

ON THE NATURE OF 'OBLIQUE' OBJECTS IN BITRANSITIVE CONSTRUCTIONS*

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1. Introduction

This study concerns one block of the relations specified in the Noun Phrase Accessibility Hierarchy as analysed by Keenan and Comrie (1977, 1979), and has as background prior work of mine on the status of different grammatical relations with specific reference to Modern Hebrew – on Subjects (Berman 1980a), on Direct and Governed Objects (Berman 1978a: 124–135), and on Indirect or Dative Objects (Berman 1980b). The present study focuses on Indirect and Oblique Objects, hence on an 'intermediate' range of terms within the Keenan/Comrie hierarchy, with respect to which the authors are careful to note that they "have made no attempt to specify in universal terms the content of notions like Subject, Direct Object, Indirect Object, Oblique Object, Genitive, and Object of Comparison, or to defend their use within linguistic description" (1979: 650). Our study thus straddles both 'pure' and 'impure' or 'term' and 'nonterm' relations within the framework of relational grammar, which posits "a fixed, universal set of primitive 'pure' grammatical relations (specifically, Subject-of, Direct-Object-of, and Indirect-Object-of) and a set of 'impure' grammatical relations such as Instrumental, Locative, and Benefactive", which are characterized as differing

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from the 'pure' relations in that they have "independent semantic content" (Johnson 1977: 153). That is, we consider an intermediate group including both what Perlmutter (1978) terms central grammatical or 'term relations' – Subject, Direct Object, and Indirect Object arranged hierarchically in that order – and what he calls 'nonterm relations', which include Oblique relations such as Benefactive, Instrumental, Temporal and Locative, as well as the Retirement relations.

We aim to show that the categories of Indirect and Oblique Objects can be further specified to yield their own kind of internal hierarchy according to different kinds of bitransitive constructions. We try to motivate this hierarchy in terms of semantic content and pragmatic function, as well as in terms of syntactic patterning of both surface 'coding' properties and transformational or 'behavioral' properties (in lines with the distinction made by Keenan 1976). We will see, however, that accessibility to relative-clause formation as criterial for Keenan and Comrie in the studies noted earlier, as well as passive-formation, as used in Davidson's (1980) study of various types of non-Subject, non-Direct Object nominals, will not suffice for the present analysis. This is partly because our study is based primarily on data from Modern Hebrew, although it is reasonable to assume that detailed examination of the issues for one particular language will be relevant to more general, cross-linguistic claims about the status of nominals in bitransitive constructions.

Our analysis is confined to three-place predicates, and thus eliminates from consideration the two closely related relations of Direct Object – as in the examples in (1a) – and Governed Object – as in (1b) below.¹

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|--|---|
| <p>(1a) (i) <i>dan hika et ha xamor</i>
 Dan beat Acc the donkey</p> <p>(ii) <i>dan rima et xaverav</i>
 Dan deceived Acc his-friends</p> <p>(iii) <i>We've discussed the problem</i></p> <p>(iv) <i>They'll investigate the case</i></p> | <p>(1b) <i>dan hirbic la xamor</i>
 Dan beat (to) the donkey</p> <p><i>dan he'erim al xaverav</i>
 Dan tricked (on) his-friends</p> <p><i>We've talked about the problem</i></p> <p><i>They'll look into the case</i></p> |
|--|---|

¹ The two sets of relations, DO and GOV, are compared in Berman 1978a, b. The present analysis also disregards such two-place predicates as *dan nasa le xeyfa* 'Dan went to Haifa' or *dan yasan al ha ricpa* 'Dan slept on the floor' and *dan nasa be otobus* 'Dan went by bus'. These and other related constructions are analyzed for Hebrew *inter alia* in Rubinstein 1971; Sadqa 1979. Where the same types of complements occur with some other, generally Direct Object nominal, so that the construction is potentially bitransitive, we do, however, consider the nature of such nominals.

The hierarchical categorization we propose is set out in (2) and illustrated in (3) below, where the notation on the left indicates the symbol used to represent each relation; the capitalized terms which follow specify the semantic content; and the prepositional phrase italicized in the sentences illustrates the relation under consideration.

(2) IO/DATIVES > OBLIQUES > LOCATIVES > ADVERBIALS

The relations to the left are 'higher' along the continuum in the sense that they are more object-like than those to the right. We will see that this hierarchy can be further collapsed to yield a tripartite system, as follows: Object-like IOs and Obliques belong together as syntactically identical (in Hebrew, at all events) although semantically distinct; Locationals share certain object-like bitransitive properties but are both syntactically and semantically different from 'true' objects; while Adverbials lie so far to the other end, that it may be claimed that they do not participate in bitransitivity at all.

Below we illustrate these four types of relations, with IO-Datives and Obliques being represented distinctly for the time being.

(3)	IO/DAT:	RECIPIENT:	dan natan <i>le rina</i> et ha sefer Dan gave to Rina Acc the book
		BENEFACTEE:	hu kana <i>le xulam</i> kartisim he bought for everyone tickets
		DEPRIVEE:	dan ganav <i>le yosef</i> harbe ra'eyonot Dan stole to=from Joseph many ideas
OBL:	INSTRUMENT:		dan patax et ha mgera <i>ba mafteux</i> šeli Dan opened Acc the drawer with my key
		COMITATIVE:	dan halax ha'ira <i>im axoto</i> Dan went to-town with his-sister
		SOURCE:	dan lamad italkit <i>me ha šxenim</i> Dan learned Italian from the neighbors
LOC:	LOCATION:		dan sam et ha sfarim <i>al ha madaf</i> Dan put Acc the books on the shelf
		GOAL:	dan hevi ugot <i>et ha msiba</i> Dan brought cakes to the party
		SOURCE:	dan hoci et ha yladim <i>me ha kita</i> Dan sent-out Acc the children from the classroom

