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Form and Function:
 Passives, Middles, and Impersonals in Modern Hebrew*

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1. Introduction

There have been a number of recent studies on impersonal passives in relation to personals and to other types of impersonal constructions (for instance, Comrie 1977, Keenan to appear, Kirsner 1976, Langacker & Munro 1975, Olshtain 1978, Perlmutter & Postal 1977). [1] The purpose of this paper is to investigate three related types of agentless constructions in Modern Hebrew, and to characterize the distinctions between them in terms (i) of structural factors conditioning their formation and (ii) of pragmatic factors affecting when they are used and/or how they are interpreted. It seems that detailed examination of such constructions in a given language might suggest certain typological correlates between the existence of well-developed impersonals and middle voice, on the one hand, and a concomitant lack of resorting to the use of passives even where a language does have a productive structural mechanism for passive-formation.

The three Hebrew constructions in question are illustrated in (1) and (2) below: The first two constructions - passives and middles - share the same surface SV(X) ordering of constituents, differing formally in verb morphology and in the fact that the passive alone may have a overt agent specified. The third, impersonal construction takes the form VO(X), and differs from both the passive and the middle in the morphological pattern of the verb, which moreover must be in the plural.

(1) Type I: AGENTLESS PERSONAL PASSIVES

hara'eyon putax be angliya
 the-idea was-developed in England

Type II: MIDDLE VOICE (REFLEXIVE) INTRANSITIVES

hara'eyon hitpateax be angliya
 the-idea developed in England

Type III: 3RD PERSON PLURAL (ACTIVE) IMPERSONALS

pitxu et hara'eyon be angliya
 developed(PL) OM the-idea in England [2]

(2) Type I: PASSIVE

šney cvatim ye'urgenu bekarov
 two teams will-be-organized soon

Type II: MIDDLE

šney cvatim yit'argenu
two teams will-get-(themselves)-organized
bekarov
soon

Type III: IMPERSONAL

ye'argenu šney cvatim bekarov
(they)-will-organize two teams soon

The three alternates in (1) and (2) above are semantically equivalent, in the sense of expressing the same propositional content and having the same truth value. And none of the three specifies overtly who or what perpetrated or will perpetrate the event in question: that is, they are all superficially "agentless". Yet, as we will try to show, such expressions function differently with respect to the extent to which they can or do imply agency.

In Type I, the traditional role of the agentless passives is manifested: here, "the identity of the performer of the action is not of interest, (and) is as far as possible from being the topic of the sentence" (R. Lakoff 1971: 159), and "the personal passives ... foreground the NP which is their subject" (Keenan Ms. 61). In Hebrew, as in English (though by no means all languages), such expressions typically can specify agency - e.g., in I of (1) bidey mad'anim 'at-the hands-of = by scientists' and of (2) al ydey hamax-laka 'by (means of) the-department'. [3]

In the Type II middle voice intransitives, agent-specification is much less vague: it is expressed within the verb morphology - both hitpateax in (1) and yit'argenu in (2) being in the intransitive hitpa'el verb pattern - with the clear implication that it is the (nonoccurrent) Object of the action which is also its agent. Thus, in the Type II examples, hara'eyon hitpateax 'the-idea developed' or cvatim yit'argenu 'teams will-get-organized', no "by" phrase can be attached [4] - by contrast with the Type I passives - but some kind of "reflexive" expression is quite feasible, for instance:

- (3) a. hara'eyon hitpateax me acmo
the-idea developed from itself
'the idea developed of itself, on its own,
of its own accord'
b. hacvatim; yit'argenu lahem;
the teams will-organize(INTRANS) to-them
'the teams will (go and) get themselves organized.'

In both cases, the object pronominal must agree with the surface subject NP - ra'eyon 'idea' or cvatim 'teams'. The dative marker le- on the pronoun object on (3b)

represents a productive type of intensifying reflexive form on intransitive verbs - e.g., hem halxu lahem bli lomar mila 'they went to-them without saying (a) word' means something like 'they went off, they upped and went themselves' or with a middle voice verb, hi hitpatxa la yafe me'od 'she developed to-her very nicely' has the sense of 'she's gone and developed (herself) very nicely'. This reflexivity of sense is to be expected for Type II middles, for the action is predicated of a coreferential Object and Agent or Experiencer together. This can explain why Hebrew uses the same verb pattern for middle-voice and for the small set of lexicalized reflexive-verbs referring to bodily activities (e.g., hitraxec 'wash oneself', hitlabeš 'dress oneself', hitgaleax 'shave oneself') as discussed in Berman to appear. And in fact many languages show an overt morphological equivalence between reflexives and middle-voice intransitives, reflecting the close semantic correspondence between these categories (see Barber 1975, Faltz 1977, and Garcia 1975).

Type III expressions take the form of a Main Verb in 3rd Person Masculine Plural with its associated complements and modifiers. They have no surface subject at all, and hence are a kind of "verb-first" or "missing-persons" construction (the latter term is due to Hakulinen & Kartunnen 1973), and they constitute the prototypical instance of "impersonal" constructions in Modern Hebrew. [5] Examples include:

- (4) a. pitxu et hara'eyon be angliya
developed(PL) OM the-idea in England
'They developed the idea in England'
- b. ye'argenu od cvatim bekarov
will-organize(PL) more teams soon
'More teams are going to be organized shortly'
- c. bonim šam kviš xadaš
are-building there road new
'They're building a new road/
A new road's being built there'
- d. lo garim ba bayit hahu kvar šanim
not(have) lived in house that already years
'That house hasn't been lived in/
Nobody's lived in that house for years'

Elsewhere (Berman in progress), we try to demonstrate why the main verb of such constructions must be Masculine in gender (Masculine here being functionally equivalent to Neuter, in fact); why it must be Plural - in keeping with the the "generic" sense of such propositions; and why the unspecified agent or agents must be construed as Human (in this connection, see also Kirsner 1976). Below we present

evidence to demonstrate that despite these three semantically motivated constraints on the form of the "impersonal" verb - which in Hebrew as in other languages agrees with the surface subject in number, gender, and person - such constructions cannot be analyzed as transformationally related to their counterparts with some overt, though "impersonal" Subject such as anasim 'people' or hem 'they'. As (5) and (6) show, a zero subject cannot be coreferential to any overt nominal; that is, it neither pronominalizes a noun like 'people' nor is it pronominalizable by a pronoun like 'they'.

- (5) a. kše anasim omrim zot, hem mit'almin
 when people say that, they're ignoring
 me'ikar haba'aya
 the-root-of the-problem
- b. kše Ø omrim zot, Ø mit'almin
 me'ikar haba'aya
- c. * kše anasim omrim zot, Ø mit'almin
 me'ikar haba'aya
- d. * kše Ø omrim zot, hem mit'almin
 me'ikar haba'aya

The contrast between wellformed (a) and deviant (c) shows that even such a "generic" kind of noun as anasim 'people' requires an overt pronominal anaphor, and cannot be taken to cover the same scope of subjecthood as the zero subject in (b). As a corollary, hem 'they' must be anaphoric to anasim 'people' (or to some more clearly specified N such as politika'im 'politicians' or yedidav 'his friends') and cannot be taken as the implied subject of a subjectless plural verb - as in (d). Similarly, the (a) example in (6) below is only wellformed if the people who do the talking ill of him are not the same as those who tell him about it (pragmatically the most likely situation), thus:

- (6) a. im anasim meraxlim alav, hu mitragez
 if people gossip about-him, he gets-mad
 kše Ø mesaprim lo
 when tell(PL) him = 'when he's told'
- b. im Ø meraxlim alav, hu mitragez
 kše Ø mesaprim lo
- c. * im Ø meraxlim alav, hu mitragez
 kše hem mesaprim lo

Thus expressions like those in (4) above and in the (b) sentences of (5) and (6) - with both main clause and embedded zero subjects - are truly "impersonals" and they do not have any kind of deep subject hem associated with them; for hem 'they' is typically a personal, that is referring, pronoun,

whereas here "the underlying subject is unspecified", in the sense of Langacker and Munro (1975: 794).

The event specified by the main verb of Type III impersonals, then, has no referential agent outside of the general class of human beings entailed by a given universe of discourse. [6] Such sentences are quite typically translated by passives or by the use of "they" as an impersonal subject in English (as noted in Gesenius' comments on Biblical usage in fn. 5) - for the latter is a language which has the peculiar property of requiring an overt constituent as surface grammatical subject in all sentences other than imperatives. This is certainly not true of Hebrew, in which one finds a wide range of subjectless constructions (see fn. 5), including both active impersonals of the kind labelled Type III in this study as well as a more restricted set of passive impersonals, too. [7]

Before proceeding to a consideration of the functional impact of the three constructions - Type I agentless passives, Type II middle voice, and Type III active impersonals - we consider structural factors constraining the formation of one or other of these constructions.

