Chapter 6:
Blending analysis of the Hebrew intransitive *binyanim*.

6.0 Introduction

In chapters 4-5, I discussed the *blending schema* associated with the three *binyanim* used *transitively* in Hebrew (transitive *hif'il*, *pi'el*, and *pa'al*). I suggested that a generic causative schema underlies the prototypical transitive use of all three *binyanim* (stems), where each stem marks the mapping (and therefore the *highlighting* in communication) of different *predicates* from the generic causative schema onto the verbal slot of the integrating construction. In particular, I suggested that the causative *hif'il* and *pi'el* stems grammatically mark the mapping of the *effected* and *causing* predicates respectively onto the verbal slot of the integrating construction (where the content of the predicate is denoted by the verbal root). The *pa'al* stem, in contrast, grammatically designates the mapping of an *autonomous* predicate onto the verbal slot (i.e., a predicate which is not part a larger causal sequence of events). This predicate may itself integrate a whole causal sequence, or it may be an autonomous predicate in a single-predicate conceived event.

In this chapter I will discuss the use of the principal *intransitive binyanim* in Hebrew[1], i.e., *binyanim* that occur with the Intransitive syntactic construction (to be defined below). In the group of "intransitive" *binyanim*, I include both the three *binyanim* discussed in chapters 4-5 (*pa'al, hif'il, pi'el*) when used intransitively, as well as the four other

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[1] There are seven *principal* verbal stems in Hebrew (*pa'al, nif'al, pi'el, pu'al, hitpa'el, hif'il, huf'al*). In this thesis I will discuss only these seven stems. In addition, there exist few other secondary "sub-stems" which have developed from the basic set of seven *binyanim* and which are used with some degree of productivity in Modern Hebrew (Berman, 1978). These include a set of stems related to *pi'el*, formed by a prefixing of *sh* to the basic *pi'el* form to yield a notion of repetition (like the English *re-*, as in `rewrite', `reconstruct'). In addition, there is the *nitpa'el* stem (where the *hitpa'el* prefixal *h-* is replaced by *n-*, as in *nif'al*). This stem, according to Berman (1978:85), is a "sort of passive extension to *hif'il*", and was common particularly in Mishnaic Hebrew.

binyanim in the Hebrew verbal system -- *nif'al, hitpa'el, pu'al* and *huf'al* -- which occur with the Intransitive construction only.

The goal of this chapter is not to provide a detailed analysis of each intransitive stem, but rather to sketch in general terms a way in which the analysis of the causative transitive *binyanim* in chapters 4-5 can be extended in a systematic way to cover the whole *binyanim* system in Hebrew. There are two major points that emerge from the blending analysis of the intransitive *binyanim* in Hebrew:

(1) That the same "generic causative schema" that I proposed underlying the prototypical use of the three transitive-causative *binyanim* in Hebrew (chapters 4-5), also underlies the use of most intransitive stems. It follows then that the *binyanim* system as a whole can be characterized to a large extent as marking various blending operations from a generic schema of causation onto different syntactic constructions (this characterization excludes the linguistic representation of non-causative events marked by *pa'al* and *nif'al*, as will be discussed in this chapter). The central role given in this analysis to the structure of causation is in accord with Waltke and O'Connor's analysis (1990) of *binyanim* in Biblical Hebrew (the two proposals differ however in their basic assumptions and the particularities of the analysis, see discussion in chapter 7).(2) The analysis in this chapter suggests also that the various grammatical functions assigned to each *binyan* in traditional accounts of Hebrew, and particularly the traditional grammatical *ambiguity* associated with some *binyanim*, is really the outcome of imposing grammatical distinctions from Indo-European grammars on the Hebrew system. I will suggest that the ambiguous grammatical functions associated with one *binyan* represent in fact conceptual elaborations on the blending schema associated with the *binyan*.

I will start with a discussion of the "intransitive-only" *binyanim* (i.e., *binyanim* that occur in the Intransitive construction only), and later extend the analysis to the causative-transitive *binyanim* (discussed in chapters 4-5) when used intransitively.

6.1 The "intransitive-only" *binyanim*

There are four "intransitive-only" principal *binyanim* in Hebrew (i.e., *binyanim* that occur in the Intransitive construction only). Berman (1975a, b) defines the main grammatical functions of each *binyan*(ordered by frequency):

(1) *nif'al* :   passive, middle, basic (and few reciprocals).

