

Chapter 5: Blending analysis of the Hebrew transitive *binyanim*

5.0 Introduction

In the previous chapter (chapter 4), I discussed the conceptual and linguistic blending processes that underlie the generation of causative *hif'il* sentences in Hebrew. Through the blending process, a causal sequence of events is communicated as a single, integrated event, grammatically expressed via a basic clause structure and a single linguistic predicate. The blending process is motivated by perceived similarity between the conceived causal event in the world, and the semantics associated with one of the language's integrating constructions (I discussed three integrating syntactic constructions in chapter 4). In the process of blending, participants and predicates from the conceived causal sequence of events are mapped onto the integrating construction, generating the actual sentence communicated in the language, which is a blend of linguistic forms from both input spaces. The syntactic pattern of the blend is inherited from the integrating syntactic construction, while the lexical items are inherited from lexical representations of participants and predicates in the conceived macro-event.

I proposed in the previous chapter that the morphological verbal stem (*binyan*) in Hebrew marks a *blending schema*: the *binyan* marks which predicates from the conceived event are mapped onto the verbal slot of the integrating syntactic construction. The *root* of the main verb in the blend provides the semantic content of this predicate, and the *binyan* marks the mapping operation. In the previous chapter, I analyzed the stem *hif'il*, and suggested that it grammatically marks the mapping of an *effected* predicate from a conceived causal macro-event onto the verbal slot of the integrating construction.

In this chapter I will discuss two other *binyanim* in the Hebrew verbal system that are used *transitively* - the stems *pi'el* (CiCeC) and *pa'al* (CaCaC)¹. I will suggest that the *generic causative schema*, defined in section 2.1 in discussing blending operations in the generation of English Caused-Motion sentences, and identified in chapter 4 as underlying the generation of *hif'il* sentences in Hebrew, also underlies the generation of many transitive *pi'el* and *pa'al* sentences. The three *binyanim* (*hif'il*, *pi'el* and *pa'al*) differ however in the particular *blending schema* associated with each: each *binyan* formally marks the mapping of *different predicates* from the conceived causal event onto the verbal slot of the integrating construction.

I will start with an analysis of the transitive *pi'el* stem (section 5.1), and discuss its associated *blending schema* in contrast to the *hif'il* stem. I will suggest that the root of transitive *pi'el* verbs prototypically denotes the *causing* predicate in a causal sequence (this is in contrast to causative *hif'il* verbs whose root denotes the effected predicate). In section 5.3, I will discuss the third transitive stem - *pa'al*. *Pa'al*, I will suggest, marks that the event indicated by its root is an *autonomous* event. This is in contrast to *hif'il* and *pi'el* which construe the event indicated by the root as part of a larger causal sequence of events. Not surprisingly, *pa'al* is considered in most accounts of the *binyanim* system as the 'basic' (i.e., non-causative) stem (see section 3.2). I will suggest that the *pa'al* stem itself is indeed neutral with regard to causativity, but that the *root semantics* of *pa'al* verbs may itself denote a causative event (i.e., the root semantics sometimes integrates a whole causal sequence of events).

Figure 5-1 compares and contrasts the *blending schemas* associated with each of the transitive *binyanim* in Hebrew: *hif'il*, *pi'el*, and *pa'al*. The figure represents the three

¹ The Hebrew verbal system includes seven major *binyanim* - three of which (*hif'il*, *pi'el*, and *pa'al*) are used both transitively and intransitively. The other four stems (to be discussed in chapter 6), are used intransitively only.

binyanim as marking different types of blending operations from a causal sequence of events onto an integrating construction. The figure depicts only the mapping of *predicates* onto the verbal root of the integrating syntactic construction, and abstracts away for the moment from the particular syntactic construction being used (Input 2), and the mapping of *participants* onto the NP slots of the integrating construction

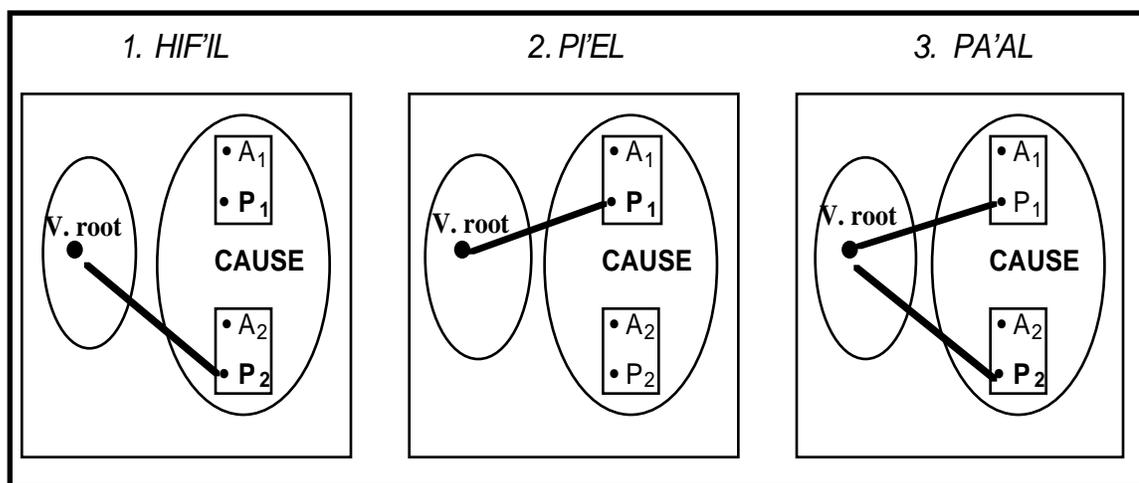


Figure 5-1: The blending schemas of *hif'il*, *pi'el*, and *pa'al* (predicate mapping only)

5.1 Blending characterization of the *pi'el* verbal stem.

The characterization of the *pi'el* stem (or its larger Semitic class called the *D-stem*) has proven to be extremely difficult, resulting in various proposals and controversies over the possible semantics of the stem (cf. Ryder, 1974; Leemhius, 1977; Weingreen, 1983; and review in Goshen-Gottstein, 1985). As of today, grammarians have not yet reached a consensus regarding the stem's sense.

In chapter 3, I briefly mentioned several characterizations of *pi'el*. According to Berman's (1975) generative account, the primary function of *pi'el* is as a *basic (+transitive)* verb, with a secondary function as a *transivitization*, or specialized form, of basic verbs in *pa'al*. Gesenius (1910) suggests that the *pi'el* stem has two grammatical-semantic functions: one of which is to mark the *intensification*, strengthening, or repetition of an

action; the second is to mark *causation*. The description of *pi'el* proposed in Gesenius (and others) as signifying an intensification of the root's meaning has been challenged long ago (cf., Goetze, 1942), and is no longer considered valid as the *primary* characterization for the *binyan* (though it certainly applies to a restricted group of *pi'el* verbs, mainly *intransitive* ones).

