, incidentally, that these are, semantically speaking, straight cases of CCI. They are all subject to the semantic implications associated with CCI).

We are now in a better position to answer question (1) by reformulating (7) informally and provisionally as:

(18) (I assert there exists a distance on a scale_x (labelled *height*) such that {John's } position on scale_x is {above } {Bill's } position on scale_x.

It seems that (18) is sufficient to predict the semantic properties of CCI listed in (3)—(6). However, a doubt might remain about its properties as an explanatory device. What really is the connection between distance and comparing? I suggest the answer lies in postulating a theoretical category journey which mediates between the two through its associations with space and time. Let me start by giving an analogy. Suppose a blind person wishes to verify for himself whether X is taller than Y. Whatever the complexities of the task and given however many available strategies, the process would have to take place in time. His sensors (hands, sticks or whatever) would have to go on a journey in order to perform an act of comparison. Is it too fanciful to suggest that this notion of journey underlies linguistic acts of comparison? The answer would clearly be yes if there were no residues

⁷ This is essentially the solution adopted by Bartsch and Vennemann in their Semantic structures (1972).

⁸ For reasons which I do not understand Bartsch and Vennemann have chosen to label their type of grammar (which is based on what most linguists would call a non-natural relationship between deep and surface phenomena) natural generative grammar.

The inventor of this theoretical category is Marilyn Jessen (see her A semantic study of spatial and temporal expressions in English. Ph. D. dissertation, Edinburgh University, 1975.)

whatever of such a notion on the surface. But these residues clearly exist in a variety of shapes (either spatial or temporal in meaning) such as ablative case-markers or the word than (historically thonne meaning subsequently or then) or equivalents of pass and the like.

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The clue to the connection between *comparison* and *journey* would seem to lie in the analysis of the words *above* and *below*, which are clearly reducible to the concept *journey*. In utterance-tokens of the type X is above Y the implicit instruction to the *traveller/hearer* is:

(19) Start at (a referentially well-defined) point Y, travel away from gravity (or zero in the case of numerical scales) and you will reach X.¹⁰

If X is below Y the implicit instruction is:

(20) Start at (a referentially well-defined) point Y, travel towards gravity (or zero) and you will reach X.

Two things are to be noted about these instructions. First, there is a constant point of departure, i.e., the second term of the relation regardless of whether the relation is expressed as above or below. Secondly, the constant point of departure is identified with a known point of reference (which itself, of course, is part of a (circular) network). This corresponds to the fact that the speaker who utters a token of the sentence-type X is above Y or X is below Y, if he wishes to make sense is bound to presuppose that his hearer knows the position of Y but not of X.

My main point is that CCI are journeys in the sense outlined for the semantic relations above and below. That is, the sentence:

(21) Caesar maior est Pompeio

contains the following instruction to the traveller/hearer:

(22) Start with Pompeius' position on the numerical scale (labelled height for the purpose of this particular comparison), move away from zero and you will arrive at Caesar's position.

Whereas:

(23) Pompeius minor est Caesare contains the implicit instruction:

(24) Start with Caesar's position ... move towards zero and you will arrive at Pompeius' position.

As in the case of above and below instructions (22) and (24) contain a constant point of departure, i.e., the second term of the comparison. Moreover, this constant point must be referentially well-defined. Now the direction of the

journey plus the point of departure together determine the surface characteristics¹² of sentences (21) and (23), i.e., the subject NP (=the destination NP), the selection of the adjective and the second NP (or departure NP).

The departure NP in CCI is marked in a variety of ways across languages the least surprising of which is the case-marker ablative as in (1bi). It would surely not be unreasonable to maintain that the semantic notion 'departure point' explains the presence of ablative markers in case-marking languages.

- (a) *John is taller than anybody I like
- (b) John is taller than anybody you like
- (c) John is taller than anybody I know
- (d) John is taller than a giant
- (e) *John is taller than an electrician
- (f) *A giant is shorter than John
- (g) A giant is shorter than an ogro

Evidently we must allow for departure NP's which describe, rather than an identified reference point, a set of identifiable reference points as in (c). The reason why (d) is acceptable is that in uttering tokens of this type a sincere speaker would guarantee the well-defined character of the departure NP.

The prima-facie puzzling difference in status between (a) and (c) can be clarified by making explicit the nature of the understood objects of the verbs like and know as in:

- (h) *John's height is greater than the height of anybody I like
- (i) John's height is greater than the height of anybody I know

Token (h) compares a numerical entity with an incompatible (i.e., likeable) entity, whereas token (i) compares a numerical entity unknown to the hearer with a numerical entity identifiable by the speaker, which is predicted by the general constraints on CCI outlined in the main text.