2. Structural Constraints on Passive and Middle-Voice Formation

Although Hebrew has a highly productive morphological mechanism for constructing passives, and a relatively productive means for constructing middle-voice expressions - as indicated schematically in (7) below - it appears that both Type I passives and Type II middles are severely constrained on formal grounds. A rough chart indicating the main functions of the binyan system of verb morphology (adapted in part from Berman to appear, fn. 2) is given below:

(7) Main Functions of the Binyan Verb-Patterns

1. kal - Basic, nonderived verb pattern, both transitive & intransitive, e.g., caxak 'laugh', patax 'open', gamar 'finish'
2. nif'al - Intransitive verb pattern: [8]
 - i) Passive reflex of kal: e.g., niftax 'be opened', nigmar 'be finished'
 - ii) Intransitive, middle reflex of hifil: e.g., nirdam 'fall asleep', niš'ar 'remain', names 'melt'
3. pi'el - Basic, nonderived verb pattern, typically transitive: e.g., gibeš 'finalize', piteax 'develop', irgen 'organize'
- 3b. pu'al - Passive reflex of verbs in pi'el: e.g., qu-baš 'was finalized', putax 'was developed'

4. hitpa'el - Intransitive verb pattern: [8]
- i) Intransitive, middle reflex of pi'el: e.g., hitgabeš 'get finalized', hitpateax 'develop'
 - ii) Reflexive: e.g., hitraxec 'wash oneself', hitlabeš 'dress oneself'
 - iii) Reciprocal: e.g., hitkatev 'correspond (with)', hitnašek 'kiss (one another)'
5. hif'il - Transitive verb pattern:
- i) Causative of verbs in kal: e.g., hicxik 'make laugh', hilbiš 'dress (someone)'
 - ii) Transitive reflex of verbs in nif'al: e.g., hirdim 'put to sleep', hiš'ir 'leave (behind)'
 - iii) Inchoative (intransitive): e.g., hexvir 'turn pale', hivsil 'become ripe'
- 5b. hof'al - Passive reflex of verbs in hif'il: e.g., hulbaš 'be dressed (by X)', hurdam 'be put to sleep'

This chart shows that on the basis of transitive verbs in (1) kal, (3) pi'el and (5) hif'il - passives can be formed in (2) nif'al and in (3b) pu'al and (5b) huf'al respectively; while middle-voice intransitives can be formed in (2) nif'al and in (4) hitpa'el. Below we consider different kinds of constraints - syntactic, morphological, and lexical - on such formations.

- (a) Only Direct Object Passives: Hebrew allows only DO (Patient or Experiencer) passives, in the sense of Keenan, to appear, Ms. 25-7. The lack of IO passives (John was promised help), Oblique passives (He'll be laughed at) as well as Instrumental, Locative, etc. passives in Hebrew is due to a more general syntactic constraint in the language which disallows dangling or orphan prepositions (as discussed in Berman 1978, 124-238). That is, forms like yicaxek 'will-be-laughed' or ruxal 'was-gossiped' are morphologically feasible but syntactically constrained because they would entail prepositions without any associated NP. Type III impersonals are typically used instead of expressions like the English examples above.
- (b) Present Tense Statal: Present tense passives tend to be interpreted and hence used in a statal or adjectival rather than in a kinetic or dynamically passive sense (terms are due to Hasegawa 1968), reflecting the basically participial nature of present-tense verbs in Hebrew in general (Berman 1978: 142-59). That is, passives like those in (8) below are ambiguous in a way analogous to English The room is swept (i) by the cleaning woman at around 6:00 every morning - dynamic passive

- compared with (ii) so we can put the carpet down now - statal or perfective passive. [9] Examples of similarly ambiguous constructions in Hebrew are:

- (8) (i) pu'al pattern
- a. hašgiyot mesumanot be'adom
mistakes are-indicated in-red
?? al ydey ha'orex
by the editor
- b. hašgiyot mesumanot be'adom,
mistakes are-indicated in-red,
az kal livdok otan
so(it's) easy to-check them
- (ii) huf'al pattern
- a. kol hamo'amadim musmaxim
all the-candidates are-qualified
?? al ydey va'ada
by (a)committee
- b. kol hamo'amadim musmaxim
all the-candidates are-qualified
la'asok banose
to-deal with-the-subject

As the question-marks in the (a) examples indicate (as well as further examples of the same type discussed in more detail in Berman 1978: 159-68), these present-tense passives are typically interpreted as adjectival or statal - and again, Type III impersonals will be preferred for the dynamic sense of the verb. [10]

- (c) Constraints on Non-finite Passive Forms: Nonfinite verb forms - infinitives and gerunds - have no passive counterpart in the two purely passive patterns, (3b) pu'al and (5b) hof'al as set out in the chart in (7). Thus the equivalents of English the pipe needs to be fixed or he sighed with relief on his article's being completed need to be given an active formulation - very often of an impersonal type corresponding to '(they) need to fix the pipe'. As a result of the lack of passive infinitive forms in the two exclusively passive verb-patterns - (3b) pu'al and (5b) hof'al by contrast with (2) nif'al in the chart in (7) above - when modal expressions taking an infinitive are used, the active impersonal will again take over. Thus the Hebrew equivalents of expressions like the affair must be ended or he can't be helped will take the Type III impersonal form:

- (9) a. xayavim lesayem et haparaša
must(PL) to-end OM the-affair

b. lo yexolim lesayea lo
not can(PL) to-help him

(d) Lexical Gaps in Passive Patterns: There is quite a large group of verbs with respect to which the paradigmatic Active pi'el / Passive pu'al / Middle hitpa'el is suppletive in actual usage; in such cases the passive form, though morphologically regular, is avoided, being replaced by the middle-voice form - which functions as a true passive in some cases (e.g., in (10) below it can take an agent phrase) but not in all.

- (10) (i) a. PASSIVE * hamixtav kubal
the-letter was-received
(al yadeynu)
(by us)
- b. MIDDLE hamixtav hitkabel
the-letter was-received
(al yadeynu)
(by us)
- (ii) a. PASSIVE * hu bukaš (al ydey hamenahel)
he was-asked (by the-boss)
lehitnacel
to-apologize
- b. MIDDLE hu hitbakeš (al ydey hamenahel)
he was-asked (by the-boss)
lehitnacel
to-apologize

For reasons which are as yet not clear to us, some such suppletive paradigms admit of no passive construction at all with certain verbs, as evidenced by the fact that the (b) examples below are wellformed just in case no agent phrase is possible.

- (11) (i) a. PASSIVE * haš^vi'ur suyam
the-lesson was-ended
(al ydey hamore)
(by the-teacher)
- b. MIDDLE haš^vi'ur histayem
the-lesson was-ended
* al ydey hamore
by the-teacher
- (ii) a. PASSIVE * hamexonit tekulkal
the-car will-be-broken
(al ydey hace'irim) im titen
(by the-kids) if you-give
ota
it (to them)

- b. MIDDLE hamexonit titkalkel
 the-car will-break-down
 * (al ydey hace'irim) im titen
 (by the-kids) if you-give
 ota
 it (to them)

These are cases where Type II middles are used instead of Type I passives - functioning as dual-purpose passives and middles as in (10b) or as middles alone as in (11b).

- (e) Gaps in the System of Middles: The system of verb-patterns charted in (7) includes one highly productive and regular set of Active/Middle alternations in the form of the transitive pattern (3) pi'el and its intransitive reflex (4) hitpa'el. Thus:

- (12) (i) ACTIVE pi'el: dan sider et ha'inyan
 Dan arranged OM the-matter
 MIDDLE hitpa'el: ha'inyan histader
 the-matter arranged-itself/
 got-settled/worked-out
 (ii) ACTIVE pi'el: hamore siyem et haši'ur
 the-teacher ended OM the-lesso^v
 MIDDLE hitpa'el: haši'ur histayem
 the-lesson ended

A somewhat less productive but quite widespread Active/Middle alternation is manifested by the transitive hif'il pattern taking the intransitive nif'al as its middle reflex, thus:

- (13) (i) ACTIVE hif'il: haxom hemis et haxem'a
 the-heat melted OM the-butter
 MIDDLE nif'al: haxem'a namesa (baxom)
 the-butter melted (in-the-heat)
 (ii) ACTIVE hif'il: hamore himšix et
 the-teacher continued OM
 haši'ur
 the-lesson
 MIDDLE nif'al: haši'ur nimšax^v
 the-lesson continued

Numerous verbs alternate in this way in Hebrew, and the fact that each such pair has an associated passive form (in pu'al for the verbs like those in (12), in huf'al for verbs like those in (13)) is evidence for the claim that Hebrew manifests a tripartite system of voice - active, passive, and middle. [11] However, this system breaks down with respect to verbs in pattern (1) on

chart (7) - the basic or unmarked kal pattern which includes both transitive (two-place predicate) and intransitive (one-place predicate) verbs.

