

ON THE CATEGORY OF AUXILIARY IN MODERN HEBREW*

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THIS STUDY considers some of the categories commonly associated with the notion "auxiliary" from the point of view of Modern Hebrew. As background, a characterization of auxiliaries as syntactically and semantically DEPENDENT elements is suggested (Section 1.1), and an attempt is made to show why many Hebrew studies to date have taken rather too unconstrained a view of the notion by extending it to virtually all verbs requiring an infinitival complement (Section 1.2). There then follows a review of the syntactic patterning of semantic categories typically included under the general heading of "auxiliaries," specifically Tense (Section 2), Modality (Section 3), and Aspect (Section 4), in an attempt to motivate the claim presented here that there is only one clear case of an auxiliary verb in Modern Hebrew—*haya* 'be'—as a marker of durative and perfective aspect and of conditional mood (Section 4.3).

Worth noting here is the point made by Akmajian, Steele and Wasow in their recent analysis of the category AUX in universal grammar; they observe that "an important confusion exists in the literature between the category AUX on the one hand and auxiliary verbs on the other" (1979, p.3). The concern in this present discussion is specifically with the nature and role of auxiliary

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VERBS, rather than with the formal characterization of the category AUX within a given theory of grammar (as undertaken, for instance, in Akmajian *et al.*, 1979; Pullum and Wilson, 1977; Steele, 1979). In fact, Hebrew studies lack any specific term for the notion AUX as formulated initially in Chomsky's (1957) phrase-structure rule for this category in English,¹ most relevant studies in Hebrew—as discussed in Section 1.2 below—devolving upon the notion of *pó'al 'ézer* 'helping verb.' The formal category AUX is noted only marginally below, as relevant to the insertion of Tense-marking in Hebrew (Section 2).

The conclusion presented here, that Hebrew manifests very restricted use of auxiliary verbs—primarily *haya* 'be' and more marginally *nihya*, *na'asa* 'get' = 'become' in expressing inchoativeness as well as *niš'ar* 'stay' = 'keep on'²—is attributable in part to two quite general features of the language. As a heavily inflectional language, its rich system of verb morphology makes it prefer lexicalized, incorporating forms of expression for such categories as passive and middle voice (analyzed in Berman, 1979b) as well as causatives and inchoatives (Berman, 1979a). All of these are instances where a language like English makes wide use of auxiliary verbs such as *be*, *get*, *make*, or *have*. Moreover, the strong predisposition that Hebrew has for verb-initial, predicate + complement type constructions (discussed in Berman, 1979c) provide it with a major device for expressing modality by means other than that of auxiliary type verbs.

1. The Notion of 'Auxiliary' in General and Hebrew Grammar

The kind of criteria which have been taken into account in characterizing the auxiliary class in contemporary linguistic theory are considered below, in order to specify in what way they are essentially 'dependent' elements (1.1); and the manner in which this notion has been treated in Hebrew studies is then briefly reviewed (1.2).

1. The only exception I know of is in an introductory transformational grammar of Hebrew (Chayen and Dror, 1976, pp. 77–78), where the term '*azar*' is coined as a noun from the verb *la'azor* 'to help' corresponding to AUX in the transformational literature up to the mid-sixties. The authors analyze AUX as consisting of two obligatory elements *binyan* + Tense, where *binyan* stands for one of the seven verb-patterns obligatorily associated with any verb-root to form an actual lexical verb. Elsewhere (Berman, 1976, p. 68), I have discussed why *binyan*, while necessarily assigned as a value of any verb occurring in the language, is not a fit candidate for the category AUX. A fuller analysis of the nature and role of *binyan* verb-patterns in Modern Hebrew is provided in Berman, 1978, pp. 83–107.

2. Throughout, the convention is adopted of using the past tense, masculine singular, third person form in citing verbs, as this is the morphologically simplest 'stem' form. A rough phonemic (bordering on broad phonetic) transcription is used, taken to represent a common colloquial form of Israeli pronunciation. Word-stress is final, unless otherwise indicated as penultimate by an acute accent.

1.1 *Auxiliaries As 'Dependent' Elements*

Studies of "the auxiliary verb" tend to focus differentially on a formal as against a functional perspective. Thus, transformational treatments of the notion have related crucially to Chomsky's early (1957) phrase-structure analysis of the category AUX in terms of STRUCTURAL criteria of co-occurrence and ordering constraints of the elements within this system. This was a major step forward in syntactic description, for it made it possible to consider a given category or structure—in this case "the auxiliary"—as manifesting highly specific patterns of behavior with respect to a wide range of grammatical operations such as questions, tags, negatives, affirmation, and contraction (with respect to all of which Hebrew auxiliaries such as *haya* 'be' or *na'asa* 'become' pattern just like main verbs). And it was this same formal framework, while considering semantic factors to be of central relevance, which led to a reanalysis of auxiliaries as main verbs by generative semanticists, as in Ross, 1969.

An essentially logical pragmatic point of departure is adopted by others. Thus, for instance, in Fillmore's early work on case systems, all elements lying outside of the core propositional content of the sentence are subsumed together under the constituent of "modality," which includes "such modalities on the sentence-as-a-whole as negation, tense, mood, and aspect" (1968, p.23), in fact everything typically handled within AUX in transformational grammars of the time. This "core proposition" of Fillmore corresponds to what Langacker (1972), as cited in Steele (1975, p.223) terms the "objective content" of a sentence, while Fillmore's "modalities" are—in part at least—similar to Lehmann's constituent Q (for "qualifier"), which entails obligatory specification of the categories declarative, interrogative, negative, middle, necessitative, voluntative, perfective, momentary, iterative, causative—with a plus or minus value in each case (1978, p.44). The FORM of such elements is considered secondarily, if at all, in such discussions, as a superficial manifestation of semantic and pragmatic concepts which in one way or another serve to modify the propositional core of verbal predicate plus associated nominal arguments.