We will try to show that this continuum can be analyzed in terms of 'degree of participation' of the relevant NPs in the events described in each case. Thus, at the upper end of the listing, the italicized nominals

in (3) are construed as 'participants involved in the event' and as displaying a relatively high degree of transitivity (along the lines suggested for characterizing this notion in Hopper and Thompson 1980); in lexico-syntactic terms they are generally governed by the verb, and pragmatically they are good candidates for being topics of the sentence. By contrast, those nominals occurring at the lower end of the scale, particularly those we have designated as ADV, are nonparticipants; rather, they are by way of 'circumstances relating to the event', and as such they are good candidates for serving the function of scene-setting. In delineating the semantics of each type of relation – as Recipient or Benefactee, as Location, Goal, or Source, etc. – we have incorporated the notion of nominals as embodying not only grammatical relations, but also case-roles along the lines suggested by, say, Halliday (1967) and Fillmore (1968, 1971, 1977). We focus here on what Fillmore in his later study refers to as "role analysis of the participants in a situation", though we will also find it helpful to take into account pragmatic questions of what Fillmore calls 'perspectivizing'. For instance, a statement like *dan sagar le rina et ha delet* 'Dan closed to = for/on Rina the door' could have either a benefactive or malefactive intent from Dan's perspective, and either a benefactive or malefactive consequence from Rina's point of view.

2. Semantic content and valence

This section considers the valence relations and semantic values of each of the categories listed in (2) and (3) above.

2.1. Datives

In a detailed analysis of dative-marked arguments (Berman 1980b), I pointed out that the canonic dative or 'indirect object' in Hebrew as in other languages bears a *Recipient* relation to the event, and occurs with verbs meaning *give*, *show*, *present*, *tell*, *describe*, and so on, where some entity or information is volitionally transferred by an agent to a recipient. The Recipient relation has a special syntactic status in Modern Hebrew in that it alone of all dative-marked arguments must take the case-marker *le-* meaning 'to' or 'for';² other IOs, with non-Recipient semantic content,

² This does not take into account the semantic role of Experiencer, which in Hebrew often

may be marked either by *le-* – as if typical of everyday colloquial usage rather than more normative or literary style – or by some other, semantically more specific prepositional, such as *bišvil* 'for, in behalf of', *bifney* 'in the face of, against', or *mi-* 'from', as illustrated in (4) below.

- (4) **BENEFACTEE:** (a) *hem hizminu la orxim kartisim*
they ordered to-the guests tickets
= (b) *hem hizminu kartisim bišvil ha orxim*
they ordered tickets for the guests
- MALEFACTEE:** (a) *hi sagra le dani et ha delet*
she closed to Danny Acc the door
= (b) *hi sagra et ha delet bifney dani*
she closed Acc the door in-face-of Danny
- POSSESSOR:** (a) *hi tikna lo et ha garbayim*
she mended to-him Acc the socks
= (b) *hi tikna et ha garbayim šelo*
she mended Acc the socks of-him = his socks
- DEPRIVEE:** (a) *hem lakxu le dan et ha kadur*
they took to Dan Acc the ball
= (b) *hem lakxu et ha kadur mi dan*
they took Acc the ball from Dan
- LOCATEE:** (a) *ha axot sama la xole talk*
the nurse put to-the patient talcum-powder
= (b) *ha axot sama talk al ha xole*
the nurse put talcum on the patient

The fact that all these relations may, as shown in the examples in (4a) above, be marked by dative *le-* is not as highly language-specific as it might appear when compared with English, for quite similar constructions are found in Slavic and Yiddish (from either or both of which *le-* usage was apparently taken over into Modern Hebrew for relations other than Recipient or Benefactive of more classical norms), as well as in French (LeClère 1975).

These datives are semantically cohesive in the sense that the nominal in question is always the Affectee of the event, whether benefactively or malefactively. And, as noted, ambiguity may arise depending on the perspective of the participants, as to whether they view an event such as Rina's

takes Dative marking, as in *kar li* 'cold to-me' = 'I'm cold' or *lo noax la hem* 'not comfortable to them' = 'they're uncomfortable'. Such constructions typically lie outside the three-place predicates which concern us here, but they are semantically compatible with the notion of Affectee of events attributed to IO/Dative relations in the present analysis, with Experiencers more usually being Affectees of circumstances or states than of transitive events.

opening the door 'to' Danny, or Danny's taking the car 'to' his father, as being favorable or adverse from the point of view of the protagonists. Dative IOs here are necessarily animate, and hence have the potential of being affectively, and not only physically, involved in the event. Hebrew provides evidence for this claim in cases where some semantically specific case-marker other than *le-* dative is required just in case the noun in question is nonanimate, as in the (ii)-examples in (5) below.

- (5a) (i) hu lakax *le-/mi-* rina harbe ra'eyonot
 he took to/from Rina many ideas
 (ii) hu lakax harbe ra'eyonot **la-/me* ha ma'amar
 he took many ideas to /from the article
- (5b) (i) ?hem cav'u *la* xeder et ha kirot
 they painted to-the room Acc the walls
 (ii) hem cav'u et ha kirot *šel* ha xeder
 they painted Acc the walls of the room
- (5c) (i) ?hu šavar *la* mxonit et ha šimša
 he broke to-the car Acc the window
 (ii) hu šavar et ha šimša *šel* ha mxonit
 he broke Acc the window of the car

While (5b)(i) and (5c)(i) are dubious, use of *le-* in the identical surface construction would be fine if the affectee were animate, as in the equivalent of 'They painted Rina's room (for her)', 'he broke my dish (against me)'.