As a result of both the dual transitive/intransitive distribution of verbs in the kal pattern (1) along with the dual function of the nif'al pattern (2) - both the passive reflex of verbs in kal and the middle reflex of verbs in hif'il as shown in (7) - no special form exists as the middle counterpart of kal, and nif'al may function as both the intransitive-middle and passive sense in such cases:

- (14) (i) PASSIVE nif'al: hakad nišbar
 the-vase was-broken
 (al ydey haxatul)
 (by the-cat)
 MIDDLE nif'al: hakad nišbar,
 the-vase broke,
 le da'avoni
 to my-regret
- (ii) PASSIVE nif'al: hadelet niftexa
 the-door was-opened
 (al ydey hašo'er)
 (by the-doorman)
 MIDDLE nif'al: hadelet niftexa
 the-door opened
 pit'om
 suddenly

Again, where no agent is specified, speakers can use Type III impersonals in the active kal pattern in such cases, too, to yield, for instance, gamru et kol ha'oxel '(they) have-finished OM all the-food' in the sense of 'the food's all finished' or savru et hakad '(they) have-broken OM the-vase' = 'the vase has broken'.

The structural constraints noted in this section can be charted as follows:

(15) Constraint	I Passives	II Middles	III Imperson.
a) Only DO Passives	-		+
b) Pres. Tns. Passive = Statal	-		+
c) No Nonfinite Passives	-		+
d) Lexical Gaps in Passives	-	+	(+)
e) Gaps in Set of Middles	+	-	(+)

where minuses indicate that a construction is formally unavailable, pluses indicate the construction used instead, and parentheses indicate that a construction may but need not be used to bridge the gap.

The picture which emerges is that Type I passives are the most severely constrained of the three constructions; Type II middles are somewhat constrained - as shown by (e), but they may take over the role of passives as in (d); while active plural impersonals of Type III seem to manifest no constraints at all - being the only ones which can be freely formed with intransitive and transitive verbs alike. This account also provides a formal explanation of the intuitive feeling of Hebrew speakers that the passive is somewhat atypical of their language, somehow "not really Hebrew", despite the relatively productive morphological mechanism which exists for its formation. This intuition is backed up by the findings of a pilot study conducted by Mira Ariel of Tel Aviv University [12] of seven 8 to 10 and one-half year-old Israeli children, who consistently avoided using the passive form even when it was quite clearly called for. This avoidance was particularly evident in the younger of the seven subjects, and was manifested throughout with respect to present-tense passives which are viewed as adjectival (see our point (b) above). [13] Moreover, the strategies children used for avoiding the passive when required to produce sentences in which the logical object occurred initially are consistent with the points made here: younger children used simple actives or middle-voice (Type II); those who showed better command of passive constructions used impersonals (Type III) or NP fronting strategies to avoid the passive; while only the the two oldest children, who made most frequent use of passive formation (including passives with agent-phrases), made relatively rare use of such methods of avoidance.

This ties in with another relevant structural property of Hebrew, as a language for which the passive is relatively not

at the outset, personal passives "foreground the NP which is their subject" (Keenan Ms. 61), Hebrew has numerous other devices for foregrounding a nonagent NP (see, for instance, Ben-Horin 1976). In order to, in some deliberately vague sense of the term, "focus" on a given NP, Hebrew speakers can regularly bring it to the front, as follows:

- (16) DO FRONTING - et hara'eyon pitxu
 OM the-idea developed(PL)
 hamad'anim be angliya
 scientists in England
- IO FRONTING - le dani natati et hamixtav
 to Danny I-gave OM the-letter

- OBL FRONTING - al ba'ayotexa nedaber
 about your-problems we'll-talk
 behizdamnut
 in-due-course
- LOC FRONTING - ba megira tasim
 in the-drawer put(IMP)
 et kol haneyarot
 OM all the-papers

Moreover, Hebrew has a very productive process of left-dislocation with crossreferential pronominal trace, specifying the dislocated NP as the "topic" in the sense of what the following discourse is about. Thus, where the dash indicates a pause:

- (17) DO DISLOCATED - ra'eyon ze - mad'anim pitxu
 that idea - scientists developed
 oto be angliya
 OM+it in England
- IO DISLOCATED - dani - natati lo et hamixtav
 Danny - I-gave him OM the-letter
- OBL DISLOCATED - ba'ayotexa - nedaber al-
 your-problems - we'll-talk about
 ehen behizdamnut
 them some-time
- LOC DISLOCATED - rina - ha- hitnaḥagut √sel- a
 Rina - the behavior of her
 mešaga'at oti
 makes-crazy me
 'Rina, her behavior drives me crazy'

Such constructions, as well as other devices for NP "foregrounding" in Hebrew, lie outside the scope of the present discussion. They are noted here as further motivation for the fact that Hebrew speakers can and do avoid using the passive, because they have other devices available to them to perform at least one major function of passives in a language like English - foregrounding of NP's other than the agent.

Moreover, with respect to the other, logically related function of passives - as a way of talking about actions the performer of which is perceived as unimportant or irrelevant, or whose identity is unknown or taken for granted - Hebrew again has welldeveloped structural devices alongside the agentless passive of Type I: specifically Type II middles and Type III impersonals. [15] Hence the tendency to use relatively few passives even in more formal written Hebrew, certainly in the spoken language, can be explained in terms of other structural options which are available to the Hebrew speaker, rather than to factors of relative mor-

phological complexity (as noted in fn. 11 above).

3. Functions of Agentless Constructions in Hebrew

The three construction-types considered here, then - passives, middles, and impersonals - are alike in that none makes any overt reference to an agent NP (and in this they differ from sentences with preposed NP's like those illustrated in (16) and (17), where the agent is specified). What we shall try to show is that the three constructions in question differ crucially in whether and how they impute agency, and that notions of degree of agent involvement or responsibility for the event described are relevant to how such expressions are interpreted.

We would like to suggest that there is a kind of agent-hierarchy, along the following lines:

(18) 1. TYPE II MIDDLES

hara'eyon hitpateax be angliya (me acmo)
 the-idea developed in England (of itself)
 -Least agency imputed, the event is perceived
 as "autonomous"

2. TYPE I PASSIVES

hara'eyon putax be angliya
 the-idea was-developed in England
 -Agency is logically implied - and an agent could
 be mentioned - but its importance is downgraded

3. TYPE III IMPERSONALS

pitxu et hara'eyon be angliya
 (they) developed OM the-idea in England
 -Human agency is clearly imputed, but its identity
 not specified

Consider, first, Type II Middles, in which, we are claiming, the event or process is construed as in some sense "autonomous" - some formal evidence being provided by the possibility of an expression such as me'acmo 'of/in itself' or 'of its own accord' in (18-1) above. In discussing middle-voice constructions, some writers stress the identity of Agent/Experiencer and Patient/Benefactee. As typical one-place predicates, they are taken to imply that "a patient/benefactee is either the agent as well, or is partially involved in or responsible for the action" (Olshtain 1978: 29). According to Barber, "the middle voice is expressing the fact that the subject is not only performing the action, as agent, but receiving some benefit from it as well" (1975: 18), that is, the middle-voice is "a means of signalling that some nonsubject NP in the sentence proposition is identical with the surface subject" (op cit). Much in line with Faltz (1977), middle voice - specifically, lexicalized reflexive - verbs have the effect of "incorporating

the idea of to whom and by or for whom a given action was perpetrated...expressing a kind of 'oneness' of action and object-of-action, whereby the object is somehow 'internal' or integral to the action itself" (Berman to appear). This accords well with Keenan's characterization of certain middles as "a class of constructions which resemble personal passives in a great many ways, but in which the subject's responsibility for the action is portrayed as sufficiently autonomous that the existence of no other argument (agent or causer) is implied (to appear, Ms. 22).

We would like to refine the notion of "autonomy of event" expressed by middles in relation to the claim made by Keenan that the semantic interpretation of intransitive verbs varies with (depends on) their surface subject NP. [16] Thus, the "oneness" of agent/patient referred to earlier is possible only with animate subjects, which can be viewed as both the doers and receivers of an action, as in (19):

- (19) a. hacevet hitargen
 the-team (got itself) organized
 bli ba'ayot
 without (any) difficulty
- b. haganavim histalku
 the-thieves took(themselves)off
 me habayit
 from the-house
- c. haxatul hitnagev bašemeš^v
 the-cat dried(itself) in-the-sun

This truly "reflexive" sense of such verbs - implied by the parenthesized reflexives in the gloss - is possible only with animate, purposive initiators of the action. Other such expressions are somewhat less autonomous, in that they imply some human agent responsible for the event, as in (20):

- (20) a. hamesiba hitargena bli
 the-party got-organized without (any)
 ba'ayot
 difficulty
- b. hatoxnit mitpataxat yafe
 the-plan is-developing nicely
- c. hacalaxot yitnagvu maher
 the-dishes will-get-wiped quickly

That the event is viewed in each case as autonomous is evidenced by the fact that in each sentence in (20) the verb could be followed by a dative pronoun that agrees with the Subject NP, of the sort noted in connection with example (3) at the outset of this paper - hitargena la, mitpatxat la and

yitnagvu lahen respectively. Some human agent is implicit, however, because obviously parties do not organize themselves, nor plans develop themselves nor dishes (unfortunately) wash themselves - people do these things.