Yet a more integrated specification of the notion "auxiliary" seems necessary, in terms of both structural criteria such as morphological form, surface syntactic distribution, and behavior with respect to sentence-level syntactic processes, as well as of semantic properties in relation to the kind of logical categories expressed by auxiliaries. From both points of view, auxiliaries are peculiarly associated with VERBAL rather than with nominal elements of a sentence; they "fill out," add to or further specify the predicate rather than its arguments.³ And, as their name implies, they are in some sense DEPEN-

3. An exception is provided in the analysis of Steele (1979), where markings on subject and object are also included in the set of elements potentially within the scope of AUX. And indeed,

DENT elements from both points of view. Structurally, they always co-occur with an independent verb (or adjective) of some kind, a lexical item which normally can and does occur as the head of the predicate. In English, this verb typically has the surface form of an uninflected base-form or of a present or past participle, while in Hebrew this main verb takes the *beynoni* 'medial' or participial form, either active as in *hu haya kotev* 'he was writing = he used to write' or passive as in *ze haya katuv* 'it was written'—as analyzed in Sections 4.2 and 4.3 below. Thus, in highly dissimilar languages such as English and Hebrew, auxiliary verbs co-occur with verbs which are themselves in some sense structurally non-independent, since base-forms and participles are not finite verb-forms. However, they are specific forms of verbs which as lexical items may be finite, and hence fully 'independent,' and in this they differ crucially from auxiliary verbs which—no matter in what syntactic configuration they occur—must be accompanied by some other 'full' verb (or adjective).

Semantically, too, auxiliaries are dependent elements, for they serve to modify, extend, or in some way restrict the sense of the predicate without

Hebrew has accusative markers of objects enclitically attached to VERBS (today restricted to highly formal or literary style) as in *yahargéni* '(he) will-kill-me' contrasting with analytic *yaharog oti* '(he) will-kill me,' or *le + hargizo* 'to+annoy-him' vs. *le + hargiz oto*. Hebrew also has obligatory affixal marking of person on past and future tense verbs in 1st and 2nd person. Compare:

(i)	(<i>ani</i>)	<u>haláxti</u>	(ii)	(<i>ani</i>)	<u>egmor</u>
	I	went + 1sg.		I	1sg. + will-end
	(<i>ata</i>)	<u>haláxta</u>		(<i>ata</i>)	<u>tigmor</u>
	you	went + 2sg. masc.		you	2sg. masc. will-end
	(<i>anáxnu</i>)	<u>haláxnu</u>		(<i>anáxnu</i>)	<u>nigmor</u>
	we	went + 1pl.		we	1pl. + will-end

The parenthesized free pronouns occur (redundantly) in all such contexts in colloquial usage today, whereas in more normative style they are used only for emphatic or contrastive effect. The formal representation of a marker of a major constituent, in this case, the Subject, as invariably attached to the verb in such constructions is not a simple matter. It is probably best handled as a kind of 'agreement' feature triggered by the independently occurring separate pronoun—*ani* 'I', *ata* 'you, masc. sg.', etc.—which may, but need not be deleted in the actual stream of speech. That is, there seems neither structural nor semantic justification for treating the underlined affixes in (i) and (ii) above as 'verbal auxiliaries' rather than as obligatory morphological markers of subject-verb agreement, manifested as inflections on the verb in much the same way as number and gender. Such a non-auxiliary analysis of subject-marking affixes also makes it possible to treat the more marked 1st and 2nd person verbs in past and future in the same way (a) as 3rd person verbs which, being morphologically unmarked, require an overt free pronoun in surface contexts too—in the form of *hu* 'he,' *hem* 'they,' etc.—and (b) as present-tense verbs in all persons, for the latter are marked for number and gender, but not for person.

changing its propositional content or the inherent lexical content of the verb.

1.2 Auxiliaries and ‘Extended Predicates’ in Hebrew Studies

In Hebrew linguistic studies relating to the notion *pó'al 'ézer* ‘helping verb,’ a concept central to both traditional and more contemporary treatments of the subject is that of the *nasu murhav*, literally ‘extended predicate’ or ‘expanded predicate.’ This is defined by Schwarzwald, in a very clear critical review of the topic, as a “combination of words within the predicate part of a sentence which together form a single conceptual unit . . . and which together constitute the head for objects and complements” (1978, p. 246).

For purposes of exposition, I take the broadest view of “the extended predicate” as represented, for instance, by Ornan (1972), rather than the narrower view of Schwarzwald (who restricts the notion mainly to occurrences of *haya* ‘be’+main verb) or the intermediate view of others of the scholars whom she reviews. Thus, in the examples in (1) through (5) below—which are set out in terms of rough semantic groupings—the term “extended predicate” refers to a construction taking the form of V-V, where the first verb is finite, the second in the infinitive (formed in Hebrew by prefixing *le-* to the verb stem):

(1) Modality:

a. *dan alul le hafsid.*

Dan is liable to lose. = ‘Dan may/could lose.’

b. *hem yaxlu la azor.*

They could+Pl. to help. = ‘They were able to help.’ OR:
‘They could/might have helped.’

c. *hu haya hayav la vo.*

He was obliged to come. = ‘He had to come/should have come.’

d. *ectarex le varer.*

I’ll need to check. = ‘I’ll have to check.’

This set of expressions and others like them are termed “modal verbs” by some Hebrew scholars (for instance, see the term *pə'alim modáliyim* in Azar, 1977, p. 39), and are discussed under the heading of modality in Section 3 below. Others of these expressions entail some “aspectual” notion, of points in a process as in (2) or of habituality as in (3):

(2) Process-Aspectual:

a. *hu holex le hibaxen.*

He is going to be-tested.

- b. *hem omdim le hagia.*
They stand to arrive. = 'They're about to arrive.'
- c. *hi hixila la léxet.*
She began to walk. = 'She started walking.'
- d. *hu hosif la léxet.*
He added to walk. = 'He continued to walk.'
- e. *tafsik le daber!*
Stop to talk! = 'Stop talking!'