Thus the Indirect Object or Dative relation in Modern Hebrew – and, we would like to claim, across other languages too – specifies quite uniquely some human or at least animate affectee of the fact that some action is performed by some Agency with respect to some Patient. The semantics of the verb itself will often determine the nature of this role – as a Recipient of acts of transferring, giving, showing, or telling; as Benefactee of acts of obtaining, finding, buying; as Malefactee of acts of breaking, destroying, dirtying; as Deprivee of taking, stealing; or as Locatee of putting, placing, smearing, etc. However, as noted, for pragmatic reasons a given event may be interpreted in more than one way, and a verb such as, say, 'taking' may relate either malefactively or benefactively to the person affected thereby.

2.2. Obliques: Instrumental, Comitative, Source

At the second level of the continuum set out in (2) and (3) above we have used the term Oblique to cover a rather mixed bag of semantic

relations which represent the 'anything else' case between datives as discussed above and locatives in the sense defined in 2.3 below. While they are syntactically nonobligatory in the surface form of sentences – as in the case of Instrumental 'he broke the window (with an axe)', Comitative 'he went to town (with his sister)', or Source 'he got help (from a neighbor)' – they are semantically often entailed by the verb. Thus, for instance, while *Instrumentals* differ not only from IOs but also from the other Obliques in being typically nonanimate, they may be perceived as partners in the perpetration of an act, and hence higher up on the continuum than, say, Place expressions. Syntactically, instruments may show up as the surface subject, as in 'This key will open the door for you' or 'My brush won't yield the right lines', and in ergative languages they may take the same case-marker as Agents. Where instrumental case is used, the performance of an act such as opening a drawer, breaking a window, painting a wall, and so on, requires the involvement of both the agent-wielder of the instrument and the instrument itself.

Comitatives are in a sense logically implied by transitive events, in the sense that an agent can either perpetrate an act alone or with others. Where comitative case is used, the person thus marked is clearly involved as partner in the event for if, say, Dan goes to town or writes a book with his girlfriend, the implication is that his girlfriend has also gone to town or written a book. The perspective against which the partners are viewed may differ, for in 'Dick wrote the book with Robert', Robert may be perceived as less of an equal partner than Dick – although this interpretation is not logically necessary, if one compares, say, 'Einstein conducted the experiment with two assistants' as against 'My sister had lunch with the Prime Minister'. However, in all such sentences the logical implication is that both the subject and the comitatively marked nominal performed the activity in question.

Superficially, *Instrumentals* and *Comitatives* are associated in the sense that in colloquial Hebrew as in English they share a single case marker *im* 'with' and a single converse term *bli* 'without'.

Another type of Oblique nominal occurs with animate *Source* relations, as in the semantically related expressions 'learn something from someone' as well as 'get/buy/find out something from someone'. As with the other Obliques, a Source noun is a semantic argument of such verbs, and in pragmatic terms it may be viewed as a participant of the event in question – where some kind of object or information is transferred from a source to the surface-subject Recipient. As has been widely noted in the literature, these provide for the converse of datives – as in X teaches A to Y/

Y learns A from X, X gives A to Y/Y gets A from X, and so on. In analyzing the syntactic behavior of such constructions in Hebrew, we will see, in fact, that Datives and Obliques pattern very similarly – motivating our claim that they belong together at one end of a continuum highest up on the scale of bitransitivity.

2.3. *Locationals*

At the third level of the continuum occur expressions of place, functioning as complements of motion verbs referring to the transfer of entities to or from a given location or in a given direction. Thus, animate nominals will not occur in this category, with the exception of elliptical genitives such as 'at the doctor's' or 'to my friends' (house). In terms of valence, the verbs which take such arguments determine which type of role is involved: Location is specified for verbs such as *put*, *place*, *instal*; Goal for verbs meaning *bring*, *carry*, *transport*, etc.; and Source for verbs meaning *remove*, *expel*, *extract*, etc. This type of case-relation is logically entailed by the predicate in each instance; even if the locative expression is not overtly expressed, as in the examples in (6) below, which are well-formed utterances in Hebrew even without the parenthetical material, its content is recoverable from context (and see Sadqa 1979: 203–239 for discussion of relevant Hebrew data).

- (6) PLACE: hiney sam-ti et ha sefer (ba makom ha naxon)
 look I've-put Acc the book (in-the right place)
 GOAL: hu lo levi et ha targilim (la ši'ur)
 he (did) not bring Acc the assignments (to class)
 SOURCE: hi hoci'a et ha pkak (me ha bakbuk)
 she took-out Acc the cork (from the bottle)

These relations are pragmatically lower on the continuum than Obliques, since the Location cannot be regarded as a partner in the event, nor is it an Affectee thereof, as was seen to characterize IO-Datives. However, Locationals warrant more of a 'participant' status than the Adverbial relations at the lowest end of the hierarchy, since Adverbials are not logically entailed by the predicate, whereas Locationals are.³

³ While all events inherently take place at some point in time and space, specification of Place is required by the predicate just in case it is of the bitransitive 'motion-transfer' type of verb noted in this subsection. In other words, it seems to us that the place-expressions in

2.4. Adverbials

The class of Adverbials discussed here concerns mainly expressions of Time, Cause, and Concession. We do *not* consider Conditionals, as these typically involve separate propositions, and our analysis is confined to single-clause sentences, nor have we taken into account Manner-Adverbials, which constitute a rather special problem (although they probably should be classed with this last group since they are never governed by the verb, and are thus extraneous to the event, expressing circumstances rather than participants). As noted in footnote 3, nongoverned Place Expressions, too, should probably be included in this last category.