(2) *pu'al:*   passive

(3) *huf'al:*   passive

(4) *hitpa'el:*   middle, reflexive (and few reciprocal, inchoative, iterative, and basic).

Following are a few examples (from Berman 1978, and Glinert 1989) of the use of each *binyan* in Modern Hebrew (and the grammatical functions assigned for each) :

Nif'al: (1)   *raxel nilkexa (nif'al) habayta* --> `passive'

                          Rachel was taken home.

                  (2)   *hakad nishbar (nif'al)* --> `middle'

                          The vase broke.

                  (3)   *hem nifgeshu (nif'al)*   --> `reciprocal'

                          They met (each other).

                  (4)   *haxayal nixna (nif'al)* --> `basic'

                          The soldier surrendered.

Pu'al: (5)   *hapcaca purka (pu'al).* --> `passive'

                          The bomb was taken apart.

Huf'al: (6)   *hahoda'a hushme'a (huf'al) pe'amim rabot.* --> `passive'

                          The announcement was announced many times.

Hitpa'el: (7)   *dani hitgaleax (hitpa'el)*   --> `reflexive'

                          Danny shaved.

                  (8)   *habalon hitpocec (hitpa'el)*   --> `middle'

                          The balloon burst.

                  (9)   *aba hit'ayef (hitpa'el)* --> `inchoative'

                          Daddy got tired.

                  (10)   *hem hitnashku (hitpa'el)* --> `reciprocal'

                          They kissed each other.

                  (11)   *hi hitpalela (hitpa'el) kol yom* --> `basic'

                          She prayed everyday.

Note that two out of the four intransitive *binyanim* (*nif'al* and *hitpa'el*) are associated with more than one grammatical function, and many grammatical functions (e.g., 'passive' and 'middle') are associated with more than one *binyan*. Sadka (1978:245) notes this form-function ambiguity in the *binyanim* system in his analysis of passive in Hebrew:

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In English, French, German, and other Indo-European
languages, the form of the passive verb is steady and
unambiguous (aside from few exceptions). This fact makes it
easy to identify the passive verb. In Hebrew, on the other
hand, the passive form can be realized in several binyanim:
pu'al, huf'al, nif'al, and hitpa'el. The stems pua'l and
huf'al are clear passive stems, except for a few cases. In
contrast, the stems nif'al and hitpa'el have multiple
senses/functions. They are used not only to express the
passive form, but also to express inchoativity, reflexivity,
reciprocality, and more. Therefore, it is sometimes
difficult to know whether a sentence is passive or not.
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The analysis in this chapter aims at defining a *single* blending schema for each *binyan* (following a basic assumption of research in Linguistics, and particularly in Cognitive Linguistics, that similarity in form indicates similarity in semantics). I will suggest that the major grammatical functions traditionally associated with each *binyan* reflect in fact alternative conceptual (pragmatic) elaborations on the single generic blending schema defined for each *binyan*[2].

Each of the four *binyanim* (*nif'al, pu'al, huf'al,* and *hitpa'el*) commonly occurs in the language with the Intransitive syntactic construction only[3]. The syntactic form of this

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[2] As noted before, the blending analysis in this thesis characterizes *only the most frequent* grammatical-semantic functions of each *binyan*, and does not claim to cover every single use of the system. As many scholars have noted before, finding a unified analysis for the *binyanim* system is impossible since the lexicon of Modern Hebrew manifests a large amount of idiosyncrasy. However, among the more frequent verb forms a significant degree of regularity in function is preserved (cf., Bolozky 1996, Schwarzwald 1981). In particular, when discussing the four "intransitive" *binyanim (nif'al, pu'al, huf'al* and *hitpa'el)*, I will discuss only the most frequent functions of each: i.e., the passive, middle, and reflexive functions. The reciprocal function, for example, which is associated only with a small number of verbs will not be discussed (see further comments in section 6.4.1).

[3] Hebrew passive sentences are commonly agentless (i.e., no agent-phrase is associated with the verb). As Junger (1987:84) notes, in Hebrew, "the addition of Ag [agent-phrase] to [passive] constructions is rare and

construction (in Hebrew as in other languages) is: [NP V] (the first NP is associated with the grammatical role of a subject). I suggest that the syntactic form [NP V] is associated with a generic semantic schema of `an entity (NP) undergoing some activity or change of state (V)'. This schema is extracted from the semantics of all intransitive sentences in the language (see also Kemmer, 1993[4]). The activity or change of state may involve different levels of volitionality on the part of the entity undergoing the event (the subject), which is why the subject role in intransitive sentences has been associated in the literature with various semantics roles, including Agent, Patient, and Experiencer (when referring to mental events). In this chapter, I will use the term *Theme* as a neutral term for referring to the entity associated with the subject role in the Intransitive construction, independently of whether the event involves purposeful activity on the side of this entity or not.