(3) Habitual-Aspectual:

- a. *anaxnu nohagim le hazmin oto.*
We are-wont to invite him. = 'We ordinarily invite him.'
- b. *hu hazar li kro.*
He returned to read. = 'He re-read, went back
and read.'
OR: 'He went back to reading.'

Two other classes of verbs included in the general listing of Ornan (1972) are rather harder to characterize, and I have labeled them somewhat arbitrarily as "intentional" and "quantificational," respectively.

(4) Intentional:

- a. *hu hašav la vo.*
He thought to come. = 'He thought of coming/
meant to come.'
- b. *hitkavánti lo mar.*
I meant to say.
- c. *nenase la azor.*
We'll try to help.
- d. *al tit'akeš la léxet.*
Don't insist to go. = 'Don't insist on going,
be stubborn about going.'
- e. *hi nota le hitvakéaḥ.*
She tends to argue. = 'She is inclined to be
argumentative.'

(5) Amount:

- a. *hu mam'it le daber. = hu medaber me'at.*
He luttles to speak. He speaks little.

b. *hu hirba li štot. = hu šata harbe.*
 He muched to drink. He drank a lot.

Such "amount" expressions are not considered further below; they are restricted to fairly high, formal style, and are otherwise synonymous with the adverbial paraphrases in the right-hand column of (5).⁴

One defining property of the class of verbs entering into the "extended predicate" constructions above (although this is not always explicitly recognized by those who discuss the construction) is that the first verb can occur only before an infinitive, never before a 'that' noun-clause complement. Thus, the construction does not include such verbs as *hehlit* 'decide,' for Hebrew has both the equivalent of 'he decided to go' and 'he decided that he would go' or *kiva* 'hope,' as there are Hebrew counterparts for both 'she hopes to succeed' and 'she hoped that she would succeed' (the second 'she' being ambiguous as to coreferentiality with the main-clause 'she' in Hebrew as in English). In other words, the class of constructions with the surface form finite-V[∞] infinitive corresponds to the case of verb-phrase complementation structures by contrast with noun-phrase complements in Rosenbaum's (1967) analysis of English predicate constructions.

The initial verb in such constructions is often termed by Hebrew grammarians (including Ornan, 1972, and some—though not all—of those reviewed in Schwarzwald, 1976) as a *pó'al ézer* 'helping (= auxiliary) verb,' while the second, infinitival verb is analyzed as the *gar'in* 'nucleus' or 'head' of the construction. This in turn is taken to correspond to a SEMANTIC distinction between the two verbs in these "extended predicates." The helping verbs are characterized as "assigning a special nuance to the action specified by the verb" (Ornan, 1972, p. 93), where this "special nuance" could stand for such notions as those we have labeled as modality, aspectuality, habituality, etc. In SYNTACTIC terms, these helping verbs are typically analyzed as occurring in the bounds of the so-called *mišpat pašut* 'simple sentence,' so that the two verbs are taken together as constituting a single syntactic constituent, as well as a single semantic entity, the helping verb merely "extending" or modifying the core meaning of the main or nuclear verb.

4. Such expressions are typical of Biblical Hebrew, which is largely lacking in manner and other adverbials (compare, for instance, literary *hu iher la vo* 'he was-late to come = he was late in coming' with contemporary *hu ba me' uhar* 'he came late'). A related type of construction takes the form of a descriptive verb followed by an action verb in the stem, or gerund form with no infinitival *le*-marker, e.g. *hinmix tus* 'was-low fly(ing)' = *tas namux* 'flew low' or *le-haškim kum* 'to-be-early get(ing) up' = *la-kum hašekem* 'to-get-up early.' This usage is confined to certain set or frozen expressions in contemporary Hebrew, being replaced largely by productive verb + adverb combinations.

From the point of view of “auxiliariness” as discussed in Section 1.1, the initial verbs in (2) through (4) above constitute a mixed bag. Some of them are no more nor less dependent than any transitive verb; thus, compare *hu hitḥil le havin* ‘he began to understand’ with *hu hitḥil et ha štur* ‘he began Acc the lesson’; *hu nisa la azor* ‘he tried to help’ with *hu nisa et ha šita* ‘he tried Acc the method’; *hu note le hitvakeah* ‘he tends/is inclined to argue’ with *ze note hacida* ‘it leans/is inclined sideways.’ And the other “intentional” verbs can similarly be extended, so that *ḥašav* ‘thought=meant to’ or *hitkaven* ‘intended, meant’ can occur in such contexts as *ḥašav al dani* ‘thought about Danny’ or *hitkaven le maḥar* ‘meant (to) tomorrow,’ etc. There is clearly a (possibly cross-linguistic) meaning distinction in each case, between the kind of predications which can be attributed to propositions—in the syntactic form of infinitivals in Hebrew—and those attributable to lexical, hence referential nominals such as *štur* ‘lesson,’ *šita* ‘method,’ or *dani* ‘Danny’. But it does not seem necessary to claim that these same predicates are “helping verbs” in one case, “main verbs” in the other; and treating the two cases—of sentential vs. simplex nominal complements, respectively—as both instances of “simple sentence” structures fails to capture the special nature of complements which themselves entail propositional content.

Rather more equivocal is the status of modal-type verbs like those in (1) and aspectual verbs like those in (2) and (3). The first group, discussed in more detail in Section 3 below, includes verbs and adjectives which may have ordinary “independent verb” homophones with related meanings, e.g. *carix* ‘have to, must’ and also ‘need, require’ or *ḥayav* ‘must, be obliged to’ and ‘owe (money, for instance)’; and this is true of some aspectual verbs, too, thus *halax* ‘be going to’ is the same as the main verb ‘go, walk,’ and *omed* ‘be about to’ is the same as ‘stand.’ This again suggests that the meaning distinction can be related to the nature of the complement, as a propositional or a referring expression, respectively, rather than to the fact that in the former but not the latter case, the initial verbs are “auxiliaries.”