The class of 'Adverbials' are taken as lying at the far end of the continuum by contrast with more directly-involved participants in an event. They represent extraneous circumstances, the background to a given event, and as such they are not logically entailed by the event, nor do they themselves entail the event. Thus the predicate of the main clause has no semantic valence relation to the nominal which represents its time-of-occurrence, duration, cause, or purpose, etc. And within certain real-world limitations, any event can be predicated as occurring at-the-time-of, because-of, or in-spite-of X. Since Adverbials cannot be construed as arguments of the predicate in question, they are not candidates for the syntactic or semantic status of 'Object', of whatever kind. Rather, Adverbials represent the circumstances contingent to an event; they may have caused it, been concurrent or prior to it, or applied in spite of it – but they are not an integral part of the event itself.

3. Surface syntactic properties

Below we consider the surface syntactic properties, of the kind termed 'coding' properties in Keenan (1976), of the categories represented in the continuum in (2) above. Three such properties are: (i) Agreement – of number, gender, etc. – which can be dismissed outright in this context, since only Subjects control Agreement in Hebrew; (ii) Case-marking – in

sentences like I spoke to Tom in Tel Aviv or He lectured on sign-language at the symposium belong more properly with the class of Adverbials discussed in section 2.4. Surface evidence for this claim in Hebrew is provided by the fact that Place expressions quite typically follow Time expressions in terms of linear ordering (Amit 1976).

Modern Hebrew typically in the form of prepositionals; and (iii) linear ordering of post-verbal nominals with respect to one another.

Numerous Hebrew scholars have attempted to establish criteria for distinguishing between so-called *musa akif* 'indirect = oblique object' – a term traditionally applied to all nondirect objects, including what we have termed Governed Objects in two-place predicates as illustrated in the sentences in (1b) above, Indirect or Dative Objects, as well as certain types of Oblique Objects both in bitransitives and in two-place predicates – and the so-called *teʔur* 'Adverbial'. (See, for instance, Ben-Asher 1972; Blau 1973; Fruchtman 1980; Ornan 1972; Rosen 1966). One criterion which most of them adopt for distinguishing between all (non-Direct) objects and adverbials is distribution of specific prepositions. And it is often noted that in the former case the preposition is lexically governed by the verb, so that it constitutes part of its lexical entry, whereas in the other, 'adverbial' cases, the preposition is not so governed and is, moreover, substitutable by other prepositions with independent semantic content. And, in fact, close lexical association between a specific, often semantically unmotivated, idiosyncratic preposition and the verb with which it occurs is precisely a defining property of the class of what I have elsewhere analyzed (Berman 1978a, 1978b) as 'governed objects' of two-place predicates (cf. English *operate on someone*, *cope with a problem*, etc.).

However, several problems arise in attempting to use prepositional marking as criterial for distinguishing different semantic and/or syntactic relations between a verb and its associated complements. One obvious problem is that of surface ambiguity, as in Chomsky's (1965) example of *he decided on the boat* or Ornan's (1972) analogous Hebrew example *hu hištagea axarey pnina* 'he went-crazy after Pnina' which could mean either idiomatic 'he was-crazy about Pnina' or 'he went crazy after Pnina (did)'. Such ambiguities can generally be resolved in terms of different constituent bracketing, but they still show that prepositions qua prepositions are not criterial distinguishing markers. Besides, a single preposition can obviously be used for more than one type of relation; for instance, *le-* 'to' is both a Dative marker and an indicator of Locational Goal, while *im* 'with' is used for both Comitative and Instrumental in colloquial Hebrew (*be-* 'in, at' being normatively used for Instruments) as in English.

As far as prepositions are concerned, then, they are relatively marginal as distinctive for the different classes of expressions along our hierarchy. Our Hebrew data yield the following points which may be relevant in this connection, however. Firstly, those prepositions which may or must be

prefixed to the next word – the markers *be-* 'in, at' and *le-* 'to, for', which are also unique in that they incorporate definiteness within a single surface form (*be-* 'in' vs. *ha-* deriving from *be-* + *ha-* 'in + the'), as well as *mi-* 'from', the ablative marker which alternates with the free preposition *min* – these prepositions are particularly multifunctional, but they do not generally occur at the lowest end of the scale to mark Adverbial relations. (Although this claim excludes both Time and Place Adverbials, as in *be ša'a arba* 'in hour four = at four o'clock', *ba šana še avra* 'in-the year that passed' or *be xeyfa* 'in Haifa', *ba hayit* 'in-the house = at home'.) Secondly, a necessary though not sufficient condition for a nominal to have the role of IO-Dative is that it can be marked by *le-* 'to, for', although, as shown in (4) above, IOs can take prepositions other than *le-* alternatively, and *le-* can also mark other types of relations. Moreover, *le-* can alternate with the free form *el* 'to' only if it has a Place-marking role, not when it is a Dative marker, as in (7).⁴

- (7) IO RECIPIENT: *hu natan le rina/*el rina et ha sefer*
 he gave to Rina/to Rina Acc the book
 IO BENEFACTIVE: *hem mac'u la/*el ha orxim malon*
 they found for-the/t the guests (a) hotel
 LOC GOAL: *hu hevi ugot la/el ha msiba*
 he brought cakes to-the/to the party
 LOC GOAL: *hem šalxu et ha yeled la/el ha kfar*
 they sent Acc the child to-the/to the village

It transpires that in general prepositional case-markers do not get us very far in providing surface morpho-syntactic criteria for evaluating the continuum we propose (and a similar conclusion is reached with respect to the 'unreliability' of prepositional markers in distinguishing different kinds of object relations in English and other languages in Davison 1980).