I will identify two categories of causal forces that bring about the events the theme is undergoing in Intransitive sentences: the event (activity or change of state) may be the outcome of properties *internal* to the theme, or it may be the outcome of forces *external* to the theme. Klaiman (1991:115) also identifies two "loci of causality" (internal and external) when defining the "universal" parameters of voice marking. Klaiman quotes DeCharms (1981:344) characterization of the internal locus of causality as "the person's experience of being the cause of his decisions, choices, activities, and attempts to solve problems as well as the solutions to problems". DeCharms' definition, however, is too limited for our purposes, as it refers only to human, cognitive patients. As I will suggest, morphological marking of "internal causality" in Hebrew applies also to non-animate objects, where some internal "inherent" properties of the object are conceived as "causing" or "bringing about"

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produces very strange sentences . . . Ag phrase is only allowed when it is required for a specific pragmatic reason".

[4] Kemmer (1993:73) suggests that root intransitives denote simple 'one-participant events', i.e., events of "one participant of which a state or action is predicated".

the event denoted by the verb.

What is the blending (integration) operation associated with the Intransitive construction and intransitive *binyanim* ?

In the blending operations underlying the use of all transitive constructions and transitive stems discussed in chapters 4-5, it is always the causal force (the agent of the causing sub-event) that is mapped onto the first NP slot in the integrating construction. The transitive *binyanim* (*hif'il, pi'el*, and *pa'al*) differ only in which *predicates* are mapped onto the verbal slot in the integrating construction. In the case of the Intransitive construction and intransitive *binyanim*, I suggest that it is always the *affected patient* that is mapped onto the NP (subject) slot of the integrating Intransitive construction. The causal force (the agent of the causing sub-event) is left implicit (i.e., is not communicated in the blend)[5]. The four intransitive stems (*huf'al, pu'al, nif'al* and *hitpa'el*) differ again only in which *predicates* are mapped onto the verbal slot in the integrating construction.

Figure 6-1 compares the blending schema associated with the transitive stems (*hif'il, pi'el*, and *pa'al*) vs. the intransitive stems (*huf'al, pu'al, nif'al* and *hitpa'el*). The blending schemas generalize over the particular mapping of predicates onto the verbal slot in each *binyan* (and the particular integrating transitive construction). In the next few sections, I will discuss the blending schema associated with each intransitive *binyan* separately.

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[5] Langacker (1991b, Chapter 4) analyzes the passive construction in English and suggests that its chief semantic value is to focus attention on the *tail* of the coded action chain. The blending analysis in this chapter suggests that all the four stems in Hebrew -- *nif'al, pu'al, huf'al* and *hitpa'el* (as well as the intransitive *hif'il*, to be discussed in section 6.4.1) -- focus attention on (or *highlight*) the "tail" *entity* of the causal sequence of events (i.e., the entity undergoing the final sub-event - the *effected* sub-event), by mapping this entity onto the subject role of the integrating construction, and excluding other participants from the mapping schema.
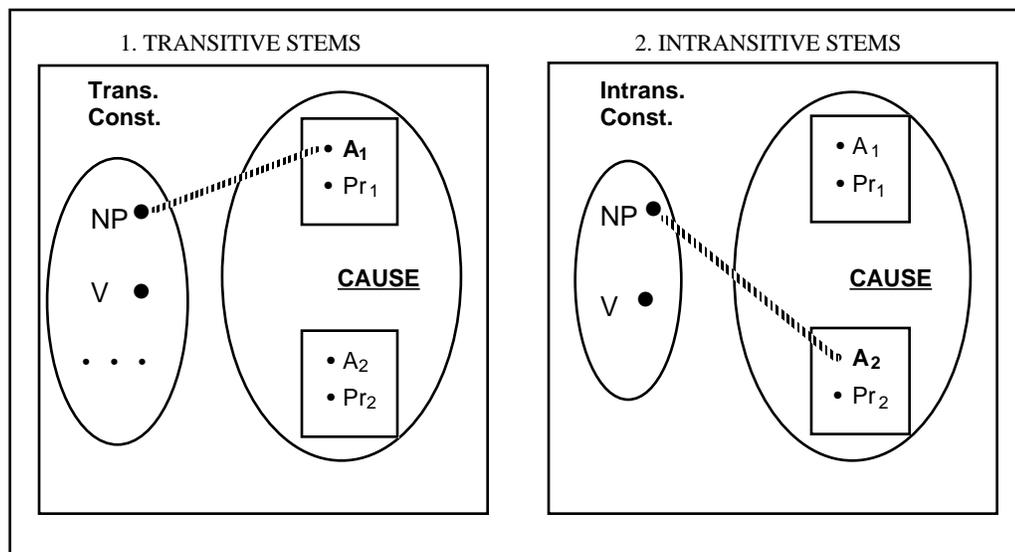
Figure 6-1: Comparing the generic blending schemas underlying transitive
stems and intransitive stems.