Clearly, verbs of the type sometimes defined as “helping verbs” in (1) through (4) above require some kind of uniform syntactic analysis, precisely because they may—though not necessarily must—take infinitival complements but never ‘that’ clause complements. On the other hand, semantically they do not constitute a uniform class, and need to be characterized as distinct. Besides, although the so-called “main verb”—the non-initial infinitival form—may be the predicate of the “core proposition” in the sense of this term as noted in Section 1.1, the “helping verbs” do not warrant the status of strict auxiliaries because syntactically they can themselves constitute the infinitival “head” for some other member of the group, thus:

- (6) a. *hu hithil lihyot alul le hikašel.*
 He began to be liable to fail.
- b. *hu yictarex li nhog le hipageš ito.*
 He will-have to be-wont to meet with-him.
- c. *hu omed le hamšix le lamed.*
 He is about to continue to teach.

That is, if such a broad view is taken of the notion of "auxiliary," it becomes identified with the entire class of verbs taking verb-phrase complementation with obligatory equi-NP deletion, and would need to be extended to include (for Hebrew as for English) such additional verbs as *ahav* 'like (to do)', *he'ez* 'dare,' *meher* 'hurry, hasten,' *hicliah* 'manage' or *serev* 'refuse.' Hence, the analysis that follows proposes to restrict the notion of "auxiliary verb" rather more severely, i.e. to the class which includes *haya* 'be,' *nihya* 'become' and *niš'ar* 'to stay=keep (on)' which, as discussed in Section 4.3 below, uniquely take *beynoni* participial verb-forms and/or adjectives as complements. The wide range of verbs which are dependent in requiring infinitival complements are analogous to other transitive verbs which "cannot stand alone" in the very broad sense that they require some form of complement. That is, while syntactic and, in effect, semantic dependency in the crude sense of "not occurring alone as the head of a surface-structure simplex predicate" is a necessary condition for inclusion in the class of auxiliaries, it is not a sufficient condition for this.

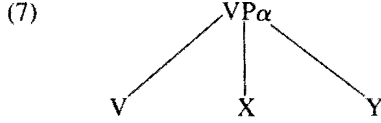
2. The Category of Tense in Modern Hebrew

The category of Tense seems to me to afford the only good candidate for inclusion in some universal characterization of AUX with respect to Hebrew. For in Hebrew, as in many languages, Tense is marked by affixation on verbs, and as such it is akin to other features of the inflectional morphology of the language—such as number, gender, and person. Unlike the latter, however, Tense has no effect on subject-verb agreement; it is uniquely associated with the verb phrase, and uniquely affixed to members of the lexical category V, which is morphologically distinct in that all (and by and large only) verbs pattern according to a restricted set of *binyan* conjugations or forms.

Tense should thus be analyzed as an associated or phrasal feature of all and only VPs in the language,⁵ as described and motivated in some detail in Berman

5. In another context (Berman, 1973, Chapter 2), a distinction is suggested between two types of syntactic features: "inherent" features which are part of the lexical characterization of words, e.g., common or proper, mass or count, masculine or feminine (for inanimates) for nouns, or state vs. motion vs. affect for verbs; and "associated" features which, by contrast, are not assigned to lexical items as such, but to phrasal nodes within given syntactic configurations.

(1978, Chapter 5) and represented schematically in the figure in (7). Here, *alpha* stands for a value of the category of Tense associated with all and only VPs, manifested on the surface in all and only occurrences of the category V.⁶



where α is a variable ranging over the values:

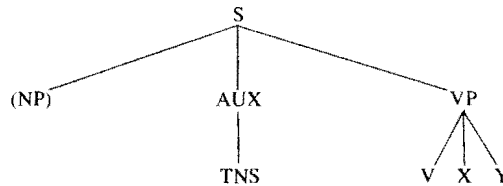
- (i) [-Tense] = "Nonfinite" forms:
 - INFINITIVE: *li+gmor* 'to end'
 - GERUND: *(bi)+gmor* '(on) ending'
- (ii) [+Tense] = "Finite" forms:
 - 1 TENSE=Past: *gamar* '(he) ended'
 - 2 TENSE=Future: *yigmor* '(he) will-end'
- (iii) [\emptyset Tense] = 'Intermediate' participial or present forms:
 - BEYNONI 'medial': *gomer* 'end(s)/is ending'

The following may be noted with respect to this schema:

- a) Infinitive and Gerund, the two nonfinite forms, share the same morphological stem as future tense, and their temporal interpretation depends on or is commanded by the tense of the finite verb of the main clause;
- b) Imperatives, which are not included in (7), also take the future stem, with 2nd person marking;
- c) Biblical Hebrew is generally described as "tenseless" (see, for instance,

6. This is in clear opposition to the view taken in generative semantics studies. For instance, McCawley (1971) analyzes tenses not as features but as themselves underlyingly verbs. On the other hand, however, there does seem some justification for not treating Tense as a feature in Hebrew—as analyzed in figure (7) of the text—but as deriving from an independent S-dominated constituent in the form of AUX, thus:

(i)



The initial NP is parenthesized to account for the wide range of subjectless, impersonal constructions in Hebrew (Berman, 1979c); Tense would then be transformationally incorporated within the VP constituent as an affix on V, hence "pruning" the AUX node; and the VP constituent might be viewed as alternating with NP in the structure in (i) to account for "nominal sentences" of the kind discussed in Section 4.1 of the article.

Givon, 1977), while the past and future tense forms of Modern as well as earlier, Mishnaic Hebrew, correspond to the perfective and imperfective aspect of Biblical Hebrew respectively;

- d) Present Tense in Hebrew has the same surface form as nonfinite participles, and like them it is marked for gender and number, but unlike the past and future ‘fully finite’ forms, not for person. Today, the so-called *beynoni* ‘intermediate’ or ‘medial’ form of verbs still functions as a participle, both active and passive, but it can also have main-verb status, standing for some indefinite period of time that is neither distinctly prior to nor subsequent to the time of discourse, as discussed in Berman, 1978, pp. 173–179.