Another frequent characterization of *pi'el* is as having a *causative* effect (Gesenius, 1910; Ryder, 1974; Waltke & O'Connor, 1990; and others). The main problem with the causative characterization of *pi'el* has been to distinguish between the type of causation denoted by *hif'il* and by *pi'el*. Gesenius (1910), for one, believes that the effect of causative *pi'el* is just like that of *hif'il*. Other researchers suggest that *pi'el*, in contrast to *hif'il*, is not real 'causative' but rather 'factitive' (involving *non-active* patients, according to Bolozky, 1982). Leemhius (1977) proposes that while *hif'il* causative is intended to describe the act of "making someone do an act", *pi'el* factitive means that some state or quality is "made to come into being" (in review by Goshen-Gottstein, 1985). Waltke and O'Connor (1990:355) define the *pi'el* as signifying "causation with a patiency nuance", and summarize studies by E. Jenni who suggests that the object in *pi'el* experiences the action as an "accident". All in all, the distinction between causative *hif'il* and *pi'el* (or the general D and H Semitic stems) has not yet been settled in the literature. As Waltke & O'Connor (1990) also note, this contrast is especially difficult to delineate since it can scarcely be recognized in most Indo-European languages.

My characterization of *pi'el* and its contrast with *hif'il* focuses not on the semantics of the whole verb (i.e., *binyan*+root), but rather on the semantics of the verbal *root* only. I suggest that the root of transitive *pi'el* verbs prototypically denotes a *causing* predicate within a causal sequence of events. This is in contrast to the root of *hif'il* verbs which denotes an *effected* predicate within a causal sequence. In other words, while the *hif'il* stem marks that the event indicated by its root is *caused* by another (non-specified) event, the

pi'el stem marks that event indicated by its root is *causing* (or leading to) another (non-specified) event². My characterization of *pi'el* as marking the blending of a whole conceived *causal* sequence of events into a single *transitive* construction is in accord with both the suggestion of several Hebrew grammarians that *pi'el* denotes causation, and with Berman's (1975) characterization of *pi'el* as primarily transitive³.

Figure 5-2 contrasts the *pi'el* and *hif'il* verbal stems as marking the mapping of different predicates (the causing and the effected predicate respectively) onto the verbal slot of the integrating syntactic construction. In the blend (the generated sentence) the *root* of the main verb denotes the mapped predicate, and the *binyan* marks the mapping operation.

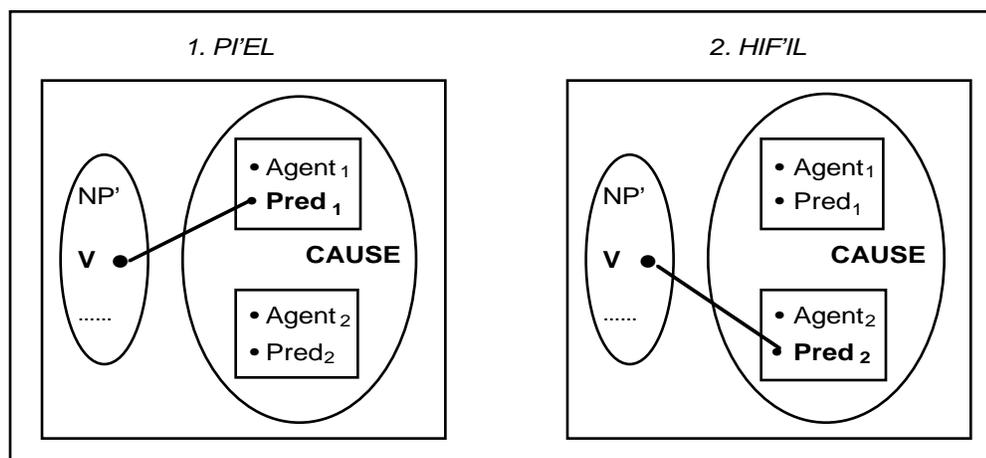


Figure 5-2: Contrasting the mapping schemas of predicates in *pi'el* and *hif'il*

² Note that I use the general term *event* to refer to both *active* and *stative* (e.g., change of state) events.

³ It is important to note that the characterization of *pi'el* in this chapter applies only to a large percentage of *pi'el* verbs, traditionally defined as simple basic transitive verbs. The characterization does not apply to (the less common) *intransitive pi'el* verbs, such as intensive *pi'el* (as in, *kipec* - leap repetitively, or *hilex* - walk about, keep walking), other basic intransitive *pi'el* verbs or *pi'el* verbs with non-accusative complements (such as *diber* - speak, or *higer* - immigrate), and a group of transitive inchoative *pi'el* verbs with *adjectival* roots (such as *yisher* - straighten, *xizek* - strengthen, *kicer* - shorten). The latter group highlights the effected state in the adjectival root, and is similar semantically to a group of *hif'il* inchoative verbs with adjectival roots (such as *hexlish* - weaken, and *himtik* - sweeten) which will be discussed in chapter 6 (section 6.4.2).

In the coming sections (5.1.1-5.1.3), I will discuss the interaction of *pi'el* and *hif'il* morphology with the three syntactic constructions identified in chapter 4 (the Basic Transitive, the Transfer, and the Bitransitive construction). Comparing the blending operations underlying sentences with the same syntactic form but with different *binyanim* (*hif'il* vs. *pi'el*) suggests that these two classes of grammatical constructions (syntactic and morphological), though marking a single blending operation, are associated with independent conceptual schemas: the syntactic forms are associated with schemas of generic event structures (and thus define the generic structure of the event communicated in a sentence); the *binyanim* are associated with mapping schemas (thus defining the mapping configuration underlying a given sentence). Sentences with different syntactic form but the same *binyan* reflect the same mapping configuration on different event structures; sentences with the same syntactic form but different *binyanim* reflect different mapping configurations on the same generic event structure.

5.1.1 *Pi'el* vs. *hif'il* morphology and the Basic Transitive construction

Compare the following basic transitive *hif'il* and *pi'el* sentences (1a-b):

- (1) a. *hamefaked heric (r.u.c-hif'il) et haxayal .*
 The-commander **run-hif'il** past ACC the-soldier
 'The commander made the soldier run'.
- b. *hamefaked geresh (g.r.sh-hif'il) et haxayal .*
 The-commander **"drive-away"-pi'el** past ACC the-soldier
 'The commander drove the soldier out' (i.e., expelled the soldier)⁴

Sentences (1a) and (1b) have exactly the same syntactic form (NP V *et* NP), but they differ in the *binyan* used in the main verb (*hif'il* in 1a, and *pi'el* in 1b). Both sentences depict the same generic event (associated with the Basic Transitive schema, discussed in