6.2 A blending analysis of *huf'al* and *pu'al*

Huf'al (huCCaC) and *pu'al* (CuCaC) are the only two *binyanim* defined as
grammatically *regular*, and characterized as "near-automatic passive derivations" from the
active transitive stems *hif'il* and *pi'el* respectively (Glinert, 1989:466). Supporting their
"regular" derivation is the fact that the stems *huf'al* and *pu'al* are phonological alternations
of *hif'il* and *pi'el*, where the first vowel alters into *u*. This fits a general principle in Semitic
languages whereby "the passive is distinguished by the vowel *u*, or very rarely *o*, in the
first syllable" (Gesenius, 1910:140). In Arabic, for example, the passive is formed
throughout with *u* in the first syllable.

I suggest that the "regular, near automatic" morphological and semantic link of *huf'al*
and *pu'al* to the active forms *hif'il* and *pi'el*, respectively, indicates that each morphological
pair (*hif'il-huf'al* and *pi'el-pu'al*) is associated with a *similar underlying conceptual
structure* and *blending configuration*. The similarity in the blending schemas underlying
each active-passive pair is in the mapping of *predicates* onto the verbal slot of the

integrating construction: the root of both *pi'el* and *pu'al* designates the *causing* predicate in a conceived causal sequence, while the root of both *hif'il* and *huf'al* designates the *effected* predicate. The active and passive stems differ however in the mapping of *participants*: in the "active" stems, it is the agent of the causal sequence that is mapped onto the subject role (first NP) of the integrating construction, while in the passive stems it is the affected entity (the entity undergoing the effected sub-event) that is mapped onto the subject role in the integrating construction. Figure 6-2 characterizes the blending schemas associated with the *pi'el, pu'al, hif'il,* and *huf'al* stems (the schemas of transitive *pi'el* and *hif'il* generalizes over the particular syntactic construction employed and the mapping of other participants into additional slots in the integrating construction).
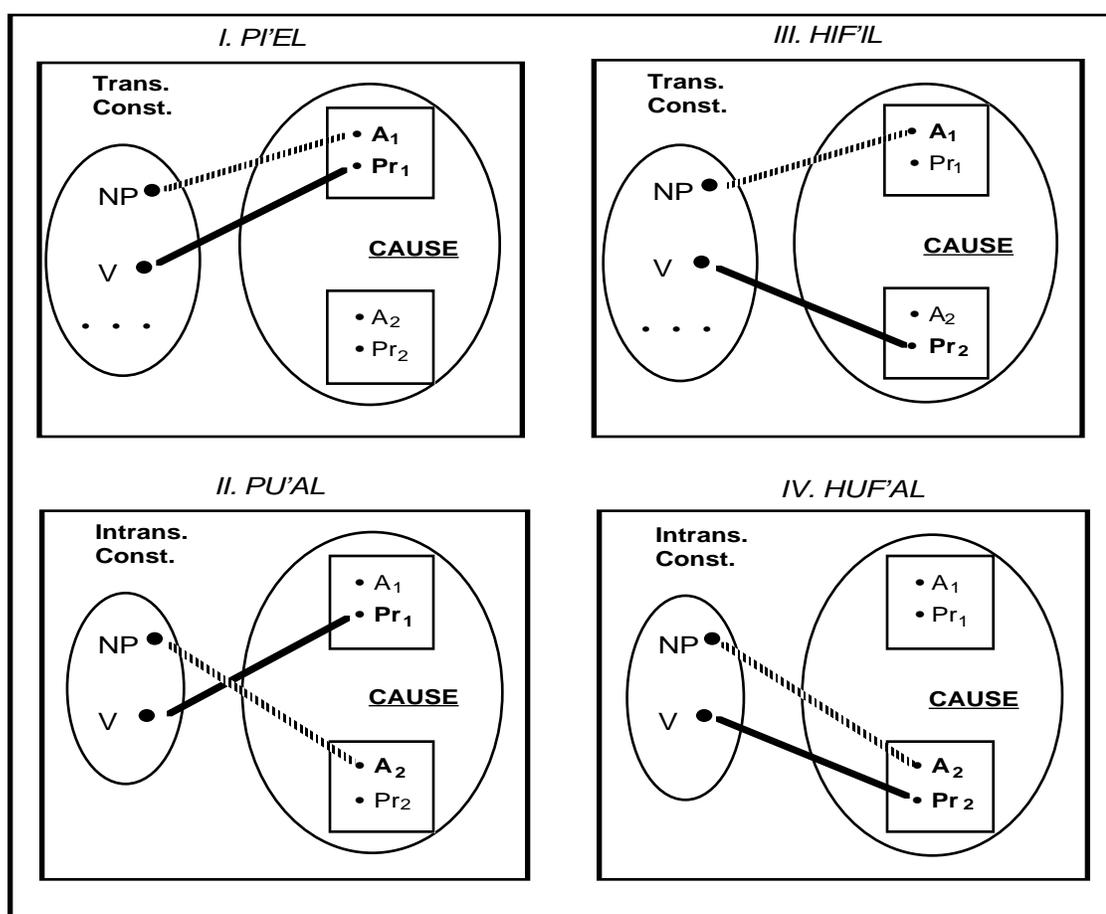