Tense is the only property (or constituent, if the view taken in note 6 is adopted) which must be associated with every occurrence of V at some level of intermediate as well as surface structure. The moment a verb is used in the language it has some marking for tense in terms of its form, and no sentence is interpretable without being given some temporal ‘anchoring.’ In terms of form, Hebrew tense is realized as an inflectional affix on the root plus *binyan* pattern combination, in the shape of a vocalic infix, usually combined with a CV(C) prefix and/or suffix, and often syncretized with marking for number, gender, or person.

Semantically, the tense of a finite matrix verb in past, present, or future ‘commands’ the temporal interpretation of all other VPs in the same surface sentence.⁷ As Tense is an obligatory property of verbs, there is some motivation for assuming that it is part of the propositional content of an utterance (by contrast, say, with modality which in Hebrew, perhaps universally, is an optional element in sentences). In other words, following Lyons, we might adopt the view taken in certain systems of tense-logic, which

7. The infinitive is generally interpreted as being future to the time-reference of the main verb, except in the case of verb-phrase complements of the kind termed ‘extended predicates’ in Section 1.2. This is shown by the finite-clause paraphrase in (b) below:

(i) <i>hu doreš</i>	<i>/ daraš</i>	<i>/ yidroš</i>	<i>mi ména</i>
He is-demanding	/ demanded	/ will-demand	of her
a) <i>li firoš.</i>	OR: b) <i>še</i>	(<i>hi</i>)	<i>tifroš.</i>
to resign.	that	(she)	<u>will-resign.</u>

Main-verb time-reference also ‘commands’ that of gerunds, which in Hebrew typically occur in time-adverbials, thus:

(ii) <i>ha nos'im</i>	<i>nivdeku</i>	<i>/yibadku</i>	<i>lifney</i>
The passengers	were-inspected	/will-be inspected before	
a) <i>alot + am</i>	<i>la</i>	<i>matos.</i>	
their-boarding	(to) the	plane.	
OR: b) <i>še hem alu</i>	<i>/ ya'alu la</i>	<i>matos.</i>	
(that) they boarded	/will-board to-the	plane.	

take the truth or falsity of a proposition as being relative to the world, or world-state, that it purports to describe: saying, for example, that the proposition expressed by 'It is raining', 'It was raining', 'It will be raining', 'It has been raining', etc. is true in world w_i (i.e. the world at time t_i) but false in world w_j and that the same proposition—'It be raining'—is involved in each case. (Lyons, 1977, p. 809)

That is, Tense in Modern Hebrew is a category uniquely associated with all and only VPs, part of the sentence-core, so to speak, hence a candidate for the category of AUX, and never realized as an 'auxiliary verb.'

3. The Expression of Modality in Hebrew

The category of 'modality' in this context refers to elements which 'mark one or more of the following notions: possibility or the related notion of permission, probability or the related notion of obligation, certainty or the related notion of requirement' (Steele, 1975, p. 199), as well as the concept of 'desirability' or 'advisability.' Steele distinguishes between two types of languages: those where the position of modal elements is in some way dependent on the main verb—e.g., the Subject \wedge Modal \wedge Verb order of Hebrew in expressions like those in (1) above—and those where the modal elements are sentence-dependent in terms of position, like the Hebrew examples in (8) below. The surface form of such sentences in Hebrew is Modal \wedge Sentence; the modal element is adjective-like in that in all except the present (zero) tense, it is preceded by some overt form of the tense-carrying *haya* 'be'—e.g. *haya asur le hagid zot* '(it) was forbidden to say that' or *yihye keday le nasot* '(it) will-be worthwhile to try'; and the sentential complement can take the form of an infinitival, as in the (a) sentences of (8), or of a 'that' clause, as in the (b) sentences.

(8) (a) carix le hagid lo.

Must to tell him. = 'He must be told.'

(i) efšar le daber ito.

It's(im)possible to talk to-him.

keday (lanu) le nasot axšav.

Worth to-us to try now. = 'We/You should try now.'

asur le daber kax.

Forbiddento talk thus. = 'You/one musn't talk that way.'

(b) yitaxen še hu yavo.

(It's)likely that he will come. = 'He may well come.'

mutav še na'azov.

Better that we-leave. = 'We'd better leave.'

yaxol li hyot še hu codek.

Can to be that he is right. = 'He could/might be right.'

Thus Hebrew, like other languages, manifests a "mixed" order with respect to modality: both Subject $\hat{\text{Modal}}$ Verb as in *dan asuy le hacliah* 'Dan (is) likely to do-well' and Modal $\hat{\text{Sentence}}$ as in *yitaxen še dan yacliah* '(it's) likely that Dan will-do-well.' The difference between the two options is not merely stylistic, with the latter a more formal variant of the former. Rather, in the first case, akin to English 'Dan may do well,' 'We can go,' etc., something is being predicated of the surface subject, and the modality—of possibility, ability, obligation, etc.—is attributed to that predication in relation to the individual or individuals specified by the Subject NP. In the second case, of Modal Sentence, a modality is being predicated of the event or activity expressed in the proposition, and it is related to the proposition as a whole, not to an individual or class of individuals.

to,' or *muxrah* 'must, obliged to' are sometimes termed "modal verbs" in Hebrew grammars (e.g. Azar, 1977), and included within the class of "extended predicate" constructions discussed in 1.2 above. They are morphologically, syntactically, and semantically akin to the class of so-called "semi-modals" of English, as suggested by the glosses given above. Morphologically, they are like adjectives in taking number and gender but not person marking, and in requiring an overt form of *haya* 'be' except in present tense; however, unlike other adjectives, they enter into paradigms in the form of verbs in some cases, e.g. *carix* 'need, have to' is nonverb in present tense, but takes a verb-pattern as *hictarex* in the infinitive, past, and future; and *yaxol* 'be able to' alternates in past tense, say, between adjectival *hayiti yaxol* 'I-was able' and verbal *yaxól-ti* 'I could.' Thus, these modal verbs are typically members of defective or suppletive paradigms, rather like the "anomalous finites" of English. Semantically, these verbs do clearly express the notions associated with modality as defined above. Syntactically, they must occur with some lexically-specified "full" verb in the infinitive, and hence are like the other aspectual, inclinational, and other dependent verbs discussed with reference to "extended predicate" constructions in Section 1.2. For the reasons noted there, however, they are not true "auxiliary verbs"; perhaps they can best be characterized as "associated predicates." On the one hand, they do make "independent" predications about the individual to whom they are attributed (the surface subject), while on the other they are invariably associated with some other "full" verb both syntactically and semantically.