A use of middles related to such instances is where no person, but some other (often physical) force presumably initiated the action, just because these inanimate subjects cannot be conceived as self-initiating, for instance:

- (21) a. hamarak mitbaš[√]el (al ha'eš[√])
 the-soup is-cooking (on the-fire)
 b. hadelet niftexa pit'om
 the-door opened suddenly
 c. hamidron hitkasa be š[√]eleg
 the-slope got-covered with snow

Here, some outside, nonhuman agency is presumed responsible for the event experienced by the Subject NP - and in (c) the "perpetrator" of the covering must be overtly mentioned as snow. Normally, however, when one talks about soup cooking, doors opening, vases breaking, butter melting (all middle forms in Hebrew), what happened to the Subject is what matters - and not the agent. One last set of examples will serve to further show how very tenuous is agency-imputation in middle-voice expressions. We refer to cases where some inherent property of the Subject NP is responsible for the state of affairs described, thus:

- (22) a. calaxot mi plastik mityabš[√]ot bekalut
 dishes (made) of plastic dry easily
 b. xomer ka ze nisdak maher
 stuff like that chips(off) quickly
 c. habad haze mitkavec nora
 this cloth shrinks terribly

Thus, middles will be used in Hebrew precisely to talk of states-of-affairs which the (surface subject) patient-experiencer is viewed as undergoing autonomously, irrespective of agency - except where the Subject is animate, and hence both the initiator and undergoer of the event. This claim is strengthened by cases where middles - while morphologically available - are ruled out in Hebrew, just because the event is such that an agent is either logically or pragmatically involved, thus:

- (23) a. * hamišpat lo hitnaseax
 the-sentence (did)n't get(itself)worded
 kahalaxa
 properly

- b. * ha'ašpa histalka me haxacer
 the-garbage took(itself)off from the-yard

Unlike the cases in (20) - parties and plans can develop their own momentum, so to speak, and dishes can be left to dry - sentences only get worded and garbage removed if there are people around who deliberately undertake to do so. Thus, (24) is somewhat better than the two sentences of (23), just because the act of omission need not - in fact usually is not - be purposeful:

- (24) ?? štey milim nišmetu be xol sura
 two words (got)dropped in each line

In all these cases, the passive Type I would be used instead - in keeping with its property of entailing an agent, even where none is specified, thus:

- (25) a. hamišpat lo nusax kahalaxa
 the-sentence not was-worded properly
 b. ha'ašpa sulka me haxacer
 the-garbage was-removed from the-yard
 c. štey milim hušmetu be xol sura
 two words were-dropped in each line

Type I Passives, then, will be used - as in English and other languages - where an agent is logically implied, but downgraded in importance or relevance by not being specified. Beyond this, we note with respect to passives that (i) they are relatively infrequent in Hebrew - as discussed in Section 2 above; (ii) they occur almost exclusively in written language - mainly of scholarly works and newspaper usage - hardly at all in informal speech; and (iii) they function analogously to the dynamic passive with be (rather than with get) in English.

With respect to Type III Impersonals, we need to motivate our claim as formulated in (18) that they are the highest of the three constructions on the scale of agency-imputation. Note that impersonals like the ones below are logically equivalent to their passive counterparts in (25) in the sense of having the same truth value as propositions.

- (26) a. lo nisxu et hamišpat kahalaxa
 (did)not word(PL) OM the-sentence properly
 b. silku et ha'ašpa me haxacer
 have-removed OM the-garbage from the-yard
 c. hišmitu štey milim be xol šura
 left-out(PL) two words in each line

The sentences in (26) are typical impersonals, and as such

they "function to de-emphasize, de-focus, or in general withdraw attention from an argument" (in this case the "missing" Subject - R.B.) in the sense of Keenan, Ms. 61. Yet such sentences do impute agency, and imply quite clearly that there are or were agents, in fact people, who are responsible - for, as we noted earlier, these impersonals are only feasible just in case the verb is understood to apply to human beings. [17]

One explanation of this in typological terms is suggested by Olshtain 1978. She points out that in languages which have a welldeveloped morphological middle voice (e.g., Hebrew, Russian, Greek), "It is to be expected that there will be a wide use of impersonal, nonreferential active sentences...(possibly because) Middle Voice weakens the 'agenthood feature' by having the agent and patient share the same 'agent function' (and) the need therefore arises to create a special construction that is 'passive-like' in meaning and stresses

It seems clearly the case that Hebrew impersonals of our Type III do indeed "stress agenthood as such", and in this sense differ significantly from both Type I passives and Type II middles. Take, for instance, a man coming home from work, walking into the house and finding a broken window (or - a window broken). Either of the following is a possible reaction, but they imply different points of view:

(27) PASSIVE OR MIDDLE: [18]

la'azazel! haxalon nišbar šuv
 damn! the-window was broken/broke again
 = 'the window's been broken/has gotten broken/
 has broken again'

(28) ACTIVE IMPERSONAL

la'azazel! šavru šuv et haxalon
 damn! broke(PL) again OM the-window
 = 'they've (gone and) broken the window again'

In (27) there is a focussing on the subject - the patient of the action - in the sense of the highlighting of a certain element for attention, and it is the window that is being cursed, along with its having gotten (itself) broken again. In (28) it is the act of breaking and hence the perpetrators thereof - though their identity is not specified, may perhaps not be known - that are being cursed; that is, responsibility is being imputed for the event. In other words, if one chooses to focus on an NP other than the agent (apart from the kinds of fronting operations discussed in Section 2), the patient "comes first" in both the middle-reflexives and the agentless passive. If what one is concerned with is the action, the event itself, then a "verb-first" impersonal is used.

With regard to the high degree of "imputation of agency" we are claiming for the Impersonals, compare the following:

- (29) a. hamon mexoniyot nignavot
lots-of cars are(getting)stolen
kan la'axarona
here lately
b. šeli gam be sakana
mine (is) also in danger
c. ?? kol miney tipusim mistovevim
all kinds-of types wander-around
bašetax po
in-the-area here

(29a) is in the passive, hence (b) which refers back to the surface subject of (a), talking about "a car", is a plausible follow-on from (a), unlike (c) which refers explicitly to conceivable perpetrators of the stealing noted in (a) and hence is only possible as a follow-on from the original (a) statement if some sort of shift in the topic of discourse is assumed. The converse is true with impersonals, thus:

- (30) a. gonvim hamon mexoniyot kan la'axarona
steal(PL) lots-of cars here lately
b. ? šeli gam be sakana
mine (is) also in danger
c. kol miney tipusim mistovevim
all kinds-of types wander-around
bašetax po
the-area here

Similarly, the sentence in (28) about the breaking of the window (impersonal) could be followed by something like "I'm gonna give those kids one helluva talking to!" - but this is not a plausible follow-on for the passive/middle-voice sentence of (27), where the window is what the speaker is most concerned with. Thus in the Type III impersonals of (28) and (30a), the state of affairs described is clearly attributed to some unspecified but presupposed (and in these instances negatively perceived) human agents viewed as responsible for breaking and stealing respectively.

4. Summary

Given that Hebrew has (at least) three different constructions in which no overt agent is specified, we have tried to show that the choice between them is partially constrained by structural factors - morphological, syntactic, and lexical. Type III impersonals are least constrained, being limited only by the requirement of human

reference (fn. 17); Type II middles are rather more constrained, and in some cases merge morphologically with passive forms; Type I passives are quite severely constrained on formal grounds, and some of their traditional functions can be performed by other, very productive fronting operations in Hebrew - hence providing formal motivation for the fact that passives are relatively so uncommon, even in more careful written usage.

In terms of function, the three constructions differ in degree of agency, in the sense of the amount of involvement and responsibility imputed to the unspecified perpetrators of the event in question. Type II middles are the most agent-free, the Subject (particularly in the case of animates) or the event itself being construed as largely "autonomous"; Type I agentless passives focus on the patient, which they serve to foreground - and although passives imply the logical existence of an agent, the latter's role is deliberately ignored; Type III "verb-first" impersonals stress agency as such, making it clear that there are people in the background who are held responsible for the state of affairs - while the "impersonal" formulation means the speaker has no need or desire to specify their identity, for otherwise he would use an active sentence with an overt Subject.

In more general terms, our findings reinforce the point of view of the other studies noted at the outset, indicating that the traditional - certainly transformationalist - conception of passives in terms of their direct active counterparts is not necessarily the most revealing approach to such constructions. Our study further suggests that agentless passives and impersonals - both Type III active impersonals and impersonal passives like those noted in fn. 7 (and see Comrie's discussion of the latter in different European languages) - can be characterized as having similar propositional content but different pragmatic motivations and hence consequences. The data from Hebrew also provides evidence to explain the cooccurrence of middle-voice and impersonal constructions in languages like Hebrew, spoken Arabic, and Russian, on the one hand, and the common morphological identity between forms used in both middle-voice and reflexive constructions, on the other.