The single most relevant surface property distinguishing the various relations ranked in (2) above is that of *linear ordering* of post-verbal complements with respect to one another – a factor which is generally not taken into account in the Hebrew studies noted earlier, although Stern (1981) makes sporadic comments in this connection, while the relatively more

⁴ Stern (1981: 51) also notes that *le-* and *el* do not alternate freely in all environments, and he concludes that expressions with *el* should be assigned to the status of Adverbials. As we have noted, we wish to motivate a separate class of Locationals as intermediate between IO and Oblique 'object-type' constituents and Adverbials as totally 'external' or 'non-nuclear'.

theoretically sophisticated analysis in Schwarzwald (1976) considers 'transformational' reorderings of canonic forms, as discussed in section 4 below. Modern Hebrew can be taken to have basic SVO order, so that the constituents in question are all postverbal in their unmarked or neutral occurrences. The question is then of how the two so-called objects are ordered with respect to one another. Consider, first, the ordering of IO-Datives with respect to Direct Objects – where in Hebrew the former invariably has the surface shape of a prepositional phrase, since Hebrew has no 'promotion' process equivalent to Dative-movement in English, and the *le-* marker can never be omitted.⁵

Generally speaking, linear ordering of the IO with respect to the DO in Hebrew is, nonetheless, governed by very much the same constraints as have been noted for 'double-object' constructions in English. Thus Erteschik-Shir (1979) analyses Dative Movement as "a rule that functions to force a dominant interpretation of the NP that ends up in final position (and a nondominant interpretation of the other NP)" (1979: 451). Without attempting within the present context to do justice to Shir's notion of 'dominance' as expounded in this and other studies (e.g. Shir and Lappin 1979), we can for our purposes take the dominant constituent of a sentence to correspond roughly to such notions as the comment or rheme, what is asserted, new information, or the point of focus. This will help explain why in Hebrew as in English, if the IO is a pronoun, a definite NP, or some other clearly referential or presupposed element – that is, what is characterized as 'highly individuated' in terms of Hopper and Thompson (1980) – then the IO will tend to *precede* the DO. This general claim, that highly individuated elements will tend to be fronted (made nondominant in Shir's terms), is illustrated for Hebrew in (8) and (9) below.

⁵ There are a few instances only of bitransitive verbs in Hebrew which govern *two* NPs taking the DO marking of zero if nondefinite, or the accusative marker *et*, if definite, as in: *ha' he'exil et ha' tinok tapuax* 'he fed Acc the baby (an) apple' or *hi meladmedet et talmidêha širim rabim* 'she teaches Acc her-students many songs'. These are listed in Stern (1981), and syntactically analyzed as a special class of causatives in Cole (1976). We do not consider these as a separate class for two reasons: firstly, in contemporary usage there is a strong tendency to reformulate such constructions so that the non-DO has some other prepositional marking, most usually Dative *le-*; secondly, and more importantly, this cannot be viewed as a case of two 'parallel' constructions in any but the most superficial terms of accidental case-marking identity, since both semantically and syntactically the one nominal has the status of DO, the other of IO or Oblique.

- (8a) (i) *dan natan la et ha sefer*
 Dan gave her Acc the book
 (ii) *?dan natan et ha sefer la*
 Dan gave Acc the book (to) her
- (8b) (i) *dan natan la yalda sefer*
 Dan gave to-the girl (a) book
 (ii) *?dan natan le yalda axat et ha sefer*
 Dan gave to one = a girl Acc the book
- (9a) (i) *dan natan li gveret kohen et ha sefer* or
 Dan gave to Mrs. Cohen Acc the book
 (ii) *dan natan et ha sefer li gveret kohen*
 Dan gave Acc the book to Mrs. Cohen
- (9b) (i) *dan natan le yeled exad eyze sefer* or
 Dan gave to one = a boy some book
 (ii) *dan natan eyze sefer le yeled exad*
 Dan gave some book to a-boy

The (i)-sentences above represent the normal, unmarked way of ordering DO and IO respectively: in (8) IO is required to precede, if it is a highly referential or presupposed pronoun or definite NP, whereas in (9) both the (i) and (ii) orderings are possible, just in case the DO and IO share the same properties of definiteness, although even in (9) the (i) examples are slightly more typical of actual usage, since the IO refers to a person, and hence is more 'highly individuated' than the nonanimate object, *book*. By contrast, the (ii)-examples in (8) are dubious, and (8a)(ii) would be possible only if the IO pronominal *la* 'to her' were given strong contrast stress, implying that the book was given to *her* (and to nobody else).

The relative ease with which IOs can precede DOs in Hebrew, then, indicate that the former are high up on the 'object hierarchy', since both Objects are closely involved as participants in the event. Obliques are somewhat less accessible to pre-DO ordering, although where they meet the criteria noted above for high individuation or nondominance noted earlier, they can in Hebrew precede the DO, as follows:

- (10) INSTRUMENTAL: *tuxal laxtox ba sakn haze et ha uga*
 you can (to) cut with this knife Acc the cake
- COMITATIVE: *dan halax im ha xaverim šelo le misxak kaduregel*
 Dan went with his friends to (a) football game
- SOURCE: *ani lamadeti mi gveret kohen harbe dvarim*
 I have learnt from Mrs. Cohen many things

Slightly more so than in the case of IOs, Obliques tend, however, to occur mainly in DO-OBL order, with the single exception of the most highly

individuated nominals of all – pronouns quite generally preferring immediately postverbal position, as in: *taxtox bo et ha uga* 'cut with-it Acc the cake', *halax itam le misxak* 'went with-them to-(a) game', *lamadeti mimena harbe* 'learnt from-her a lot'.

The same conditions according to which IOs or OBLs can precede DOs do *not* seem relevant in the case of the next constituent-type on our continuum: Locationals typically must follow the DO, even though the same surface configuration of DO marked by *et* and some other type of prepositional phrase is involved here, too. This is shown in the examples in (11), where the (b)-sentences indicate that fronting of a Locational expression yields a less canonic type of expression, irrespective of the relative definiteness value of the DO compared with the Locational.