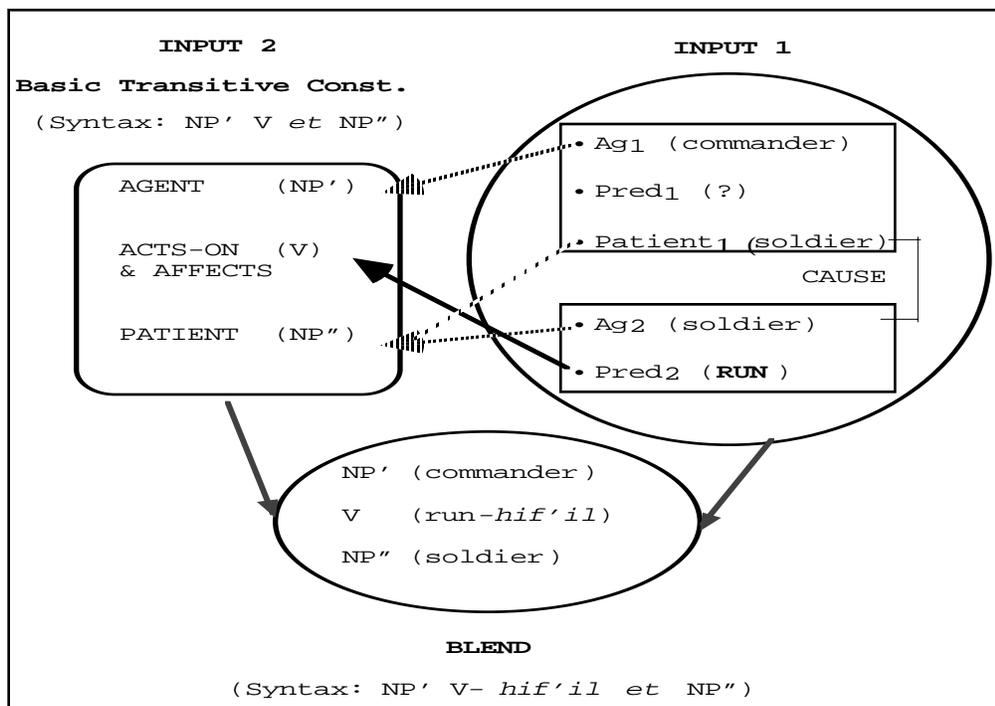
⁴ Examples of Hebrew verbs and their translation into English are from Bolozky (1996).

section 4.1.1): a causal agent (the commander) acts in some way on a patient (the soldier), thereby causing the patient to act or undergo some change of state. In sentence (1a), the root of the main verb denotes the *effected* predicate ('running'), while nothing is said explicitly about the *causing* event (i.e., what the commander did). In sentence (1b), the root of the main verb depicts the *causing* predicate ('driving away'), while nothing is said explicitly about the *effected* event (e.g., the soldier leaving)⁵.

In Figure 5-3, the blending operations involved in the generation of sentences (1a) and (1b) are compared. Both blending processes start with exactly the same generic event structure (Input 1). The mapping of participants from the conceived causal event into the integrating construction is also the same in both figures. The only difference between the two blending operations is in the mapping of predicates from the conceived macro-event onto the verbal slot of the integrating construction. In Figure 5-3-A (*hif'il*), it is the *effected* predicate that is being mapped, while in Figure 5-3-B (*pi'el*) it is the *causing* predicate. The two blending processes therefore result in exactly the same syntactic pattern (inherited from Input 2), but with a different morphological form (*binyan*) for the main verb.

⁵ Note that in both (1a) and (1b), a prototype scenario is imposed on the partial information provided by the sentence. For example, the force dynamics relation imposed on (1a) and (1b) is in the social domain (no physical force is assumed). If the patient in (1a) and (1b) was, for example, a dog rather than a soldier, physical causation would be imposed. In other words, the *binyan*-root combination provides only *partial* information for reconstructing the actual event conceived in the world (the reconstruction is based on prototypical scenarios, see discussion in chapter 2).

(5-3-A)



(5-3-B)

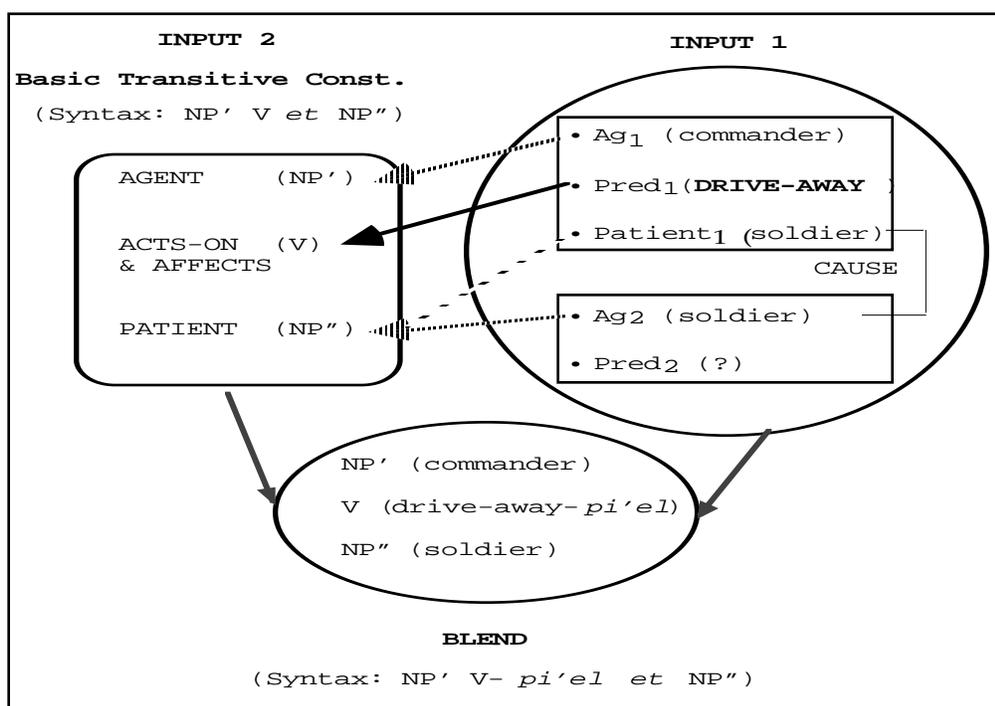


Figure 5-3: Comparing the blending operations underlying the generation of *hif'il* and *pi'el* Basic Transitive sentences.

Following are several additional examples of basic transitive *pi'el* verbs (i.e., *pi'el* verbs used with the Basic Transitive construction, as in example 1b). I suggest that the *binyan pi'el* is used in each of these verbs to mark that the predicate denoted by the root is a *causing* predicate (i.e., a predicate which has some prototypical expected effect)⁶ :

(a) *piter* (p.t.r, *pi'el*) - 'to fire (someone)'. The verb denotes an action of an agent (an employer) which has a clear (anticipated) effect on the patient (the employee becoming unemployed). The root itself indicates only the causing predicate (firing) and not the resulting state of the patient (i.e. 'being *unemployed*')⁷

(b) *bishel* (b.sh.l, *pi'el*) - 'to cook (something)'. The verb denotes the causing action of an agent, an action which leads to (or causes) the change of state of the patient (i.e., becoming eatable, not raw); see also discussion in section 5.1.4.

(c) *gileax* (g.l.x-*pi'el*) or *serek* (s.r.k-*pi'el*) - 'to shave' or 'to comb' (someone). These 'grooming' verbs denote again actions that bring about an expected change in the physical appearance of the patient (e.g., being smooth, having straight hair, etc.).

⁶ By saying that a particular *binyan* is used, I do not mean that a speaker is consciously choosing the *binyan* each time a sentence is generated. This is clearly not the case since the *pi'el* verbs discussed in this section are all *entrenched* verbs from the standard Israeli lexicon, which speakers learn as integrated lexemes. However, we do want to account for the choice of the *binyan* in the first place, when the new *pi'el* verb was “invented” (this is especially relevant for Modern Hebrew - a revived language, which is constantly “invented” and “extended”); For example according to the Even-Shoshan Modern Hebrew lexicon, 40% of all the entries in the lexicon originated from Modern Hebrew literature of the last 150 years (Nir 1993:15)). The aim of the blending analysis is also to try and predict the general schema of *pi'el* that speakers abstract from all instances of the *binyan* they know, a schema they make use of in their daily coinage of nonstandard slang verbs.