Modality, when expressed through the types of Modal Sentence constructions illustrated in (8) above, constitutes one subclass of the wide range of predicates taking sentential complements in Hebrew, which occur in predicate-initial sentences, and which include not only modals, but also affective predicates (e.g. *haya barur še hu yavo* '(it) was clear that he would-come' or *haval le vazbez et ze* '(it's a)pity to waste that') and impersonal passives (e.g. *huhlat še dan yikah ota* '(it) was-decided that Dan would-take her')—as discussed in Berman, 1979c. Thus, modality in Hebrew is not expressed in such cases by auxiliary verbs, but by predications upon propositions—a situation which accords well with the language's general disinclination for the use of auxiliary verbs and with its propensity for predicate-initial constructions and impersonal types of sentences.

4. 'Be' as Main Verb and Auxiliary

The functioning of *haya* 'be' is analyzed below as derived in three distinct ways in three different constructions: as an empty carrier of the category Tense in equational sentences (4.1); as a main verb of existence and possession (4.2); and as an auxiliary verb in the expression of aspect and mood (4.3). This analysis is made in order to establish the following claims: (i) that *haya* is the chief instance of an "auxiliary verb" in Modern Hebrew—although not the only such case, in view of the role of inchoative auxiliaries such as *nihya*, *na'asa* 'become' (Section 5); and (ii) that while the main verb and auxiliary verb 'be' are in most cases morphologically identical, they are syntactically as well as functionally quite distinct in the language.

4.1 *haya* As a Tense-Carrier "Linking" Verb

One function of *haya* 'be' is as a semantically empty element which marks off Subject from Predicate in equational type sentences. These may be attributive, identifying, or specificational types of propositions, as illustrated in (9), (10), and (11) respectively. And in the present (or 'zero') tense, there is either no overt copula, or Subject and Predicate are linked by a pronominal suppletive such as *hu* 'he' or *ze* 'it, this,' conditions governing the choice of zero or pronominal suppletive being as described in Berman and Grosu, 1976.

(9) a. *rina* (*hi*) *ħaxama*, *aval aħiħa* (*hu*) *idyot*.

Rina (she=is) smart(Fem), but her-brother (he=is) an-idiot.

b. *hata'ana šelxa hayta meyuteret*.

Your complaint was unnecessary.

(10) a. *moše hu ha iš še nisu li rcoaḥ.*

Moshe he(=is) the guythat (they) tried to kill.

b. *elenora tiyhe ha bamait.*

Eleanor will-be the producer.

(11) a. *ma še amarti ze še moše yavo.*

What (that) I said it(=is) that Moshe will-come.

b. *kavanati hayta la lexet habáyta.*

My-plan was to go home.

In such constructions, 'be' is merely a dummy carrier of Tense, the proposition consisting crucially of Subject-Predicate, with *haya* showing up obligatorily in past and future, not in present. Such sentences may be uniquely characterized as underlyingly having no element V in their structural description; and at some point in their derivation *haya* is transformationally inserted, except in the case of "zero" or present-tense marked predicates. This analysis captures the fact that Hebrew has superficially verbless sentences — the so-called "nominal sentence" of traditional Hebrew grammars (as analyzed in Rubinstein, 1968). It also demonstrates overtly that sentences like *dan (hu) talmid tov/haya talmid tov/yihye talmid tov* 'Dan is/was /will-be a good student' differ from each other only in tense-marking and in semantic temporality, exactly as do, say, *dan lomed kaše/ lamad kaše/ yilmad kaše* 'Dan studies/ studied / will-study hard.' Moreover, it captures the similarity between present (=zero) tense or participial verbs and adjectives, on the one hand, and the distinction between these and other occurrences of verbs and adjectives, where the latter take an overt form of 'be,' on the other.⁸ Thus compare:

8. In another context (Berman 1978, Chapter 5), I have motivated an analysis of *beynoni* 'medial' or "zero tense" verb-forms which surface as quasi-finite "present-tense" verbs in such contexts as the following:

(i) a. *dan oved eclénu axšav.*

Dan works/is working for-us now.

b. *rina goméret et ha'avoda be šteym esre.*

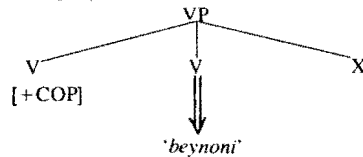
Rina finishes(Fem) Acc work at twelve (o'clock).

c. *anaxnu rocim la azor.*

We want(P1) to help.

Such present-tense verbs are derived uniquely from the following structure:

(ii)



- (12) a. *dan ko'es.* = *dan ra'ev.*
 Dan angers = 'is angry.' Dan hungers = 'is hungry.'
 b. *dan ka'as.* *dan haya ra'ev.*
 Dan angered = 'was angry.' Dan was hungry.
 c. *dan yix'as.* *dan yihye ra'ev.*
 Dan will-anger = 'will-be angry.' Dan will-be hungry.

Thus, in constructions like those in (9) through (11) as well as those with adjectivals as in (12), it is the verb *haya* 'be' to which the value of Tense — represented by the feature *alpha* in the diagram in (7) or, alternatively, as the constituent AUX (note 6 above) — is assigned to ensure appropriate surface output.