Figure 6-2: The blending schemas of *pi'el, pu'al, hif'il,* and *huf'al* .

The contrast defined above between active and passive forms in terms of what is mapped onto and expressed by the subject role in the integrating construction has parallels in many generative theories, for example in lexicalist rules of passivization (Bresnan, 1982). But while lexicalist theories generate (or link) passive morphological forms in the lexicon by applying a passivization rule to transitive (active) forms (see also the "word formation" proposal of Aronoff, 1994), the blending analysis generates both the active (transitive) and the passive forms from the consonantal root as the outcome of different mapping configurations (between a conceived event and an integrating syntactic construction). The generation of active and passive forms is therefore on par and independent from one another in the blending analysis. The independence of the blending operation for generating passive forms has advantages when studying passive *nif'al* verbs (section 6.3) with no parallel active (*pa'al*) form in the standard Hebrew lexicon (or with a parallel *pa'al* form whose meaning is not the `active' variation of the *nif'al*). Such examples are discussed in chapter 7.

The blending characterization of passive *binyanim* is also in line with the "detransitivization" view of passive marking (e.g., Junger, 1987; see section 3.4.3), in suggesting that each of the passive non-transitive stem (*pu'al* or *huf'al*) can be matched with an active transitive stem (*pi'el* or *hif'il*), where the primary participant profiled in the `transitive' stem (the `subject') is being "suppressed" in the matching `intransitive' stem. But again, while in the "detransitivization" view one stem (passive) is derived from another (active), in the blending analysis each stem is generated independently. The only link between an active *binyan* and its corresponding passive *binyan* in the blending analysis is in the similarity of blending schemas associated with both *binyanim* (i.e., similarity in the mapping of predicates onto the verbal slot of the syntactic construction).
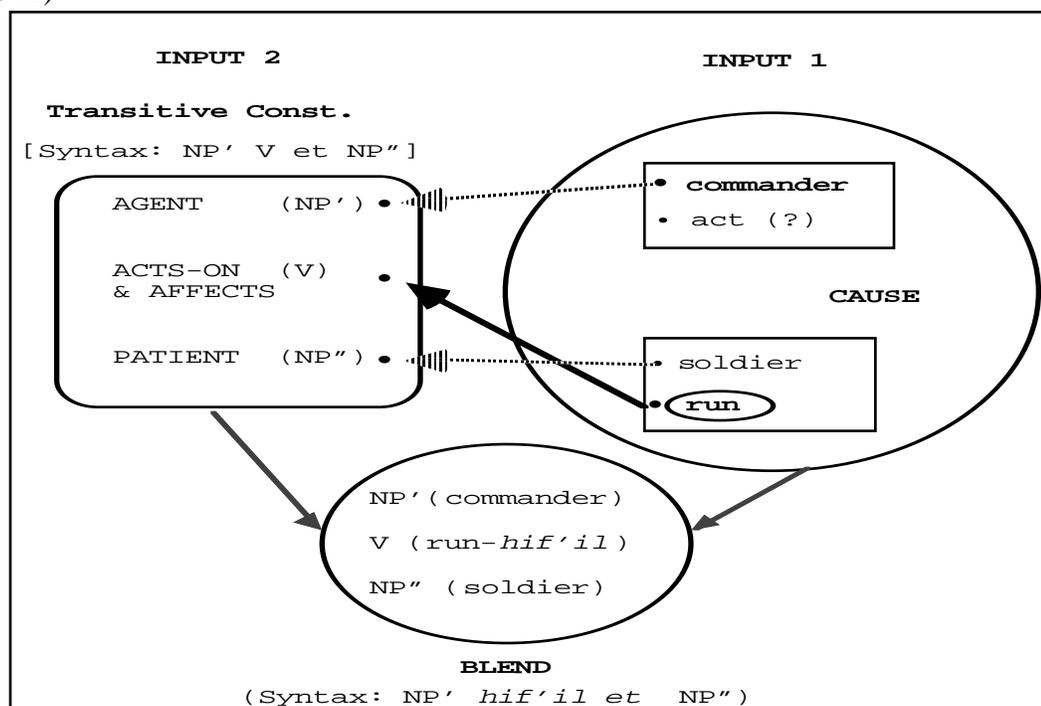
The use of *hif'il* and *huf'al* is exemplified in sentences 13a-13b below. Figure 6-3 compares the blending operations underlying the generation of sentences 13a-13b (Figure

6-3-A being the same as Figure 4-2 in chapter 4). The mapping of *predicates* between Input 1 and Input 2 in Figures 6-3-A and 6-3-B is the same, but the two figures differ in the mapping of *participants* onto the first NP (subject) position. The root semantics of the verb in the blend in both figures reflects the *effected* predicate in the communicated causal sequence (i.e., `running'), while the *causing* event is left implicit.