⁷ Of course, the effected event or state may also be denoted by a word *derived* from the root of the *causing* predicate (e.g., the event of *piter* - 'fire' results in the patient being *mefutar* - 'fired'). However, we should not confuse these participle derivations of the *root* of *pi'el* (which really defines a different blend of the same event structure - Input 1, marked by different morphology), with *hif'il* causative verbs in which the effected event denoted by the root is *not derived* from the same root as the causing event.

5.1.2 *Pi'el* vs. *hif'il* morphology and the Transfer construction

Compare the following *hif'il* and *pi'el* sentences (2a) and (2b):

- (2) a. *dani horish (y.r.sh-hif'il) et habait leruti.*
 Danny **inherit-*hif'il***_{past} ACC the-house DAT-Ruth.
 'Danny **bequeathed** the house to Ruth'.
- b. *dani gila (g.l.h-pi'el) et hasod leruti.*
 Danny **uncover-*pi'el***_{past} ACC the-secret DAT-Ruth.
 'Danny **revealed** the secret to Ruth'.

Again, both sentences (2a and 2b) have exactly the same syntactic form (the Transfer construction [NP V *et* NP *le* NP], discussed in section 4.1.2), but they differ in the *binyan* used in the main verb (*hif'il* in 2a, and *pi'el* in 2b). In both cases, the causal agent (Danny) *transfers* something to a recipient (Ruth) (this is the generic semantics associated with the Transfer syntactic construction). In sentence (2a), however, the root of the main verb denotes the *effected* possession predicate (inheriting), while nothing is said explicitly about the *causing* event (i.e., what is it that Danny did to enable Ruth to have/inherit the house). In sentence (1b), the root of the main verb denotes the *causing* predicate (uncovering the secret), while nothing is said explicitly about the *effected* (metaphorical) possession event (i.e., Ruth *knowing* the secret).

Note that the *pi'el* verb *gila* in sentence (2b) can be also used in the Basic Transitive construction, in which case it means 'to uncover' (a secret). The schematic semantics of the root *g.l.h* therefore denotes a basic *causing* event (i.e., the uncovering of (a secret) which also changes the 'status' of (the secret) - the content not being a secret anymore). When used with the Transfer syntactic construction, the verb *gila* ('reveal') acquires in addition a semantic component of *transfer* - the content (of the secret) is transferred to an intended recipient (Ruth). The additional transfer semantics is in fact contributed by the syntactic Transfer construction, as predicted by the Construction Grammar hypothesis (Goldberg,

1995)⁸.

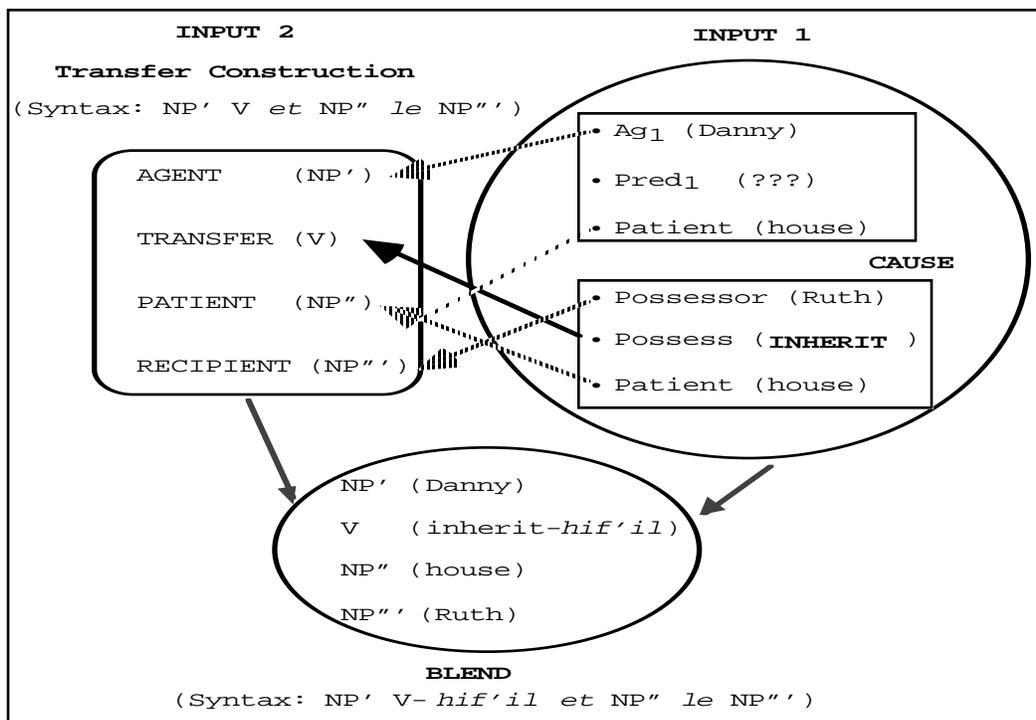
A schematic description of the blending processes involved in the generation of sentences (2a) and (2b) is given in Figure 5-4. Both blending processes start with exactly the same generic input structures: the structure of the conceived event in the world (Input 1) in both cases involves transfer (physical one in sentence 2a, and mental-metaphorical one in 2b), and the integrating construction in both is the Hebrew syntactic pattern [NP V *et* NP *le*-NP]. The mapping of participants from the conceived causal event onto the integrating construction is also the same in both cases. The only difference between the two blending operations is in the mapping of predicates from the conceived macro-event onto the verbal slot of the integrating construction. In Figure 5-4-A it is the *effected* predicate that is being mapped, while in Figure 5-4-B it is the *causing* predicate. The two blending processes thus result in exactly the *same* syntactic form (inherited from Input 2), but with a *different* morphological form (*binyan*) in the main verb.

⁸ The transfer use of *gilah* is entrenched, and therefore the two senses ('uncover' and 'reveal') are found in Hebrew dictionaries.

Another example of a *pi'el* verb used in both the Basic Transitive construction and the Transfer construction is the verb *xilek* (*x.l.k - pi'el*). In the basic transitive sense, *xilek* means 'to divide'. When used in the Transfer construction (example i), *xilek* is best translated as 'to distribute' (i.e., 'to *divide* and *give* the parts to...'). The transfer semantics of *xilek* is again contributed by the semantics of the syntactic construction. As Rubinstein (1976) notes, the use of the verb *xilek* within the Transfer construction (meaning 'to distribute') is found already in Biblical Hebrew, and in Modern Hebrew has become so entrenched that it is currently considered a second sense of the verb *xilek* (in addition to 'divide') in dictionaries.