Sentences (d) and (e) illustrate the point that departure NP's are constrained, first, to mark one inherent semantic property of the NP rather than its total set of properties, secondly, to mark a property relevant to the comparison. These constraints also hold for destination NP's of course. That is, in uttering John is taller than Bill the speaker is not comparing John with Bill but John's vertical dimension with Bill's vertical dimension.

Sentence (f) illustrates the non-reversibility of set-describing indefinite departure NP's. There exists, of course, a general constraint that non-specific indefinite NP's can only occur as the subjects of generic sentences, as in (g). Moreover, generic sentences only allow non-referring NP's as main constituents. But these general syntactic constraints do not explain anything. In particular, they do not explain (f). They seem to be part of a semantic constraint on non-world-creating speech-acts which rules out non-specific NP's as subjects or topics. In simpler terms, it does not make sense to make specific statements about something you cannot identify. Note that this general semantic constraint does not hold for world-creating speech-acts as:

(j) A giant would be taller than John (say, in answer to the question Can you think of anything taller than John?). But in general destination NP's must be specific in acts of comparison. Comparisons as journeys are never mystery tours.

The comparative marker -er is of course a function of the assertion of the existence of a difference over a dimension. The assertion of the non-existence of a difference over a dimension corresponds to comparative constructions of equality such as John is as tall as Bill.

There is more to the meaning of above and below than is contained in these instructions. Additional componential statements about the angle of the trajectory relative to the gravitational axis are necessary to distinguish above and below from over, under and other prepositions. But these complications do not seem to affect the main point.

There are interesting problems attached to this requirement of referential well-definition in that it cuts across the definite/indefinite distinction. For example:

However, it would be unreasonable to maintain that this notion explains the English comparative marker than. Indeed, this marker whose diachronic meaning is then could be construed as a counter-example to my analysis in that it seems to imply that, historically speaking, the subject NP was the point of departure for CCI in English. This objection would imply that this diachronic fact of English is not inconsistent with a localist analysis as such.

On the face of it there seem to be two possible solutions to the problem of thonne. First, it might be suggested that some languages may select a different semantic departure point from the one suggested for Latin plus correspondingly different surface structures. The Old English equivalent of the sentence John is five inches taller than Bill would then receive the following (skeletal) journey description:

- (25) Start with John, move five inches towards zero, reach Bill rather than:
- (26) Start with *Bill*, move five inches away from zero, reach *John*. The other possibility is that some languages select the same semantic departure point as the one suggested for Latin but (for whatever reason) reverse the direction on the way to the surface.

There is reason to believe that the first of these solutions is unlikely to be correct. The evidence for this concerns the nature of the subject NP in CCI. I argued earlier that the second NP must be referentially well-defined (see footnote 11). That is, knowledge of its properties with regard to the comparative dimension must be shared by speaker and hearer for tokens of CCI to be appropriate in discourse. But the subject NP need not, indeed must not be so constrained. Its properties with regard to the comparative dimension must be presupposed by the speaker to be unknown (or new) to the hearer for CCI tokens to be appropriate. In other words, it seems that both in discourse

and in semantic representations the subject NP must be the point of destination and the than-NP the point of departure.¹⁴

As regards the second "solution", it should be noted that English, historically, selects a time category rather than a space category to mark CCI journeys. This suggests that there may be a correlation in CCI across languages between the selection of time-markers and (syntactically) reversed direction. However. Latin quam (marking a temporal correlative equivalent to when) seems to mark the second NP as point of departure.

My last point about the possibility of a localist analysis of CCI concerns the (vexed) question of ne-explétif (as illustrated in example 1ci), 16 which is linked to the developmental history of comparatives in Indo-European. This history is exceedingly confused but hypotheses about the origin of CCI boil down to the question of whether its earliest forms were paratactic, hypotactic or "mixed". G. W. Small (1924) in his brilliant book The comparison of inequality argues in favour of a paratactic origin and postulates the following proto-structure:

(27)
$$NP_1 - adj_x - NP_2 - neg - adj_x$$

(John is tall—Bill is not tall)

It is clear that proto-structure (27) is to be interpreted as a postulated surface structure. However, recent attempts have been made by linguists to formalize a paratactic deep structure, which resembles (27), for synchronic forms of CCI regardless of the nature of their varying surface structures. The most notable attempt is to be found in Seuren (1973) where the following (informal) semantic representation for CCI types is postulated:

(28) W is adj_x to an extent_y and Z is not adj_x to extent_y (John is tall to an extent to which Bill is not)

Seuren argues that (28) accounts for ne-explétif in a natural way. To which one could retort that it does not seem to account in a natural way for synonymous constructions in French without ne-explétif. Indeed, it is clear that (28) must be wrong as a semantic representation of CCI for the simple reason that it predicts both John is taller than Bill and John is shorter than Bill. Seuren also claims that (28) accounts for the presence on the surface of indefinite

¹³ Note in this connection the oddity of the token:

⁽a) John is taller than Bill in answer to the query:

⁽b) How tall is Bill the acceptable (but unhelpful): rather than

⁽c) He is taller than John

It is perhaps as well to point out here that unknown may include unrealised, for example, in cases such as:

⁽d) But what about Mohammed Ali, surely he is fitter than Bill as a retort to the hearer's previous assertion that nobody is fitter than Bill. The general point is that ignorance or unawareness of the properties of the subject NP with regard to the comparative dimension is based on speaker's presupposition rather than objective fact.