4.2 *haya* As a Main-Verb of Existence

As a non-*habere* language, Hebrew uses the same superficial form *haya* in the expression of existentials and possessives (and in a rather different way, locatives as well). In such cases, however, there is a verbal suppletive form of 'be' in present tense: the invariant existential particle *yeš* or its negative reflex *eyn*, thus:

- (13) a. *yeš sikuy(im) še nacliaḥ.*
 Be chance(s) that we'll succeed.
 'There's a chance/are chances that we'll succeed.'
 b. *haya pa'am melex zaken.*
 Was once king old. 'There once was an old king.'
 c. *lo yihyu maspik kosot bišvil kulam.*
 Not will-be enough glasses for all-of-them.
 'There won't be enough glasses for everyone.'
- (14) a. *eyn la séxel.*
 Not to-her sense. 'She hasn't got any brains.'
 b. *hayta le dan havera nehmada.*
 Was (Fem) to Dan friend nice. 'Dan had a cute girlfriend!'

In case *alpha* = tense has the value of zero ('present' tense), the left-most V is deleted, and its associated main-verb V surfaces alone, as a present-tense form. All other instances of such an underlying structure, specifically those where *haya* is an auxiliary verb as discussed in Section 4.3, constitute a unique combination of V_i[+COP] as the auxiliary *haya* which carries tense, person, number, and gender marking, followed by a participial *beynoni* form which agrees with it in number and gender, but which is unmarked for any value of tense.

c. (lo) tihye li išuva bekarov.

(Not) will-be to-me answer soon.

'I will/won't have an answer shortly'.

In existentials as in (13) and possessives as in (14), *haya* is best analyzed as a main-verb, present in deep as well as surface structure. Not only does it show up as a verbal form in all types of sentences, but semantically all such propositions contain a verbal predicating element, and an abstract verb of existence which is predicated of some (indefinite) entity such as 'chance,' 'king,' or 'glasses' in existential propositions or of the existence of some entity in someone's possession. In this way, we try to capture the well-established fact that the categories of existence, possession, and to a lesser degree location, are interrelated in many languages — as manifested on the surface by the choice of *yeš* or some form of *haya* in such constructions in Hebrew.

4.3 *haya* As a Pre-Participial Auxiliary

The form *haya* functions, thirdly, as an auxiliary verb: in such cases, *haya* is always followed by a *beynoni* 'medial', participial form of the "main verb" — either active, as in most of the examples in this section, or passive in the case of statal perfectives in (16) below. That is to say, the only instance in which a surface for of $V \hat{\ } V$ is possible with the second V in participial form — by contrast with the infinitival "main verbs" of the extended predicate discussed in Section 1.2 — is where the initial verb is the copula auxiliary *haya*.⁹

9. One other verb takes a *beynoni* participial complement or "main verb": the verb *niš'ar* 'stay, remain' in the sense of 'keep on (doing something)'. This verb may thus be analyzed as an aspectual auxiliary, on a par with *haya*, though functioning in a much more restricted semantic sense. On the other hand, there is evidence that today this verb is taking on the status of an associatively "dependent" verb taking an infinitival complement, of the type analyzed in Section 1.2 above. Thus colloquial, non-normative usage often has *niš'ar* 'stay' followed by an infinitive, though this never occurs with *haya*, thus:

(i) a. *hu niš'ar omed.* = b. *hu niš'ar la amod.*

He remained standing. He remained to stand.

And Rubinstein (1971, p. 194) points out that:

(ii) *hem niš'aru omdim.*

They remained(P1) standing (P1).

means the same as:

(iii) *hem niš'aru la amod.*

They remained to stand.

not in the sense of 'remained in order to stand,' but in the sense of:

(iv) *hem himšixu la amod.*

They continued to stand. (=They kept on standing!)

Moreover, unlike where *haya* is a dummy carrier of Tense (4.1) or an existential marker (4.2), as an auxiliary *haya* is never overtly manifested in present-tense contexts, nor does it have any pronominal or other suppletives filling its slot (as explained in note 8).

Each of the (b) sentences in (15) through (18) below illustrates some form of *haya* + participial *beynoni*, agreeing with each other and with the Subject NP in number and gender. These expressions function in the expression of aspect — durative in (15), statal or perfective passive in (16), and habitual past in (17) — or counterfactual mood in (18).

(15) DURATIVE ASPECT: *haya* + Active Participle

(i) a. *ha iš amad šam ve tafas dagim.*

The man stood there and caught fish.

b. *ha iš haya omed šam ve tofes dagim.*

The man was standing there and catching fish.

(ii) a. *hem yesadru et inyaneyhem ad maħar.*

They will-arrange Acc their-affairs by tomorrow.

b. *hem yihyu mesadrim et inyaneyhem od harbe šanim.*

They will-be arranging Acc their-affairs for many years (to come).

This aspectual use of auxiliary *haya* in expressing durativeness is quite marginal in standard colloquial Hebrew, although it does still serve in literary narrative in distinguishing punctive from durative activities (see Berman 1978, pp. 163–165). The fact that in general the distinction between European simple and progressive aspects is only marginally manifested in the VERBAL element of Hebrew discourse (being expressed, instead, largely by adverbials) may perhaps be attributed to the relatively recent development of a system of Tense in Hebrew, taking over from the more classical marking of aspect in the verb (Givon, 1977).

A far more productive function of *haya* + *beynoni* forms is in the expression of ‘statal’ or ‘perfective’ passives, as in (16-b) below. Here, Hebrew makes use of a formal contrast between dynamic or ‘kinetic’ passives through the use of passive *binyan* verb patterns as in (16-a), by contrast with *haya* + passive participle forms in expressing the perfective, or adjectival passive as in (16-b):

(16) (i) a. *hamekomot hatovim nitpesu mižman (al yadam).*

The good places were-taken long-ago (by them).

b. *hamekomot hatovim hayu (kvar) tfusim*

The good places were (already) taken
(*kše higánu lešam*).

when we got there.