- (11) LOCATION: (a) *dan sam sfarim al ha madafim šelo*
 Dan put books on his shelves
 (b) *?dan sam al ha madafim šelo sfarim*
 Dan put on his shelves books
 SOURCE: (a) *dan tamid moci talmidim me ha kita*
 Dan always expels student from class
 (b) *?dan tamid moci me ha kita talmidim*
 Dan always expels from class students

The (b)-sentences in (11), where a Locational precedes a DO, are not strictly speaking 'ungrammatical', particularly since Hebrew, unlike English, easily tolerates a prepositional phrase or other, syntactically 'nonpromoted' material intervening between a Direct Object and its verb; and in general Hebrew lies closer to the class of 'pragmatic word order' languages than does a 'grammatical word order' language like English (Thompson 1979). But the DO-LOC order in (11a) can be taken as the grammatically basic, and pragmatically least marked or most neutral linear ordering for such expressions (and this is statistically vindicated in the texts examined by Stern 1981: section 5.3). The fact, then, that while LOC preceding is not totally ruled out in the language, DO-LOC is the preferred, more typical order contrasts with what we found for IO-DO ordering; and this accords with our analysis of IO Datives as being more directly involved in the event, hence ranging closer to the predicate, as compared with Locationals, which are closer to Adverbial modifiers of the event rather than central to its perpetration.

It follows that Adverbials typically do not occur before the DO, as shown in (12) below. Again, these sentences are marked as dubious rather

than as ungrammatical, since they are possible under conditions of special emphasis, for contrastive purposes and so on. But canonically, Adverbials lie outside of the main Subject-Predicate nuclear constituents of the proposition.

- (12a) ?dan pagaš *uxurey ha msiha* et ha xavera šelo
 Dan met after the party Acc his girlfriend
 (12b) ?dan azav *higlal ha ra'as* et ha xeder
 Dan left because-of the noise Acc the room
 (12c) ?dan siyem *lamrat kšayav* et ha kurs
 Dan completed in spite-of his-difficulties Acc the course

If we take linear ordering of various types of complement nominals with respect to the DO, we arrive at a continuum corresponding to the one posited at the outset: IOs can freely precede DOs, particularly when the Dative object is highly individuated or 'nondominant', while OBLs are rather more constrained in this connection; Locationals most typically come after the DO, although they can be brought forward for purposes of special emphasis or contrast; and Adverbials must nearly always follow the DO, since in general they do not enter freely into the scope of the 'participant' type constituents which occur higher on the continuum. Thus, the freedom with which post-verbal constituents can be brought closer to the verb is a function of the relative lack of dominance or assertiveness which is accorded to them – noting, again, that word order in Hebrew is less grammatically constricted than in English. From the perspective adopted in this study, the freedom with which a given nominal can come between the verb and its DO is a function of how intimate is its participation in the event, and this proceeds along a continuum which ranges from directly involved IOs via Obliques and Locationals, being virtually ruled out in the case of Adverbials, as 'extraneous circumstances' which are not really part of the predicate and its associated argument structure at all.

4. Behavioral, 'transformational' properties

The only kind of behavioral or transformational process considered with respect to non-Subject nominals by Hebrew grammarians is, typically, that of passivization (as in Rubinstein 1971; Stern 1979) as well as of question-types (e.g. Ben-Asher 1972), with the single exception of Schwarzwald's (1976) study of left-dislocated constructions. The breakdown of question-

words shown in (13) below again lines IOs and Obliques together with DOs, whereas Locationals and Adverbials have lexically specific interrogative forms, and Locationals differ from Adverbials in that they have case-marking prepositions in the question-words, thus:

- (13) (DO), IO, OBL: *mi* 'who'; *ma* 'what' – following case-marking prepositions
 LOCATIONALS: *efo* 'where'; *min-ayin* 'from-where = whence' (colloquially, *me'efo*);
le'an 'to-where = whither'
 ADVERBIALS: *matay* 'when'; *kama zman* 'how long'; *lama* 'why, Purpose';
madua 'why, Reason'; etc.

Another potential process for characterizing noun phrase complements is Passive-formation, as investigated for English in Riddle and Sheintuch (1980) in relation to non-DO 'advancement to subject status', while Davison (1980) uses passivization to arrive at a hierarchy of Object and Complement type constructions not dissimilar from the one we are suggesting here. However, in Hebrew only DOs can freely be advanced as a result of Passive-formation, never IOs or anything 'below' them,⁶ so that passivization is largely irrelevant to the post DO/GOV continuum in the kinds of bitransitives considered here. It is, however, worth noting that our analysis is highly consistent with the hierarchy proposed quite independently by Davison (1980): in studying the accessibility of prepositional phrases in English to advancement-to-subject position, she points out the relative ease with which Locationals and Instrumentals but *not* Adverbials (of, say, Purpose, Cause, and Manner) allow for passivization in English and in a number of other languages.

Given that Passivization is not relevant for Hebrew, since prepositional phrases in general disallow either deletion of prepositions, as in dative-shifting in English (although see some marginal exceptions in footnote 6), or stranding, as would otherwise be required by Passive-formation, we consider the behavior of different kinds of prepositional phrases in relation to three other kinds of syntactic processes: relative-clause formation, left-dislocation, and fronting-topicalization. We will try to show that IOs and

⁶ A few 'governed' Objects do allow for Passivization with the verb-governed preposition being deleted. cf. *dan azar le yosef* 'Dan helped *to* Joseph', *yosef ne'ezar al ydey dan* 'I was-helped by Dan'; *hi tašpita al-av* 'she will-influence *on*-him', *hu yušpa al yada* 'he will-be-influenced by her'. Detailed lists of such cases are given in Rubinstein 1971, Stern 1979. This is further evidence for our analysis of two-place predicates as allowing for the two closely related types of complements – either DO or GOV, as illustrated in (1) at the outset of this study.