(i) *dani* *xilek* (*x.l.k-pi'el*) *et* *kol kaspo* *la'aniyim*.
 Danny *divide* past ACC all his-money DAT-the-poor.
 'Danny *distributed* all his money to the poor'

(5-4-A)



(5-4-B)

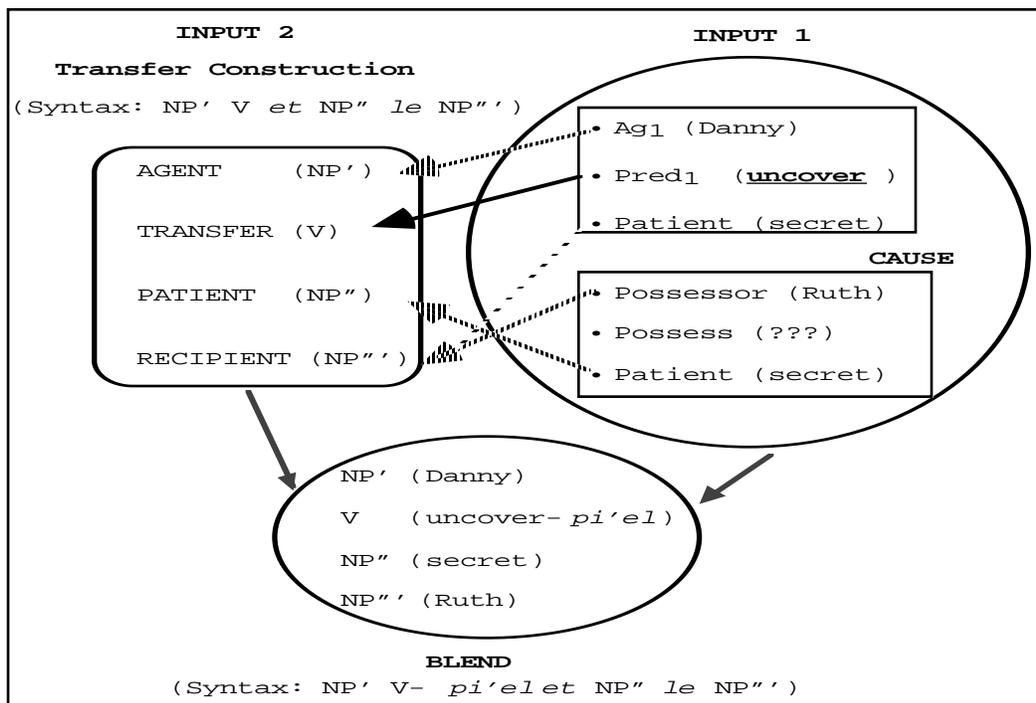


Figure 5-4: Comparing the blending operations underlying the generation of *hif'il* and *pi'el* Transfer sentences.

5.1.3 *Pi'el* vs. *hif'il* morphology and the Bitransitive construction

In contrast to the Basic Transitive and Transfer constructions, the Bitransitive construction (discussed in section 4.1.3, with regard to the *hif'il* stem) is very limited in use in Modern Hebrew. According to a comprehensive list of verbs and their usage in Israeli Hebrew compiled by Stern (1981), aside from bitransitive *hif'il* verbs, there is only *one* instance of a bitransitive *pi'el* verb, and one instance of a bitransitive *pa'al* verb in use. The one bitransitive *pi'el* verb is *limed* (*l.m.d-pi'el*), meaning 'to teach', as in example 3:

- (3) *hamore limed(l.m.d -pi'el) et hatalmidim et hashi'ur*
 the-teacher teach_{past} ACC the-students ACC the-lesson.
 'The teacher taught the students the lesson'

It is impossible, of course, to generalize from a single example, but it seems that example 3 is in accord with the findings on the Bitransitive construction in section 4.1.3, and the proposed semantics of *pi'el*. The root *l.m.d* occurs in Modern Hebrew with both the *pa'al* stem (*lamad* - 'to learn'), and the *pi'el* stem (*limed* - 'to teach'). Teaching is a causative activity, related to the activity of learning (the *pa'al* form). However, the act of 'teaching' does not mean 'to cause to learn' (in which case an *hif'il* form would be more appropriate), but rather the act of 'teaching' refers to an event which *brings about an effect* on the patient - the effect associated with *learning*, i.e., becoming educated (or 'learned'). Hence a *pi'el* verb is adequately associated with this activity⁹. The semantics associated with the macro-event of teaching is also in accord with the semantics of the integrating Bitransitive construction. As suggested in section 4.1.3, the Bitransitive construction is associated in Hebrew with a generic causal event in which an agent manipulates and affects a patient through joint activity on a third object - the third object being the "carrier" or

⁹ Roni Henkin (personal communication) mentioned that in Arabic, the root *'l.m* can be used both with the D-stem (the Semitic stem group which includes the Hebrew *pi'el*) to mean 'to teach', and in the H-stem (the Semitic stem group which includes the Hebrew *hif'il*) to mean 'to make know, learn'. The D-stem emphasizes the causing action of teaching. The H-stem emphasizes the effected predicate (the state of knowing).

“instrument” of the main event. And indeed, in example 3, we find that the communicated main event is of an agent (the teacher) acting on and modifying a patient (the student) through *joint* activity on a third object (the lesson). The lesson in the event of teaching is also the "carrier" or “medium” for accomplishing the effect on the students¹⁰. Figure 5-5 provides a schematic description of the blending operation underlying the generation of sentence 3:

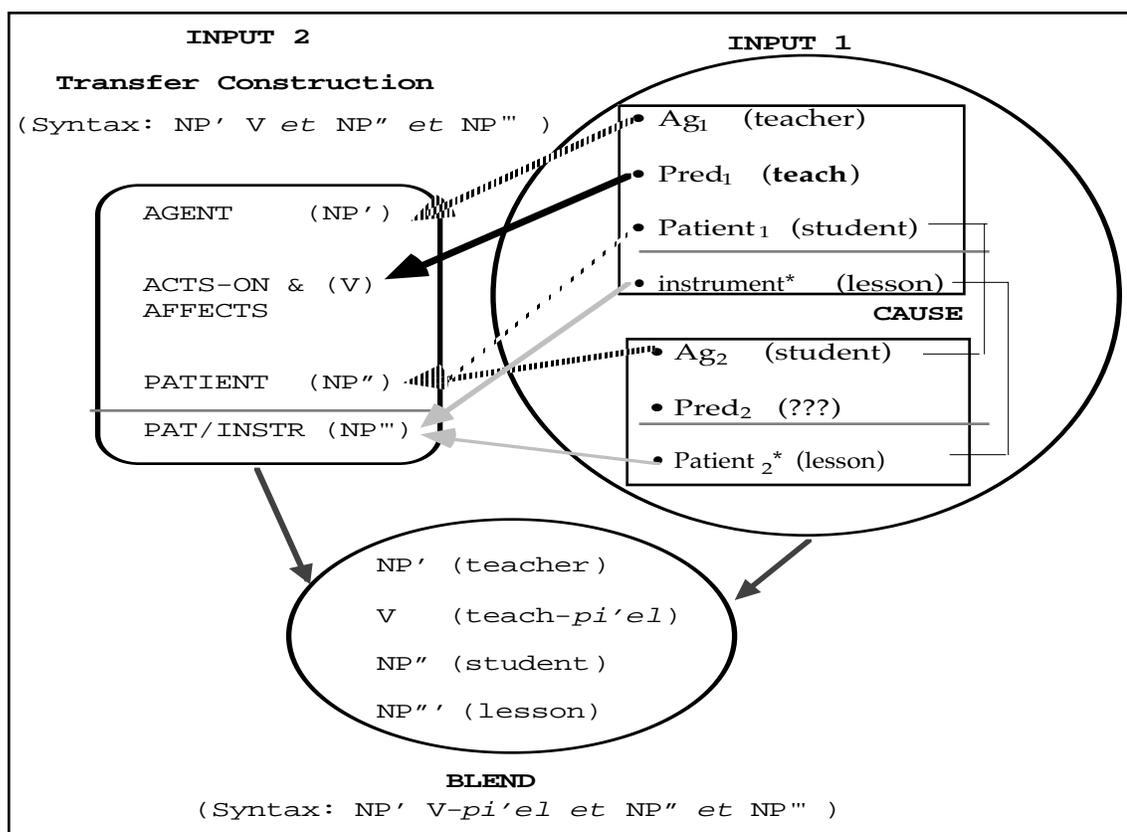


Figure 5-5: The blending operation in the generation of a Bitransitive *pi'el* sentence.