Finally, the study points to an interrelation between the relatively common use of passives in a language like English and the fact that English does not tolerate subjectless sentences. Though English can and does use "impersonal" subjects such as they, you, one, or we, these are relatively marginal features of the language. (Thus, they and you are mainly informal; one is so formal as to be rare - certainly not on a par with German man or French on; and we is not used nearly as widely as its literal counterpart anu in He-

brew, as noted in fn. 15.) Hebrew, on the other hand, is a typical instance of a language exhibiting a wide range of "subjectless" or "verb-first" constructions (see Berman in progress) - and hence the ease with which it can accommodate impersonals in lieu of passives.

FOOTNOTES

- * I am grateful to Tsafrira Ben-David, Alexander Grosu, Edward Keenan, Elite Olshtain, and David Stein for their very helpful comments on an earlier version of this paper. The inadequacies which remain are mine alone.
- 1 These studies all take a rather different view of such constructions than is expressed in various transformationalist attempts to derive passives from their corresponding active counterparts and, possibly, by extension impersonals from corresponding personals.
 - 2 OM indicates the object marker *et* obligatorily preposed to direct objects just in case they are [+Definite].
 - 3 In many cases, agentless passives seem to require some other adverbial to "fill out" a strictly one-place ##SV## construction, as in:

(i) The news is broadcast twice a day / only in Spanish.

(ii) Results will be posted on the department bulletin board.

(iii) Proposals must be submitted in three copies.

This constraint ties in with the observation that English, for instance, has very few "absolute intransitives" (Lees & Klima 1963). However, given the wellformedness - in some undefined sense of the term - of such sentences as "John was killed" or the "The building will be destroyed" in both English and Hebrew, we merely note this constraint in passing, as a theme for further investigation.

- 4 A graduate student of linguistics at Tel Aviv University informs me that such expressions as the following can be heard - particularly among young people:

- (i) hara'eyon hitgabeš al ydey hakvuca
the-idea took-shape by the-group
- (ii) hatoxnit hitpatxa be angliya
the-program developed in England
al ydey hamarksistim
by the-Marxists

Such middle-voice expressions with an overt agent phrase marked by the same instrumental preposition as agent phrases in ordinary passives seem to go counter to all

our claims - and in fact other native Hebrew speakers in the same graduate class rejected this form. Given that the student in question is in constant contact with young people who speak a very "permissive" type of Hebrew, being out of contact with the mainstream of normativism in the schools (she is a member of a kibbutz), her data may in fact provide evidence to show that Hebrew speakers are beginning to reanalyze middle voice verbs as a kind of passive. This claim is strengthened by the existence of suppletive paradigms in all levels of usage, where the middle-voice hitpa'el verb-pattern functions as a passive in cases of particular verbs which are never used in this way in the strictly passive verb-pattern pu'al as discussed in Section (2d) below. The examples given in this footnote are noteworthy precisely because the middle-voice verbs in (i) and (ii) do have well-established counterparts, thus:

- | | | | | | |
|-------|-------------|-----------------|-----|------|---------------|
| (iii) | hara'eyon | gubaš | (al | ydey | hakvuca) |
| | the-idea | was-given-shape | (by | | the-group) |
| (iv) | hatoxnit | putxa | (al | ydey | hamarksistim) |
| | the-program | was-developed | (by | | the-Marxists) |
| | be angliya | | | | |
| | in England | | | | |

- 5 Impersonals with 3rd-person plural main verbs occur in many other quite unrelated languages, such as Russian. The fact that they are used with much the same function in Modern Hebrew cannot be attributed to "foreign influence", however, as similar constructions occur in both Biblical and Mishnaic (the latter c. 300 B.C. - 600 A.D.) Hebrew. Thus the 19th century Biblical scholar Gesenius notes that "The 3rd plur. also is sometimes used to express an indefinite subject...In such a case the 3rd plur. comes to be equivalent to a passive (emphasis mine - R.B.), as very commonly in Aramaic...e.g., Jb 7:3 'wearisome nights minu li have (they) allotted to me' (equivalent to 'were allotted to me'; to make 'invisible powers' the subject is a merely artificial device)". Gesenius then cites several other verses in the Bible in which "the indefinite personal subject (our they, one, French on, and the German man) is expressed by the 3rd plural masculine...in parallelism with a passive" (Gesenius 1910: 460). In the Mishna, the use of present tense plural verbs with the negator eyn is an extremely common way of expressing prohibitions, e.g., eyn not'in yerakot betox sadan sel šikma 'not plant(PL) vegetables in (the) trunk of (a) sycamore' in the sense of "it's not done", "one shouldn't do so".

Such "verb-first" or "predicate only" constructions

are, moreover, in accordance with a more general structural property of Hebrew which, as we try to show elsewhere (Berman in progress), manifests a wide range of sentence-types which are lacking in overt subjects. These include: (i) existentials such as yeš ba'ayot '(there) are problems' or eyn derex axeret '(there is) no other way'; (ii) expressions of "ambience" (in the sense of Bolinger 1973), e.g., nora kar po '(It's) terribly cold here' or haya nexmad eclam '(It) was pleasant at-their-place'; and (iii) modal and other types of predicates taking sentential complements, e.g., carix la'azor lo 'must to-help him' = 'he must be helped' or xaval še hu lo ba '(It's a) pity that he (did) not come'.

- 6 The notion "universe of discourse" may be explained as follows: In a statement like šotim hamon mic ba'arec 'drink(PL) lots-of juice in-Israel' = 'people drink a lot of juice in Israel', the universe of discourse is confined to people living in Israel, while in lo yod'im an-glit beyapan '(do) not know(PL) English in-Japan' the discourse entails people who are Japanese living in Japan. And if someone says yodi'u et hatoca'ot maxar 'will-announce(PL) OM the-results tomorrow', he is presumably understood to be imputing the act of announcing to those people whom both speaker and hearer recognize as having the authority, knowledge, or potential to announce results.
- 7 The present discussion is confined to the class of active impersonals. Hebrew does have a passive impersonal construction - with no surface subject, the verb being passive in form and singular (unmarked, that is) in number. However, these are restricted to a few lexicalized forms, mainly verbs of saying and thinking, thus:

- (i) ne'emar lanu še dan zaxa
was-said to-us that Dan won =
'We were told that Dan won'
- (ii) sukam al yadam še Dan zaxa
was-decided by them that Dan won
- (iii) yuvrar še dan zaxa
will-be-shown that Dan won

These constructions correspond closely to a wide range of similarly "subjectless" predicates in which the (masculine singular) head of the predicate need not be passive - as in (iv) - nor a verb - as in (v) and (vi).

- (iv) margiz oti sé dan zaxa
annoys me that Dan won =
'It annoys me that Dan won'

- (v) xaval ^vse ze haya dan ^vse zaxa
 pity that it was Dan that won =
 'It's a pity that it was Dan who won'
- (vi) haya barur se dan yizke
 (It) was clear that Dan would-win

See also fn. 5 in this connection.

8

The strict intransitivity of the two "middle-voice" patterns - nif'al and hitpa'el - is manifested, inter alia, by the fact that they never govern the direct object marker et. Where they occur in two-place predicates, the verbs in such patterns will take an oblique, never a direct object.

9

Hasegawa 1968 provides a careful discussion of this distinction. Langacker & Munro (1975: 824-7) consider the relation between perfectives and passives in nonIndo-European languages. Keenan, to appear, discusses "aspect distinctions in the passive" of various languages (Ms. 17-9); in his terms, Hebrew clearly provides a further example of his generalization G-1.2 to the effect that "The presence of a specifically imperfective passive in a language entails the presence of a perfective passive...but the converse fails". Note that English can get around the dynamic-statal distinction quite often by using get as well as be, the former being typically dynamic in sense, as discussed in R. Lakoff 1971.