Consider, first, Relative Clauses, where in Hebrew pronoun-resumption is obligatory, since the NPs in question all occur in Prepositional Phrases. IOs and OBLs can freely function as the relativized element, as shown below:

- Locationals, too, allow for the same kind of surface structure, although they are unique in that they may have either a personal-pronoun copy or an adverbial pro-form in the shape of the word *šam* 'there', as shown in (a) and (b) below.

- ⁷ In all these examples, the preposition plus pronoun-trace is placed clause-initially, immediately after the 'that' relative-marker – and this in fact is the normative, literary preference. However, in most spoken and newspaper Hebrew today, the pronoun trace is typically found in clause-internal position according to where the source NP would occur, e.g. *ha haxura se dan natan la et ha sefer* 'the girl that Dan gave to-her Acc the book', *ha garzen se šavar-ti bo et ha xalon* 'the axe that I-broke with-it Acc the window', etc., *ha xaverim se halax-nu it-am la missak* 'the friends that we-went with-them to-the game'.

- SOURCE: (a) *ha ma'amar še mine-nu dan hoci et ha citata* or
 the article that from-it Dan took Acc the quotation
 (b) *ha ma'amar še mi-sam dan hoci et ha citata*
 from where

The examples in (15) are analogous to the English choice between 'the shelf on which I put my books' vs. 'the shelf where I put my books', where in the former, personal-pronoun case, the impact is of 'higher individuation' than in the less specific or less referential adverbial pro-form 'where'.

By contrast, Adverbials are not so acceptable as the nominals bounded by the head of a relative clause, as shown by the Hebrew examples in (16) compared with their English counterparts in (17):

- (16) ADV TIME: *?ha msiba še axar-eha dan pagaš rina*
 the party that after-it Dan met Rina
 ADV REASON: *?ha ru'aš še bigla'-o dan azav et ha xeder*
 the noise that because-of-it Dan left Acc the room

- (17a) (i) ??the party Dan met Rina after
 (ii) the party after which Dan met Rina
 (17b) (i) ??the noise that Dan left the room because of
 the noise because of which Dan left the room

The Relatives in (16) are distinctly odd in Hebrew, irrespective of whether the pronoun trace attached to the preposition is clause-initial as in the sentences in (16) or not, as in the following (and see fn. 7 in this connection): *??ha msiba še dan pagaš axar-eha et rina* or *??ha msiba še dan pagaš et rina axar-eha* – which are only slightly worse than the original versions in (16). The inacceptability of the (i)-sentences in English compared with the (ii)-sentences of (17) has been explained syntactically in terms of the constraint of nonextraction from Adverbs, viewed as 'islands' (Ross 1967). Shir and Lappin (1979) attempt to give a functional explanation of such phenomena, in terms of their claim that islands have a 'nondominant' reading. Along rather different lines, Grosu (to appear) points out that "Positions within phrases that serve as *arguments* of some function ... are more accessible (to extraction Unbounded Dependencies) than comparable positions within otherwise comparable phrases that do *not* serve as arguments of some function" (emphasis in the original – R.B.). Particularly relevant from our point of view is Grosu's hypothesis that "In the absence of interfering factors, the functionality of an instance of extraction ... is determined by the extent to which an NP in the position of the extraction

(and, more generally, of the element relativized, questioned, etc.) is easily interpretable as the *topic* [emphasis mine – R.B.] of the S which serves as extraction domain”.

One way, then, of explaining the problem of relativizing nominals which are extracted from Adverbial phrases is that the latter, as suggested earlier, are not good candidates for topic-hood. Evidence for this is provided by the fact that when such nominals have human-reference, hence are more highly referential or more individuated and so better candidates for the role of topic, then relativization, too, is far more acceptable, as in the following examples compared with (16).

- (18a) *ha more še biglal-o nixšal-ti ba bxina*
 the teacher that because-of-him I-failed in-the exam
- (18b) *ha baxurot še benigud lahen dan muxan laasot et hakol*
 the girls that against them Dan will (to) do anything

It follows that Time-Expressions are generally bad as the nominal bounded by the head of a relative clause,⁸ since they are typically ‘non-individuated’. In other words, if relative clauses are viewed as comments with respect to their head-noun topics, then the decreasing likelihood of using various types of Obliques as clause-internal nouns bound by such heads can be analyzed as a function of their being less argument-like in logical terms, less role-participants in the event in semantic terms, less ‘topical’ in pragmatic terms.

It follows that a similar picture emerges with respect to Left-Dislocation, termed *yixud* ‘specification’ in Hebrew grammars, and here our findings accord closely with those of Schwarzwald’s analysis of such constructions (1976), although a rather different motivation underlies the two studies in each case. Again, IOs and OBLs admit freely of Left-Dislocation, to yield constructions like those in (19), which are very common at all levels of Hebrew discourse-style.

⁸ It is not clear why certain Time-expressions do enter into this type of construction so easily, as in English ‘the day (when) they arrived’, or ‘the year (when) he was born’, or Hebrew *ha yom še (bo) higiu* ‘the day that (on it) were-arriving’, *ha šana še (ba) hu nolad* ‘the year that (in it) he-was-born’, though it is worth noting that the preposition plus pronoun trace is typically omitted in such cases, whereas normally it is mandatorily retained. This may be due to the same set of circumstances that make ‘pseudo-passives’ in English better in a case such as, say, *the house was lived in* than *the house was danced in*, as discussed in Riddle and Sheintuch (1980) and Davison (1980); relatedly, one can talk about *the house that he was born in* more felicitously than, say, *the house that we danced in*.