¹⁰ Note, however, that in contrast to the *hif'il* Bitransitive verbs, where the second accusative object *et* can be replaced by the instrumental marker *be-* (section 4.1.3), replacing *et* by *be* in example (3) is ungrammatical. Since all we have is one example of a bitransitive *pi'el* verb, it is hard to analyze the reason or motivation for this grammatical difference between bitransitive *hif'il* and *pi'el*.

5.1.4 Summary - the blending schema of *pi'el*.

I suggest that the root of *pi'el* verbs denotes a *causing* predicate within a causal sequence of events, emphasizing the fact that the event denoted by the root also brings about some effect on a patient. The analysis compares *hif'il* verbs and *pi'el* verbs used transitively (in transitive constructions): both *binyanim* mark the integration of a causal macro-event into a single basic clause construction, but they differ in the predicate being mapped onto the verbal slot of the integrating construction and denoted by the verbal root in the blend.

The blending operations proposed to underlie *pi'el* and *hif'il* sentences in Hebrew can be compared to the blending operations underlying the English caused-motion sentences 4-5 (below), discussed in chapter 2 (Figures 2-2 and 2-3):

- (4) She sneezed the napkin off the table.
- (5) She trotted the horse into the stable.

In sentence 4, what is mapped from the conceived causal event onto the verbal slot of the integrating caused-motion construction is the *causing* predicate ('sneeze'). In sentence 5, what is mapped from the conceived causal event onto the verbal slot of the integrating caused-motion construction is the *effected* predicate ('trot'). The *same types of blending operations* hence underlie the generation of English and Hebrew sentences. The two languages differ in that Hebrew clearly marks (in its verbal morphology) the blending configuration (the mapping of predicates) underlying the sentence, while English grammar does not mark this operation (at least not in the caused-motion sentences discussed in chapter 2).

Waltke and O'Connor (1990:355) characterize the *pi'el* and *hif'il* as signifying causation with a "patience" vs. "agency" nuance on the causee (see Table 7-2 in chapter 7), and exemplify the distinction in an hypothetical discussion of the Hebrew translation of a basic transitive sentence in English such as 6:

(6) John cooked the cabbage.

Waltke & O'Connor claim that sentence 6 is ambiguous with regard to the sense of the verb 'cook', an ambiguity which is not marked at all in the English grammar, but can be differentiated (in principle) in the Hebrew *binyanim* system. According to their analysis, in the sense of 'John made the cabbage cooked', sentence 6 would be translated into Hebrew by a *pi'el* verb. In the sense of 'John caused the cabbage to cook', the sentence would be translated into Hebrew by an *hif'il* verb¹¹.

In my analysis, I would similarly suggest that the meaning of English sentence 6 is ambiguous with respect to the Hebrew morphological marking system, but the ambiguity would be paraphrased slightly differently to match the *pi'el* and *hif'il* functions that I propose. In one sense (the *pi'el* sense), sentence 6 means 'John cooked the cabbage', i.e., John heated the cabbage, and prepared it for eating (with the *implication* that the *resulting* event is one where the cabbage was "cooked", i.e., not raw, eatable). In the other sense (the *hif'il* sense), sentence 6 means 'John's actions made the cabbage undergo the event of cooking', or 'John made the cabbage to cook' (as suggested by Waltke and O'Connor), where 'cook' here is used in its *intransitive* sense (as in 'the cabbage is cooking'). In the latter sense, the given information is the effected state and the *implication* is about the *causing* event - John's actions (i.e., that John put the cabbage in a pot, turned on the stove, etc.). Each of the two proposed senses focuses on another aspect of the (transitive) event of cooking, where the non-focused aspect of the event is automatically *implied* by imposing a prototypical scenario.

¹¹ The translation discussion is hypothetical since the Hebrew lexicon contains only one standard form to translate the verb 'cook' from English: a *pi'el* form - *bishel* meaning to 'boil' or 'cook' (both of which, I suggest, emphasize the causing event, with the *implied* consequence of the patient (food) becoming 'cooked' - 'not raw', or 'eatable'). The *hif'il* form of the same root (*hivshil*) has a different inchoative sense - 'to ripen' (the inchoative function of *hif'il* will be discussed in chapter 6, presenting the *intransitive* stems in Hebrew). Ryder (1974:109) notes that "apparently, both 'boil' (the *pi'el* sense of *b.sh.l*) and 'ripen' (the *hif'il* sense of *b.sh.l*) evolved from some original concept such as 'be edible, palatable'."

5.2 Blending characterization of the *pa'al* stem.

In this section, I will analyze the third *transitive* stem *pa'al* (CaCaC). *Pa'al*, I suggest, marks that the event indicated by the root is an *autonomous* event. This is in contrast to *hif'il* and *pi'el* which construe the event indicated by the root as part of a larger causal sequence of events. Not surprisingly, *pa'al* is considered in most accounts of the *binyanim* system to be the 'basic' stem (cf., Gesenius, 1910; Berman, 1975), or the 'default' stem (which "sweeps up what the more powerful classes have left in their wake", Aronoff, 1994:146). I suggest that the *pa'al* stem is basic in that it is neutral with regard to causativity. However, the *root* of a *pa'al* verb may itself denote a causative event.

Many transitive *pa'al* verbs, I suggest, are the Hebrew equivalent of Indo-European "lexical causative" verbs (in the Generative Semantics tradition). Generative semanticists suggested that in addition to grammatically marked causative forms (morphological or syntactic), there are also *lexical* causatives: verbs such as 'kill' in English reflect a whole causal event sequence in their semantics. The causative semantics in the case of 'kill' is in the *lexical stem* itself, and is not marked grammatically (in contrast, for example, to 'cause to die'), but generative semanticists posited a complex underlying embedding structure for 'kill' just as they did for grammatical causative constructions (see section 3.4.2). I suggest that *pa'al* transitive verbs are like lexical causative verbs in English in that the *root* of many (transitive) *pa'al* verbs (which is equivalent to the *lexical stem* in English) already integrates a whole causal sequence of events. The *pa'al* morphological pattern itself is *neutral* with regard to causation: it construes the event denoted by the root as *autonomous*¹²; it is only the lexical *root* which may introduce a notion of causation into the verb

¹² Waltke and O'Connor (1990:362) also claim that the *pa'al* stem (and its passive-middle counterpart *nif'al*, see section 6.3) are the only two *binyanim* that "have no element of causation in their predication".