10

This neutralization of the perfective/passive distinction occurs only in the (participial) present tense of Hebrew. Thus the examples in (8) of the text could be formally distinct in past and future, compare:

- (i) a. PASSIVE - hašg^viyot sumnu
 mistakes were-indicated
 (al ydey ha'orex)
 (by the-editor)
- b. PERFECTIVE - hašg^viyot hayu mesumanot
 mistakes were indicated
 be'adom
 in-red
- (ii) a. PASSIVE - hamo'amadim yusmexu
 the-candidates will-be-qualified
 (= ordained)
 (al ydey hava'ada)
 (by a-committee)
- b. PERFECTIVE - hamo'amadim yihyu musmaxim
 the-candidates will-be qualified
 la'asok banose
 to-deal with-the-subject

Note also that a formal distinction between

passive/perfective is made even in the present tense of the nif'al verb pattern - which came into use as a passive reflex of kal relatively recently in the language, and which still functions as a basically intransitive and not only as a passive pattern, as shown in (2) of the chart in (7) of the text. Thus compare:

- | | | | |
|------------------|-------------------------|---------------|---------------|
| (iii) a. PASSIVE | - hamekomot | haxi tovim | nitpasim |
| | the-best | places | are/get-taken |
| | (al ydey | hayaxsanim) | |
| | (by | VIP's) | |
| b. PERFECTIVE | - hamekomot | haxi tovim | tefusim |
| | the-best | places | are-taken |
| | (kvar) | | |
| | (already) | | |
| (iv) a. PASSIVE | - hatsuvot | nixtavot | bixtad yad |
| | the-answers | are-written | by hand |
| | (al ydey hastudentim) | | |
| | (by | the-students) | |
| b. PERFECTIVE | - hatsuvot | ketuvot | be'ivrit |
| | the-answers | are-written | in-Hebrew |
| | (??al ydey hastudentim) | | |
| | (??by | the-students) | |

Consideration of a number of written texts shows that present tense passives, where used at all, are nearly always in this nif'al pattern rather than in the two other potentially ambiguous patterns. Thus in an article of some 10,000 words (Blum 1977) which uses a relatively large number of passives, I noted some 10 instances of present tense passives in the nif'al pattern, but only one or two (which could be interpreted statally) in the pu'al and hof'al.

- 11 The fact that Hebrew should be viewed as having a "middle-voice" is discussed and motivated by Ariel 1969, Berman 1973 (Chapter 3), and Olshtain 1978.
- 12 As part of a research project in conjunction with Sandra Ben-Zeev of the Bilingual Education Service Center, Chicago.
- 13 All the subjects, but particularly the younger ones, had evident difficulty with passive-form verbs except for a few lexicalized items treated as unrelated to any active verb, e.g., meluxlax 'dirty', literally 'be dirtied' or nifca 'get hurt, hurt oneself' = 'be wounded'. In considering the question of "why most languages contain a passive form when it is fairly rare occurrence in spoken and written language", Beilin and Sack (1975: 11) point out that "It is difficult to assess...whether the difficulty of the passive is due to its infrequent use or whether its limited use results from the relative difficulty of

the construction".

- 14 Thus, for instance, unlike Philippine or some Bantu languages, Hebrew can form both relative clauses and questions on any NP - including DO, IO, Oblique Objects, Possessives, etc. (all except the DO case requiring a resumptive pronoun in the relative clause) - and hence there is no need in Hebrew to passivize in order to yield surface structures appropriate to such extraction processes.
- 15 Hebrew also makes widespread use of a device analogous to English "editorial" we for impersonalizing the agent in expository writing. We (sic) refer to such cases as the following (translated from Blum 1977):

- (i) Here (= in this context), we will consider the factor of frequency... (24)
 In light of the data we presented above, there seems to be no... (34)
 With respect to the first group, as we have seen, this claim is... (36)

Here the 1st person plural pronoun anu (by contrast with the seemingly synonymous but evidently more "personal" anaxnu) has a clear function within the discourse frame of scholarly writing: it is used preponderantly at the beginning and end of subsections of the text, when the writer sets out and subsequently sums up his own views of the issues in question. Hebrew speakers clearly view this use of we as "impersonal", and it contrasts functionally with some writers' use of ani 'I' when specifying their own procedures in a given study, say, or setting their own claims apart from those of other scholars. However, Hebrew speakers-writers also use anu 'we' where no sense of personal involvement at all can be attributed to the speaker, in cases where English would definitely require a passive. The following examples are taken from term-papers of Israeli linguistics majors with an excellent command of English (as discussed in Berman 1979):

- (ii) From the two trees we see that the deep structure is quite similar...
 We derive this construction by a transformation...
 We use the passive much more in English... (sic)
 We first make a yes/no question and then we add...

Hence the use of we as a strictly impersonal form in relation to activities in which the speaker-writer is in no sense personally involved (for instance, in the third example of (ii) above, it is unlikely that the student is identifying himself with "users of English") may be

- viewed as yet another device available to Modern Hebrew for avoiding agent-specification.
- 16 The claim was discussed and motivated at a philosophy colloquium presented by Edward L. Keenan "On the relationship between logical form and grammatical form", Tel Aviv University, January 10, 1979.
- 17 Thus, these impersonals are ruled out with verbs typically requiring inanimate Subjects, e.g., gozrim mecuyan 'cut (PL. - used of scissors, blades, etc.) excellently' or te'imim me'od '(are) very tasty' are uninterpretable as they stand. Moreover, such impersonals will be taken as having human reference even when the verb admits of nonhuman agents, e.g., yešenim harbe baxoref 'sleep(PL) lots in-winter' is wellformed only when it is taken as a statement about people and not about animals, and tasim kan kol yom axsav 'fly(PL) here every day now' refers to the activity of pilots, not of airplanes.
- 18 This merging of passive/middle voice is due to the dual function of the nif'al verb pattern as set out in the chart in (7) and discussed in point (e) of section 2. The same claims would hold, however, were we to use the strictly passive form nupac 'be shattered' (cf. hitnapec 'shatter (Intr.)' = middle-voice') compared with active nipcu 'shatter, Tr. Pl.'.
- 19 For instance, if I find my favorite pair of scissors missing from my drawer and I mutter la'azazel! suv lakxu li et hamisparayim 'damn! again have-taken from-me OM the-scissors' it would be something like saying "Damn! Someone's gone and taken my scissors again!" - but I'm deliberately not saying which of the members of my household might be guilty of the deed, even though I may (but need not) have a pretty good idea who the culprit is.

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Wie Es Sich Verhält: Some Referential and
Syntactic Functions of German Es without Antecedent

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For many years there has been discussion of certain construction types found in several Western European languages; these are exemplified in English by such sentences as It's cold, It's raining, It's five o'clock. The focus of dispute has been the status of the pronoun--English it, German es, French il--in these expressions. Does this pronoun have reference, and if so, to what does it refer? Or is it merely a syntactic dummy, filling the subject slot, which these languages do not permit to be void? The latter is virtually never an adequate explanation of the occurrence of it, and is totally untrue for many of its occurrences, since the pronoun it does often have an identifiable, if vague, semantic reference. German investigators debated this issue in the last century and earlier in this one (Miklosich 1883, Sigwart 1888, Brugmann 1917, Corrodi 1925, Ammann 1929), and several strong statements for the referentiality of es were made even then, particularly by Sigwart, Corrodi and Ammann. More recently, others have ignored these arguments and attempted to demonstrate a relationship between the it occurring with weather verbs and the it found in extraposition (Langendoen, Morgan, Breckenridge).

The object of our paper is to investigate these locutions and others with indefinite es in German, which has them in far greater profusion than any other Western European language, and thus evokes the greatest confusion and ambivalence as to the nature of es in them. This is no doubt why the vast preponderance of the literature on this topic is in German. Many linguists and linguistic philosophers of the past hundred and fifty years have believed that it has reference; equally many have felt just as strongly that it has none. We shall refer to these as the referential and non-referential positions. The question has still not been resolved: neither side has yet been able to cite compelling evidence for its position.

How could so profound a disagreement as to the nature of es (it, il) have arisen? It is clear enough why philosophers and logic-oriented linguists would wish to establish that es has reference: it is impossible to imagine an action, state or process without some medium through which it is manifested, that is, the subject of the verb. There are however several considerations (which in fact have never been explicitly stated by non-referentialists) that might have led to their impression that es is no more than a "leeres Formwort."

(a) Sentences like Es ist kalt, 'It's cold', tend to be used and understood unitarily, like idioms; they are not usually analyzed by speaker or hearer.

(b) Es with such verbs as regnet, blitzt, schneit, 'It's

raining, lightning, snowing', cannot be understood as having the role Agent.

(c) The classical languages and some modern IE languages have no pronoun in corresponding expressions: Latin pluit, Italian piove, 'Es regnet', 'It's raining', Latin tonat, 'Es donnert', 'It's thundering.'

While these considerations may well have helped to create the impression that es with ambient verbs lacks reference, they are by no means cogent arguments to this effect: the fact that standing phrases are not employed or understood analytically does not import that they are unsusceptible to linguistic analysis; for example, idioms commonly undergo question and other transformations and some may even be passivized, requiring understanding of their underlying role structure. Subjects in general may be any one of a number of underlying functions, including Agent, according to the valence of the verb. It is not disturbing to confront verbs which prohibit an agentive subject, as every language has many of them. Finally, the classical languages and many modern ones commonly omit subject pronouns in all persons and numbers; when used at all, such pronouns are apt to be emphatic. If the subject pronoun of pluit, for example, has reference, then it would normally be deleted, as is the subject pronoun in Latin (is) me amat, 'he loves me.'

A few more serious objections to the possible referentiality of es:

(d) Es in ambient and time expressions never represents an antecedent noun.

(e) In many of these expressions, no particular noun can be made to replace es with certainty that es really substituted for that noun and not for one of several other possible ones. Is Es ist kalt more nearly equivalent (semantically rather than grammatically) to Das Wetter ist kalt, 'The weather is cold', or Die Luft ist kalt, 'The air is cold,' or perhaps even Die Umgebung ist kalt, 'The environment is cold'?