- (19) IO RECIPIENT: dani – kvar nata-li lo et ha sefer
 Danny – already I-gave to-him Acc the book
- IO BENEFACTEE: ha ben šelanu – baninu lo/bišvil-o bayit le tiferet
 our son – we built to-him/for-him a magnificent house
- OBL INSTRUMENT: ha maftex haze – lo tuxal liftoax bo et ha delet
 this key – (you) won't be able to open with-it the door
- OBL COMITATIVE: axoti – dan halax ita ha'ira
 my sister – Dan went with-her to town

As was noted for Relative Clauses, here too Locationals are special in allowing either personal-pronoun or adverbial type traces, as follows:

- (20) LOC: ha madafim ha'ele – ešar lasim aley-hem/šam et hakol
 these shelves – you can put on-them/there everything
- SOURCE: ha mirpa'a – hoci'u mi-mena/mi šam et kol ha ciyud
 the clinic – (they) took from-it/from there all the equipment
- GOAL: ha kfar haze – navo elav/le šam harbe be atid
 this village – we'll come to-it/to there a-lot in the future

And again, as we would expect, Left-Dislocation is dubious with nominals extracted out of Adverbial phrases, unless, as in (22) below, the noun in question is human or highly referential.

- (21) ADV TIME: (a) *ha boker – pagašti bo/az et rina
 this morning – I met on-it/then Acc Rina
 (b) ?ha msiba – pagašti axar-eha et rina
 the party – I met after it Acc Rina
- ADV REASON: ??ha ra'aš – azavti bihul-o et ha xeder
 the noise – I left because of-it Acc the room
- (22) ha mora hazot – nixšalti biglal-a ba bxina
 that teacher – I failed because of-her in the exam

Thus we see that, again, Locationals share properties of both Objects and Adverbials, which makes sense, since places are less obvious or natural candidates for the role of topic than are people or inanimate objects, while Adverbials generally disallow Left-Dislocation except where the noun extracted is highly referential, as in (22). And there is good reason to suppose that similar constraints apply to Right-Dislocation, a process which to the best of my knowledge has not been examined much for either Hebrew or other languages. Consider, for example:

- (23) IO: ma hi natna lo – le david?
 what (did) she give him – to David?

- OBL: ma hi asta *ito* – im ha sakin/im david?
 what (did) she do with-it/him – with the knife/with David?
- LOC: ma hi asta *šam* – be tel aviv?
 what (did) she do there – in Tel Aviv?
- REASON: hi hitragza biglal-o (i) *biglal ha ra'aš
 she got-mad because of it because-of the noise
 because of him (ii) biglal ha yeled
 because-of the child

A mirror-image of what we have seen regarding Relativization and Left (as well as Right) Dislocation emerges with respect to Fronting, or so-called Topicalization. Here a given nominal, in Hebrew together with its associated preposition, is brought round to sentence-initial position for purposes of giving it background or 'scene-setting' status. Thus (24) below, with Adverbial-fronting, are all very natural, since in them Adverbial 'circumstances' are fronted to provide the background against which a certain event took place, as the scene for various participants to play their role in.

- (24) TIME: *axarey ha msibu* dan hevi et rina habayta
 after the party Dan took Acc Rina home
- REASON: *biglal še'ela axat nixšalti ba bxina*
 because of one question I failed in-the exam
- CONCESS: *lamrot ha takalot* dan nehena me ha tiyul⁹
 despite the hitches Dan enjoyed (from) the trip

The Locationals in (25) tend to show resistance to fronting, insofar as they generally constitute new or asserted information rather than background material. However, even these can be fronted where special circumstances make them serve as background to some contrastive material as in (26a) or to the kind of assertiveness associated with listing, as in (26b).

- (25) LOC: ʔal ha madaf tuxal lasim et hasefer šeli
 on the shelf you-can put Acc my book
- SOURCE: ʔme ha sifriya hu lakax et ha sefer
 from the library he took Acc the book

⁹ Notice that in all these examples both SV and VS order is possible within the nuclear clause, the order being constrained by the relative topicality of the subject, as discussed in Giora (1981). Thus, in the first example in (24), the definite proper noun *dan* 'Dan' can precede the verb, but in a sentence such as *biglal še'ela axat nixšelu harbe talmidim ba bxina* 'because-of one question failed many students (= many students failed) in-the exam' it is more natural for the nondefinite subject 'many students' to follow the verb 'failed', with the verb then having more topic-like status in consequence.

prepositional phrases ranking from IO-Datives and Obliques via Locationals to Adverbials. These operations have pragmatic correlates which line up Datives, Instrumentals, Comitatives, and Animate Goal-Obliques as candidates for topichood, hence for being relativized elements and for being extracted by Left-Dislocation, while Adverbials admit most freely of fronting, which serves to establish them as background to the event described, and Place expressions share properties with both ends of the scale, placing them between Object-like constituents on the one hand and Adverbials on the other. And this in turn accords with other properties noted in preceding sections, including the fact that Object-like constituents can be construed as arguments of the predicate, but Adverbials cannot; that Locationals are semantically entailed by motion verbs; and that Datives and Obliques carry 'participant' roles, whereas Adverbials encode 'circumstances' concomitant to an event, but not an intrinsic part thereof.

Clearly, cross-linguistic examinations are needed across languages with different word order as well as different case-marking characteristics to further validate the hierarchy proposed here, as a basis for a more general 'bitransitivity hypothesis' with respect to elements following the DO on this continuum. As background, detailed analyses of individual languages, such as we have attempted for Hebrew, seem the right place to start.

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