Figure 5-6 schematically represents the integration of a whole causal sequence of events onto the *root* semantics in *pa'al* verbs:

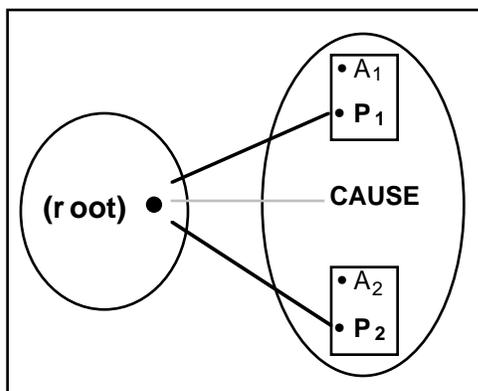


Figure 5-6: Integration of predicates in *pa'al* verbs

In Goldberg's analysis of causative syntactic constructions in English, and the possible semantic relations between verbs and constructions (1995, section 2.5), she notes that the semantics of some verbs occurring with particular constructions is a *subtype* (or 'instance') of the semantics of the construction. For example, the semantics of the verb *throw* in English is an instance of the caused-motion semantics associated with the English caused-motion syntactic construction. Fauconnier and Turner (1996) suggest that verbs like 'throw' *integrate* in their semantics a whole caused-motion sequence of events. In a similar way, verbs like 'kill' in English may be defined as a subtype (or a prototypical instance) of the semantics of the Basic Transitive construction [NP V NP], and as integrating in their semantics the whole prototypical transitive causal semantics of the construction. In Hebrew, I suggest, a single consonantal *root* denotes the integrated semantics of caused-motion verbs like 'throw' or basic causative verbs like 'kill'. The integration of a whole casual sequence is marked grammatically by the *pa'al* stem.

Note that there are, in fact, two possible ways to describe the blending operation underlying the use of transitive *pa'al* verbs (or lexical causative Romance verbs), such as

zarak - 'throw' or *harag* - 'kill', as illustrated in Figure 5-7. In one description (5-7-A), we start with a *conceptualization* of the event of 'killing' or 'throwing' as a single, integrated event. In this case, the linguistic blending process is a straight, one-to-one mapping from the single conceived event to the integrating construction. In the other description (5-7-B), we start with a conceptualization of the event as composed of two separate sub-events, and only through *linguistic* blending the two predicates come to be realized as a single predicate (and a single clause). The blending process in this case is possible only because the lexicon provides a single lexical root (*z.r.k* or *h.r.g*), or a single stem in English - 'kill' or 'throw', whose semantics already integrates the whole causal sequence. Note that the blending description of *pa'al* sentences in Figure 5-7-B is the same as the blending characterization of the English sentence *Jack threw the ball into the basket* in chapter 2 (Figure 2-5).

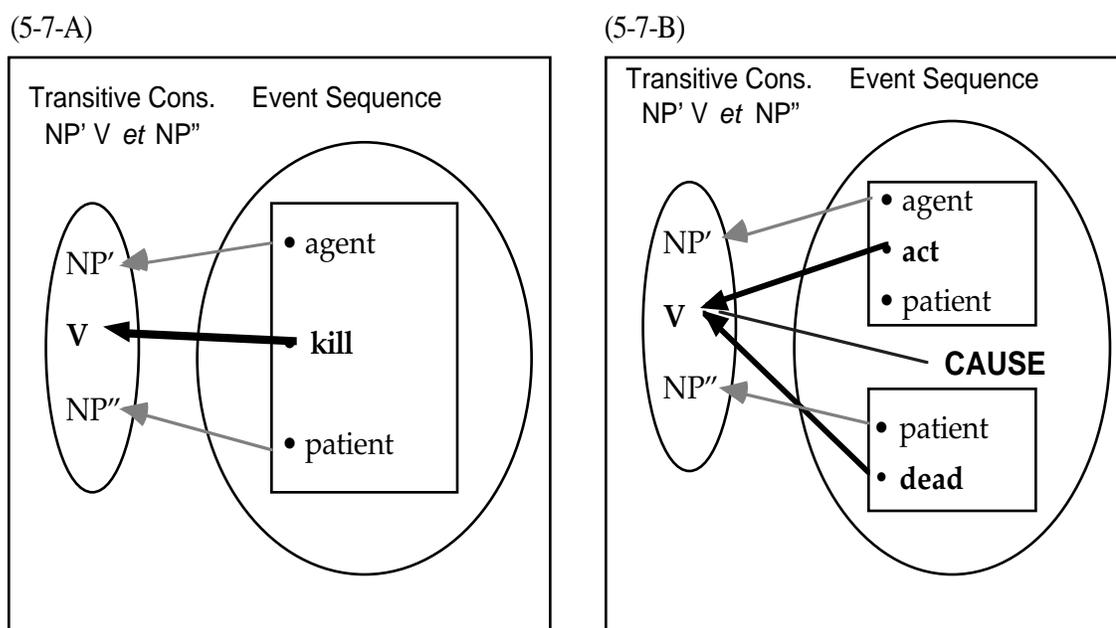


Figure 5-7: Two possible blending characterizations of *pa'al* sentences

The choice of one blending representation over another depends on whether we believe an event such as 'kill' or 'throw' is *conceptually conceived* as a single predicate, or as a sequence of events (e.g., 'act and cause to be dead') which is represented as a single

predicate only at the *linguistic* level. The choice of representation relates directly to the long debate on the link between language and thought (or conceptual representation). For example, the Sapir-Whorf hypothesis (Whorf, 1959), which maintains that our ways of thinking and conceptualizing are determined by the language we speak, suggests a conceptual representation which is more like Figure 5-7-A. I will not discuss this deep question any further in this section, as it is beyond the scope of the dissertation (and there is so far no clear answer to the question). For the *binyanim* characterization in this thesis, it is only important to note that whichever description is chosen for *pa'al* (5-7-A or 5-7-B), the mapping of predicates between the conceived causal event and the integrating construction is always *complete* (i.e., all the prominent composing sub-events in the conceived macro-event are integrated into the syntactic pattern). The event denoted by the verbal root in the blend is thus *autonomous* (i.e., not part of a larger causal sequence, as in *hif'il* or *pi'el*).

The discussion of transitive *pa'al* verbs so far focused on prototypical causative events (such as 'kill' or 'push'), where the causal force is physical and has clear observed effects. However, *pa'al* is also used with roots whose semantics involves two entities, but no causation (as in verbs of perception, e.g., *lir?ot* - 'to see', *lishmo'a* - 'to hear'). Various scholars have offered an analysis of non-causative events (such as events of perception or cognition) as metaphorical extensions of physical force-dynamic relationship (see Talmy, 1985; and Sweetser's analysis, 1990, of social and epistemic force-dynamics in modals). Kemmer (1993:46) notes that "Experiencers in mental events are like Agents in certain respects . . . Languages often do not distinguish between the two". Givón (1984:20) suggests that though the objects of non-prototypical transitive verbs are objectively speaking not patients at all (i.e., are not manipulated and affected by an agent), metaphorically (from a different point of view), they are construed "like patients". For the characterization of *pa'al*, it does not matter however whether the non-prototypical transitive

event is represented as metaphorically causative, or not (i.e., as in Figure 7-5-A or 7-5-B). The important point is again that the mapping of predicates between the conceived event and the integrating construction is *complete*, and the event is construed as *autonomous*.

Finally, note that the *pa'al* stem can also be used *intransitively* (as in *lalexet* - 'to walk' or *licxok* - 'to laugh'). The root semantics of these intransitive *pa'al* verbs indicates a non-causative volitional event. Again, the event denoted by root is *autonomous* (this is in contrast to some other intransitive *binyanim* which will be discussed in chapter 6).