(f) In some sentence-types, such as Es wird getanzt, 'There is dancing', Es hungert mich, 'I'm hungry', it is hardly possible to conceive of the pronoun as having reference. Here, most of all, it seems to be a slot-filler.

(g) Es, even more than pronouns generally, has very low information value, especially in constructions of the kind in which we are interested. This results from the fact that, lacking a nominal antecedent or postcedent, es could only refer to something understood or taken for granted or physically impinging on the senses.

These considerations make evident the most confusing aspect of the problem: the fact that es is of such low topicality that it is difficult to isolate it semantically. We will present an analysis of various functions of this elusive pronoun in which we attempt to account for its appearances semantically and syntactically.

As an approach to this problem we wish to posit four types of reference in addition to the traditional redeixis (anaphora) and prodeixis (cataphora). The first of these, paradeixis, is likewise a contextual function: it is reference which is not directly redeictic or prodeictic to something in the surrounding discourse, but only inferable from it, as in:

1. The bank was robbed yesterday but they caught him a few hours later.

The other three functions are non-contextual and in the strict sense non-pronominal, since with them the "pronoun" stands not for a noun phrase but for something perceived or conceived; they are thus respectively pro-perceptual and pro-conceptual rather than strictly pro-nominal. It has been pointed out before (Postal 1966) that there can be an original pronoun in the deep structure if it refers to something not involved in the discourse context but physically present in the situation; we call this kind of reference exodeixis. It is exemplified by sentences like

2. Die ist ja hübsch!, 'She's sure pretty',

spoken of a woman visible to speaker and hearer but previously unmentioned. Apodeixis is reference to something not physically present in the situation but inferable from it; thus, while walking through the ruins of a Mayan city, one can say to a companion without fear of misunderstanding, "They were an ingenious folk, weren't they?" In addition, a pronoun can refer to something tacitly understood by speaker and hearer: we call this metadeixis. (Cf. Hawkins 1977 for closely analogous uses of the definite article.) Thus a doctor visiting a patient may say, "Wo sitzt es?" Both know that es refers to the disease or complaint involved. Then again, in such idioms as

3. You're it,

said by children playing tag, we know from long experience as members of the English speech community what it refers to. Similarly,

4. I'm almost overparked; I've got to run or they'll nail me,

where shared knowledge of the prevailing social organization makes it possible for the speaker, without fear of misunderstanding, to use they instead of the police, which would seem unnecessarily circumstantial. Those circumstances need not have been mentioned in the preceding discourse for us to understand what is meant; that understanding is part of our shared community.

It should be particularly noted that we do not infer discrete differentiation among these types of deixis; deictic functions frequently overlap. Thus es in

5. Es ist Peter, 'It's Peter',

is exodeictic in that it calls attention to something not previously mentioned but physically present, and paradeictic in that its reference is identified by the predicate noun (it is the wrong gender to be considered prodeictic in the usual sense). The comprehension of a pronoun's reference seems to be a matter of largely unconscious, reflexive weighing of likelihoods, drawing on data from common knowledge and assumptions, and from the situation, as well as from the discourse context. With paradeictic and non-context-bound pronouns, the absence of an NP to which the pronoun could refer in the immediate speech context probably determines, just as much as the presence of such an NP, the way in which the pronoun is "processed" by the hearer. The pronoun, and thus the whole sentence in which it appears, is understood through something like an instantaneous, largely automatic process of elimination. If upon hearing Es ist kalt, the speaker has kept in mind, say, das Gemüse, 'the vegetable', from a previous sentence, or observes the speaker eyeing with distaste something on his plate, the pronoun is processed as redeictic or exodeictic respectively; otherwise, the absence of a contextual or situational referent leads to the interpretation of the pronoun as metadeictic. In everyday usage a non-context-bound pronoun can be chosen as the subject of a sentence simply because no greater specificity is needed, and a noun would seem pedantically explicit unless contrast intonation were desired:

6. Die ist ja hübsch vs. Die Frau dort ist ja hübsch, 'The woman over there is sure pretty.'

Such non-specific use of the pronoun is implied in the es with the so-called occasional impersonals--verbs representing auditory, visual or olfactory phenomena accompanied by a non-contextual es as subject:

7. Es läutet, schillert, riecht übel, 'There is a ringing, something is glistening, something smells bad.'

These verbs may be accompanied by Agent, Source and/or Instrument roles:

8. Der Glöckner läutet, 'The bell-ringer is ringing'; Die Glocke läutet, 'The bell is ringing';

es is chosen as subject either when the particular origin of the perceived phenomenon is unknown--thus in fact as a sort of indefinite pronoun, or when the speaker considers it obvious or unimportant to specify--thus in fact as a low topicality pronoun. Thus he may say Es läutet, even when he knows it is his own doorbell, and even when he knows who must be ringing it. In either case, the predicate is clearly the focus of attention. We believe that this unemphatic quality--es even lacks a kind of specificity

inherent in er and sie, since these pronouns in non-contextual use strongly imply that their referent is animate--is one reason why es has been held to lack reference in some expressions in which it is used. (An intermediate degree of subject specificity, and hence also of predicate enhancement, would be found with

9. Jemand läutet, Etwas läutet, 'Someone/Something is ringing the doorbell.'

Since, however, the verb logically calls for a medium through which the action, event, process or state it expresses is manifested, and there is a pronoun present, there seems no cogent reason to assume otherwise than that the pronoun represents that medium, however vaguely.

This brings us back to the issue with which we started, namely the reference of es with ambient verbs and time expressions. For the several reasons discussed above, it has often been assumed (though never cogently argued) that such sentences are "reine Prädikatssätze", es being a mere dummy without reference. We do not think this assumption plausible. With time expressions

10. Es ist fünf Uhr, 'It's 5:00'; Es ist Freitag, 'It's Friday',

the reference of es is quite unambiguous: it is metadictic and strongly paradeictic, its reference being identified by the predicate as a point in, or segment of, time. It is not surprising that non-referentialists have never had much to say about time expressions. Furthermore, in the ambient expression Es ist kalt, if kalt were literally predicated of nothing, the sentence would have no more meaning than X ist kalt. But in fact we know that Es ist kalt, in the absence of a nominal or specific situational referent, is a remark about the state of the atmosphere, either with indefinite extension, or within a space specified by an adjunct (in diesem Zimmer, 'in this room', in Alaska). The pronoun is exodeictic and metadictic and it bears the principal role State.

Whereas the adjectives in ambient expressions (kalt, warm, dunkel, 'cold, warm, dark') by and large appear quite regularly with subjects other than es, other subjects with weather verbs are quite exceptional, and perhaps only possible in poetic or Biblical diction:

11. Der Himmel regnete Feuer und Schwefel, 'The sky rained fire and sulfur'; Die Wolken regneten Manna, 'The clouds rained manna.'

In this sort of construction an accusative specifying the material being rained seems to be necessary. This accusative appears also in metaphorical colloquial uses of regnen as well:

12. Es regnet Bindfaden, 'It's raining string'; junge Hunde;

'young dogs' (cf. cats and dogs);

and is customary when the material is unusual, as in

13. Es regnet Steine, 'It's raining stones'; Frösche, 'frogs.'

However, the material, intrinsically an underlying Patient or Result, can also be subjectivalized at times:

14. Wenn Schwefel oder Blut regnet (Hegel), 'When it rains sulfur or blood.'

This seems, however, to apply mainly in metaphorical expressions in which the source of the phenomenon is conceived of as quite different from the usual one:

15. Feuerküsse regneten auf den Marmor (Schiller), 'Fire-kisses rained upon the marble'; Verbesserungen, Erweiterungen regneten in seinen Kopf hinein (Jean Paul), 'Corrections, expansions rained into his head.'

Weather verbs are thus somewhat parallel to the verbs with occasional impersonals; the es refers to the source of the weather or to the substance of the precipitation, and in the unmarked usage, perhaps to the rain itself. With regnen and other common verbs of this type

16. schneit, hagelt, blitzt, donnert, 'it's snowing, hailing, lightning, thundering', etc.

the reference of es is again exodeictic and metadeictic, but paradeictic as well, since our interpretation of the pronoun depends partly on the meaning of the verb.

We consider this es, like that with ambient adjectives, time expressions and occasional impersonals, to represent a constituent of deep structure. But beyond the recognition that referentiality implies pronominality and deep structure status, there is little positive proof of this. The pronominalization test for distinguishing pronouns from dummies by questioning them does not work. That is, none of the cases of referential it can undergo this test, except those which refer to a specific NP, namely the personal pronoun it. The reason is that what, like who, is a definite pronoun, and calls for a definite response. Es, though referential, is highly indefinite, and as such neither it nor its vague antecedent can serve as answer to the question What's cold? or What's raining? In fact, questions like that force the answerer to seek out a specific NP for his response, seeming to focus on a certain role, such as Source, which would fulfill the requirement of definiteness. In actual fact, the question is unlikely to be asked, except in the hope of a marked response, because part of what a competent speaker

knows about it/es/il is that there is no definite antecedent available. Seeking one, the questioner and his answerer will naturally hit on a possible NP antecedent, and will tend to choose a marked one, such as Source or Instrument rather than the substance itself.