Note that this property of CCI subject NP's might constitute a slight embarrassment to theme-rheme analyses of utterance tokens in that, on such analyses subject, NP's in CCI would clearly be theme (or "old").

¹⁴ In localist-case terms they would be described as "locative-absolute" NP and "ablative" NP respectively. In fact, Anderson's localist case grammar is the only theory in existence which seems to fit the facts of CCI noted in this paper.

¹⁵ Exmaples (Ia) — (Ie) illustrate some of the permutations that are possible in the selection of locative markers. English (historically) temporal, Latin both spatial ("ablative") and temporal (quam), Twi neutral (pass). Note that Chinese has no overt marking apart from the verb compare.

¹⁶ Ne-explétif is not restricted to French in Indo-European. Italian is notable for possessing this ancient feature and also some dialect forms of English (John is taller nor Bill).

pronouns such as anybody and their association with underlying negatives, as in:

(29) John is fatter than anybody/*nobody/ever/*never. The trouble with this evidence is that it also holds for comparatives of equality:

(30) John is as fat as anybody/*nobody/ever/*never

An additional difficulty with paratactic structures like the one proposed by Small is that they seem to contravene the condition of norm-neutrality mentioned at the beginning of this article.

Two further facts contribute to the suspicion that the matter is less straightforward than a paratactic analysis implies. First, there exist in natural languages surface structures which must be semantically hypotactic. For example:

- (31) Marry that slut and I'll disinherit you which corresponds to:
 - (32) If X then Y

Secondly, there exist structures with overt negatives on the surface but without negatives in their corresponding logico-semantic representations, as in:

- (33) Don't come here or I'll kill you
- (34) If you come here then I'll kill you

These facts indicate that a basically non-paratactic underlying structure like the one I have outlined cannot be claimed to be wrong just because it is non-paratactic and does not contain an overt negative. One could go further and propose the following hypothesis concerning ne-explétif: where there is a full or residual negative surface element in the second CCI clause it arises out of the perceptual/semantic fact that asserting the existence of a distance (or path) over a dimension between two entities X and Y implies that wherever X is, Y is not. Of course, saying that a negative arises out of a semantic implication is one thing, formalizing precisely how this happens is another thing.

Let me sum up. As I pointed out in the beginning of this brief paper, comparative constructions are a mer à boire and I do not claim to have discussed even a fraction of the fearful problem associated with this area of linguistic description. But I believe, and hope to have given some evidence for the

plausibility of my opinion, that a localist analysis is a necessary first step to provide systematic descriptions and, above all, explanations of the linguistic facts. Moreover, and regardless of the merits or demerits of the basic proposal put forward in this paper, if it can be shown that the localist hypothesis is at least as viable an ingredient of the theory of universal grammar as other current hypotheses, then localism should be discussed at applied linguistic conferences.

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¹⁷ Conversely, whenever the positions of X and Y are conflated on a dimension (corresponding to as...as constructions) it cannot be the case that X occupies a position different from Y.

Let me list some of the most important topics concerning comparative constructions I have not discussed in this paper (the list could be extended almost infinitely):

1) the precise formulation of the (semantic) underlying structure of CCI, 2) the precise formulation of the surface structures of CCI, 3) the transformational relations between underlying and surface structure, 4) the linguistic properties of comparative constructions of equality (=CCE), 5) the properties of pseudo-CCE illustrated by John is twice

as tall as Bill, 6) the properties of less-than constructions, 7) the distinction between norm-neutrality and non-norm-neutrality and the fascinating problems associated with this distinction, e.g. John is tall, John is enormous, *John is more enormous than Bill, John is less enormous than Bill (I owe the last two examples to Keith Brown), John is even more enormous than Bill, 8) a critical examination of recent syntactic theories of CCI, 9) the linguistic properties of scales, 10) multi-scalar comparative constructions, 11) norm-reversing comparative constructions such as Compared to Bill, John is a giant, 12) the amazing semantic complexities of correlative constructions such as the more, the merrier and he was running faster and faster, 13) the problem of the derivation of second clauses in CCI (and CCE) such as "He's taller than Bill is" and their relationship (or non-relationship) with two-dimensional CCI (He's broader than he's tall).