Compare now the analysis of *transitive pa'al* to transitive *pi'el* (section 5.1). It is suggested that the *pa'al* stem construes the event denoted by the root as *autonomous*, while the *pi'el* stem strongly suggests that the event indicated by the root is bringing about some effected event (i.e., is part of a larger causal sequence). A support for the semantic distinction suggested between transitive *pa'al* verbs and *pi'el* verbs is the distribution of roots occurring in both *hif'il* and one of the two transitive stems *pa'al* and *pi'el*. While numerous roots in Hebrew occur (in the standard lexicon) in both transitive *pa'al* and transitive *hif'il* (e.g., the root *?x.l* - 'eat', or 'feed', see examples in section 4.1.3¹³),¹⁴ there are hardly any roots that occur in both transitive *pi'el* and transitive *hif'il* (with no corresponding *pa'al* form). This fact cannot be motivated by a simple characterization of both *pa'al* and *pi'el* stems as “basic, transitive”, and *hif'il* as “causative, transitive” (as proposed, for example, in Berman, 1975). If *pi'el* is indeed “basic” transitive (just like *pa'al*), then why is it that *hif'il* forms cannot be derived from the basic *pi'el* form as they do from basic *pa'al* forms? The blending analysis can motivate this distribution: if the *pi'el*

¹³ The root semantics of the transitive *pa'al* verb *axal* - 'eat' integrates a whole causal sequence. The root *a.x.l* may also be combined with the *hif'il* stem (*he?exil* - 'feed'), in which case the causal sequence involved in the event of eating is just a *sub-component* (the *effected* sub-event) in a larger causal sequence.

¹⁴ Waltke & O'Connor (1990:400) refer to studies by Jenni (1968) and Ryder (1974) of *pi'el* in Biblical Hebrew who found only eight roots that occur in *pi'el* and *hif'il* (but no *pa'al*). They go on to suggest (on the basis of evidence from cognate languages and semantic patterns) that these eight *pi'el* verbs are really equivalent to *pa'al intransitive* (a fact which explains the possible derivation of *hif'il* forms).

stem already marks the event indicated by its root as part of a larger causal sequence, then it is conceptually difficult to integrate it again as a *sub*-component in an even larger causal macro-event (this is in contrast to transitive *pa'al* verbs whose root semantics indicates an integrated autonomous predicate).

There are some roots in Hebrew that occur in both transitive *pa'al* and *pi'el*. These roots, I suggest, integrate a whole causative event in their semantics (marked neutrally in *pa'al*), but when used with the *pi'el* stem, the expected *effected* (resulting) event is more in focus. Waltke and O'Connor (1990:405) suggest that the transitive *pa'al:pi'el* distinction can be sometimes captured in English translation by the use of particles. For example, English contrasts 'break' and 'break up', 'run' and 'run away', 'fall' and 'fall down'. The Hebrew root *sh.b.r* in the *pa'al* form (*shavar*) is typically translated as 'break' in English, while in the *pi'el* form (*shiber*), it is translated as 'break', 'break up', 'make broken' (or 'shatter', in the intensive sense). As another example, the root *sh.l.x* in the *pa'al* form (*shalax*) is translated into English as 'send', while in the *pi'el* form (*shileax*), it is usually translated into English as 'send away' (Alcalay Hebrew-English Dictionary, 1990, and Bolozky's dictionary of Hebrew verbs, 1996). The English translation of the *pi'el* forms *shiber* and *shileax* adds a particle which explicitly expressed the fact that the main predicate denoted in the stem (i.e., 'break', or 'send') incorporates also an expected effect (e.g., being *away*, for 'send'). This saddle contrast between *shavar* and *shiber*, or *shalax* and *shileax*, however, does not seem to be part of the linguistic intuition of Israeli Modern Hebrew speakers (as I could gather from an informal interview of a couple of speakers), but this semantic-grammatical contrast may have played a more significant role in Biblical Hebrew (as suggested in the analysis of Waltke and O'Connor, 1990).

5.3 Conclusions - The transitive *binyanim* in Hebrew

In the last two chapters (chapters 4 and 5), I discussed the function of the three *transitive* stems in the Hebrew verbal system (transitive *hif'il*, *pi'el*, and *pa'al*). I suggested that the same generic causative schema underlies the prototypical use of all three *binyanim* in transitive constructions, where each *binyan* is associated with a different *blending* schema. The three blending schemas differ in the mapping of *predicates* from the conceived event onto the verbal slot of the integrating syntactic construction: *hif'il* marks the mapping of an *effected* predicate within a causal event onto the verbal slot of the syntactic construction; *pi'el* marks the mapping of a *causing* predicate onto the verbal slot of the syntactic construction; and *pa'al* marks the mapping of an *autonomous* predicate (i.e., a predicate which is not itself part of a larger event sequence). The autonomous predicate may be either the main predicate in a conceived single-predicate event structure, or the conceptual and linguistic integration of a sequence of predicates - a causing and effected predicates from a causal sequence of events.

The blending analysis thus extends the notion of causative constructions from the traditional definition of a construction denoting an *effected* predicate together with a causative marker (as in the *make-V* construction in English, *faire-V* construction in French, or the *hif'il*-root combination in Hebrew) to all three *binyanim* in Hebrew used transitively. The *hif'il* pattern, which complies to the traditional category of causatives, is only one type of a grammatical marker of causation (another type marks a *causing* predicate, and yet another one marks the integration of a whole causal sequence of events, as in Romance

lexical causative verbs¹⁵).

The blending analysis of the three transitive-causative morphological stems in Hebrew also emphasizes the link between causation expressed morphologically, and causation expressed through the syntax of basic clauses (as in the caused-motion sentences in English, discussed in chapter 2). The same generic causative schema and similar blending operations underlie the generation of all these different formal expressions of causality. In particular, the analysis in chapters 2-4 suggests that the same three types of predicate mapping from the conceived causal event onto the integrating syntactic construction is found in both English and Hebrew grammatical blends (i.e. the mapping of a *causing* predicate, exemplified in English in Figure 2-2, and in Hebrew in the characterization of *pi'el*; the mapping of an *effected* predicate, exemplified in English in Figure 2-3, and in Hebrew in the characterization of *hif'il*; and the integration of a whole causal sequence of predicates into a single lexeme, exemplified in English in Figure 2-5, and in Hebrew in the characterization of *pa'al*, Figure 5-7. The only difference between the grammatical expression of the causative macro-event in English and Hebrew is in whether the mapping configuration of predicates is marked grammatically (as in the Hebrew *binyanim*), or is implicit (i.e., has to be inferred by the hearer) as in the English caused-motion sentences.

¹⁵Bybee (1985:11) defines a continuum of “expression units”: from *lexical* to *derivational* to *inflectional* units (and finally also to *syntactic* units). Causation can be expressed in any of these expression forms. While in *lexical* units, the notion of causation is part of the single morphological unit, in *inflectional* and *derivational* units, “each semantic element is realized in an individual unit bound into a single word”. Note that in Hebrew, however, we cannot formally distinguish ‘lexical’ causative verbs from ‘morphological’ causatives, since every verb in Hebrew occurs with some morphological pattern (*binyan*). I suggested in this chapter that the notion of *lexical integration* should be associated in Hebrew with the *consonantal root* instead of the whole verbal form. When referring to the consonantal root only, we can define its semantics as causative or not, independent of the *binyan*.