It has been pointed out that the reference of es is in many cases rather vague and its burden of significant information extremely light. It consequently acquired at a fairly early period the implied function of signalling that the important part of the communication was to follow, and it developed new usages in which no semantic function at all is discernible. This apparently happened in the course of the 11th and 12th centuries, since except for occasional occurrences of extraposition and clefting, only examples of the deep structure pronouns are found in written German sources before 1100 (Bishop 1977). These newer uses are the syntactic uses of es, exemplified in German by extraposition of sentential arguments, clefting, dummy subjects with subjective state verbs and subjectless passives, and extraposition of complex or indefinite subject noun phrases. In contrast to the deep structure es, the semantic es, all the syntactic occurrences are motivated by syntax or discourse factors. Clefting is a highly marked transformation, casting the focus upon a certain noun, which is made head of a relative clause containing the original sentence. The resulting complex NP is then predicate noun in a copular clause with es.

17. Es waren die Kinder, die ihm das sagten, 'It was the children who told him that'; Immer werde ich es sein, die ihn halten muß, 'It'll always be me who has to hold him.'

The fact that this es also has a demonstrative function is clear, for it may in turn be pronominalized as an even more emphatic derjenige (subject to agreement with the head noun):

18. Die Kinder waren diejenigen, die ihm das sagten, 'The children were the ones who told him that'; Immer werde ich diejenige sein, die ihn halten muß, 'I'll always be the one who has to hold him.'

Extraposition moves a noun clause to the right, leaving es in its slot. In German, extraposition may occur from either subject or object position, and both types are common. Whereas with clefting the es is always present, regardless of post-cyclic permutations undergone by the clause, the es with extraposition may be reduced when an adjectival matrix predicator is fronted:

19. Klar ist nur, daß er sie liebt, 'Clear is only that he loves her.'

Note that factive clauses are not normally extraposed, either from subject or object position:

20. Daß überhaupt organisiert wird, überrascht mich sehr,

'That things get organized at all surprises me very much'; Sie ließ ihn fühlen, daß man's hier auch verstehe, 'She let him feel that people here also understood.'

We employ two syntactic tests to differentiate original es from cyclic and post-cyclic es: agreement and reducibility. In no case can it be proven that the transformationally inserted es governs number agreement on the verb. Rather, any other nominative in the sentence governs it, and where there is no other plural nominative, the verb is singular. This fact accounts for the possibility of plural verbs in cleft sentences and in sentences with extraposed subjects. Whereas we use agreement to separate deep structure es from transformational es, we use reducibility to test for post-cyclicity. Post-cyclic es is always reduced when some other element begins the sentence, or better, the structural description for its insertion requires a vacant initial slot. Because various transformations which prepose sentence parts are post-cyclic, it is necessary to assume that this es insertion follows them; otherwise a deletion transformation would be required which would be, however, unable to distinguish between reducible es and unreducible es. Thus:

21. Subjectless passives: Wird heute abend getanzt? 'Will there be dancing tonight?'; subjective state verbs: Hungert dich? 'Are you hungry?'; indefinite subjects: Kamen auch schon damals tolle Geschichten vor? 'Did crazy stories happen already even then?'

There are several motivations for a post-cyclic insertion of es, some of which are explainable in terms of the Verb Second Constraint (Haiman 1971). According to this constraint, the position of the main verb in declarative sentences in German must be the second one. Where nothing else is available to fill the first slot, an es is inserted, as in:

22. Sentences with a subjectless passive: Es wurde getanzt, 'There was dancing'; sentences with subjective state impersonal verbs: Es hungert mich, 'I'm hungry'; sentences with a complex NP as subject: Es liegt was darin, das einem Christenmenschen doch zu denken gibt, 'There's something in this which, however, gives a Christian food for thought'; Freilich, es will sie (Artischocken) keiner so recht, 'Of course, nobody really wants (to eat) them (artichokes).'

(Note that the sentences with a complex NP as subject share some characteristics of cleft sentences: they begin with es, the extraposed subject is followed by a relative clause or may merely be a "heavy NP." They differ from cleft sentences in that the main verb is not to be, and the es is reducible, which it is not in cleft sentences.) Many other occurrences of post-cyclic es are generated in response to discourse factors. For these the Verb Second Constraint is an oversimplified explanation, implying that the es is

merely a slot-filler, marking the subject position and nudging the verb back into the required second position, but devoid itself of meaning or other function. Arguments for this explanation are based on the fact that this es only occurs in first position, and when some other sentence element occupies that slot, then the es insertion is blocked. The assumption is that since it is absent except in first position, its function must be to fill that position. We think that this explanation, though tidily formal, underestimates the discourse function of the expletive es, seeing discourse function only in the displacement of the subject to the right. Such accounts ignore the fact that German has various alternatives which fulfill the Verb Second Constraint with varying presentational impact. The presence of es at the front of the sentence is a perceptual cue for a subject under focus. In German, the sentence position with the greatest news value is the last optional one, the absolutely final slots being reserved for verbal elements. In what has been called "pragmatic" syntax (Vennemann 1974), German can shift subject NPs which are new information (subject NPs are normally old information) rightward into that topical slot. When the subject is thus shifted, the expletive es may introduce the sentence, filling the subject slot, and focussing attention of the topic shift it anticipates. In structures like this, then, the discourse function of es evokes the demonstrative function of es, as in Es ist Peter, and is more important than its role in preserving the Verb Second Constraint. Because this post-cyclic insertion of es occurs with new topics, rather than with all subjects which are new information, it is not possible to condition it to apply to all indefinite simple subjects. Topic shift syntax is typical of the first sentence in narratives or parts of narratives:

23. Es kamen auch schon damals tolle Geschichten vor, 'Already then crazy stories happened too',

where the thrust is scene setting, or topic shifting within a narrative or discourse, where the subject is unexpectedly new information.

This is different from the extraposition of complex NPs:

24. Es kamen auch schon damals tolle Geschichten vor, worüber wir uns stundenlang lustig machten, 'Already even then there happened crazy stories about which we joked for hours',

in that the initial position may be, and in fact more frequently is, filled by an adverbial element:

25. Auch schon damals kamen tolle Geschichten vor, worüber wir uns stundenlang lustig machten, 'Already even then crazy stories happened about which we joked for hours.'

Note that the basic sentence has available:

26. A topic shifting syntax with es: Es kamen auch schon damals dolle Geschichten vor, 'There happened crazy stories even then already'; extraposition of complex NP: Es kamen auch damals schon dolle Geschichten vor, worüber wir uns stundenlang lustig machten, 'There happened even then already crazy stories about which we joked for hours'; neutral syntax: Dolle Geschichten kamen auch schon damals vor, 'Crazy stories happened even then already.'

All three of these respect the Verb Second Constraint, operating within it to conform to varying syntax and discourse requirements.

The same discourse alternative governs all post-cyclic opportunities for es-insertion. Passives with indefinite subjects undergo the right-displacement common also to indefinite subjects of active verbs, and subjectless passives already have the structural description for the application of the es-insertion transformation to preserve the Verb Second Constraint. A subjectless passive quite without time or place adverbs is very unusual in actual texts, so that the choice of es versus adverb is virtually always available. The fact that an adverb is quite likely to be first in these types of sentences, necessitates a more complex set of rules for this syntax: first, a right-displacement of subjects which are either new information or complex NPs, and second, a discourse-sensitive rule to prepose an adverb or insert es according to discourse requirements.

We have presented an analysis of several kinds of constructions in German in which es plays a prominent role, and in all of which the es has been widely considered to be a syntactic dummy without semantic function. We conclude that the semantic es derives from deep structure, where it has semantic reference in degrees of specificity ranging from quite high to extremely low. Predicators normally selecting this referential es include the ambient verbs and adjectives, the occasional impersonals, and the time expressions. This es may not be deleted when another constituent precedes it. The syntactically-motivated es, particularly resulting from clefting and extraposition, is also non-reducible, with, however, one systematic exception under extraposition. We assume no semantic reference for these uses of es, though they are syntactically prodeictic, anticipating the clause they have displaced. The discourse motivated es is also syntactically prodeictic, semantically non-referential. Its presence is confined to first position (it cannot be inserted elsewhere) and it functions as a discourse focuser. Theoretically this post-cyclic es could be considered a syntactic dummy. In fact, since it alternates with temporal and locative adverbs as a subject slot-filler, and since the choice between them is made on discourse criteria, there is no occurrence of es which is only due to the Verb Second Constraint. Nor are there in German argumentless verbs, since the weather verbs were the only real candidates for that category. Through this paper we hope to provoke discussion of the semantics of es--we found innumerable antecedentless occurrences in both English and German--and of the role of the dummy es in discourse.

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