(ii) a. *hakol ye'urgan tox šniyot (al yadéynu).*

Everything will-be-organized in seconds (by us).

b. *hakol yihye me'urgan ve šaket, al tid'ag.*

Everything will-be organized and quiet, don't worry.

The perfective construction is readily available at all levels of Hebrew usage, *haya* 'be' functioning as an auxiliary marker of perfective aspect, and the passive participle being adjective-like in both form and interpretation. For instance, the participles *tfusim* 'taken = occupied/nonvacant' or *me'urgan* 'organized' can be conjoined with ordinary adjectives, unlike the finite passive forms in the (a) examples above.¹⁰

10. This analysis differs from that of Schwarzwald (1976) who, mistakenly in my opinion, identifies the case of passive participles with what she terms 'copula' rather than auxiliary 'be'—the former being identical to the dummy tense-carrying 'be' as analyzed in Section 4.1 above. This may be because passive participles are so often lexicalized as adjectives, so that an ambiguity (which Schwarzwald notes but does not really explain) may occur in present tense between:

(i) PASSIVE:

a. Present—*ha šemot mefursamim kol bóker.*

The names are-published every morning.

b. Past —*ha šemot pursemu kol bóker.*

The names were-published every morning.

c. Future —*ha šemot yefursemu kol bóker.*

The names will-be-published every morning.

and (ii) COP + ADJECTIVE:

a. Present—*ha šemot (hem) mefursamim.*

The names they (= are) famous.

b. Past —*ha šemot hayu mefursamim.*

The names were famous.

c. Future —*ha šemot yihyu mefursamim.*

The names will-be famous.

Our analysis distinguishes between the two surface occurrences of a participial passive like *mefursam* 'is published/famous': as a passive form it is derived from a structure in the form of (19) in the text, where the left-most, copular verb is zero in present-tense; as a lexicalized adjective it is derived from a verbless deep-structure with no "'be'-insertion'" in present-tense, but with an optional pronominal suppletive, as described in Section 4.1. (Further examples of surface identity of the kind illustrated in (i-a) and (ii-a) above are given in Berman, 1978, pp. 160-169).

Another function of auxiliary *haya* which is, likewise, fully productive in contemporary Hebrew is in the expression of habitual past, as rendered in English by 'used to/would do (something habitually)':

(17) (i) *kše hayínu ktanim, hayínu nos'im kol šana la yam.*

When we-were small, we-were going every year to the sea.
'We used to go to the sea every year.'

(ii) *ha zaken haya yošev u makšiv le xulam.*

The old-man was sitting and listening to everyone.
'The old man would sit and listen to everyone.'

Modern Hebrew here makes wide use of *haya*+participle as a means of specifying one kind of past-time aspect.

Auxiliary 'be' plus participle constructions are, finally, also used in expressing counterfactual conditions where, in everyday usage at least, no overt distinction is made between potentially realizable conditions (English 'I would do it') and those where no such possibility exists (English 'I would have done it'), thus:

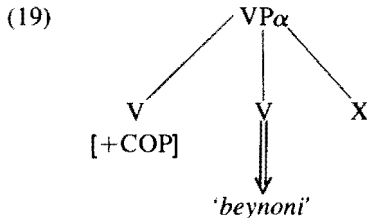
(18) (i) *ilu yadāti, lo hayíti mesaper lexa.*

If I-knew, not I-was telling you.
'If I had known, I wouldn't have told you.'

(ii) *dan haya mitnaged, ilu hevin bame medubar.*

Dan was objecting, if understood what was-talked (about).
'Dan would object/would have objected if he (had) understood what was being talked about.'

In the four types of *haya*+*beynoni* constructions — the very marginal durative aspect, and more productive perfective or statal passive, habitual-past aspect, and counterfactual conditionals — the category of Tense must, of course, be assigned. In such instances, too, it will be carried over from the dominating VP to the left-most V in its domain, in this case the auxiliary *haya*, thereby triggering a participial *beynoni* form on its associated 'main verb', as depicted below:



This structure accords with the characterization of Tense-marking shown in (7) above, and extended to include cases of the copula verb *haya* as further explained in note 8 above. That is, where *alpha* is zero, a quasi-finite present-tense verb will surface alone, the copula being itself zero; where *alpha* has some positive value, one of the more marked aspects or moods outlined in this section will be derived.

5. Inchoatives: A Further Subset of Auxiliaries

Inchoatives, like passives, middle-voice reflexives, and causatives are typically expressed by lexicalization within the verb through the system of *binyan* verb-patterns. However, inchoatives are rather special in that they have a highly productive periphrastic form of expression through the combination of "dependent verbs" like *nihya* (literally, the passive form of 'be') 'become,' *na'asa* (literally, 'be-done,') 'become' or *nehefax* 'be turned' with adjectives. And in fact at least one contemporary Hebrew scholar suggests that these are the only true instances of "auxiliary verbs" in the language functioning within the so-called "extended predicate" construction (Rubinstein, 1971, p. 189). Thus compare:

- (20) (i) *ha pri haya bašel*: a. *ze hivšil*.
 The fruit was ripe: It ripened.
 b. *ze nihya bašel*.
 It became ripe.
- (ii) *avi hu zaken*: a. *hu mazkin / mizdaken*.
 My father is old: He is-aging.
 b. *hu na'ase zaken*.
 He is-getting old

Possible semantic differences between the incorporated forms of (a) and the analytic auxiliary + adjective forms of (b) are discussed elsewhere (Berman, 1979a). Of relevance here is the fact that these inchoative verbs can and do function productively as auxiliaries in the language today. That is, it is precisely the primitive semantic notions of "being" and "becoming" which are expressed by means of auxiliary verbs in contemporary Hebrew, reflected syntactically in their choice of participial and the related adjectival forms as the head of the predicate.

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