(13)   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.   *haxayal*   *hurac (r.u.c-huf'al)*   the-soldier
         run-*huf'al*_{past}   `The soldier was made to run'.

The conceived event in the world in (13b) is a causal sequence (just like in 13a): someone acts and thereby causes the soldier to run. In contrast to (13a) however, where the speaker focuses on the agent and its causal activity, in (13b) the speaker focuses on the event the *affected entity* is undergoing. This motivates the blending of the conceived causal sequence with the Intransitive construction (whose associated semantics, I suggested, is one of a theme undergoing an event or change of state). The affected entity (the soldier) in the causal sequence is mapped onto the theme role in the integrating syntactic construction, and what is mapped onto the verbal slot is the *effected* predicate of running. In the blend (the sentence communicated in the language), the syntactic pattern communicates a generic event structure of an entity (the 'theme') undergoing some act or change of state; the lexical information reports that the conceived event involves a 'soldier running'; the *binyan* (*hif'il*) denotes hat the event of 'the soldier running' is in fact part of a larger causal sequence of events, where 'running' is the effected (or resulting) activity. Thus, the *binyan* triggers an interpretation of the sentence as involving a whole causal sequence, whereby the activity communicated in the verbal root (running) is only one sub-event in a casual sequence.

(6-3-A)

```
            INPUT 2                          INPUT 1

       Transitive Const.

     [Syntax: NP' V et NP"]

            AGENT      (NP')              • commander
                                         • act (?)

            ACTS-ON  (V)                          CAUSE
            & AFFECTS

            PATIENT   (NP")             • soldier
                                          run


                        NP'(commander)
                        V (run-hif'il)
                        NP" (soldier)

                              BLEND
                     (Syntax: NP' hif'il et  NP")
```

(6-3-B)

```
            INPUT 2                          INPUT 1

       Intransitive Const.

         (Syntax: NP' V)

            THEME      (NP')              • agent (?)
                                         • act (?)

            UNDERGOING                          CAUSE
            EVENT     (V)
                                         • soldier
                                           run


                        NP'(soldier)
                        V (run-huf'il )

                              BLEND
                       (Syntax: NP' huf'al )
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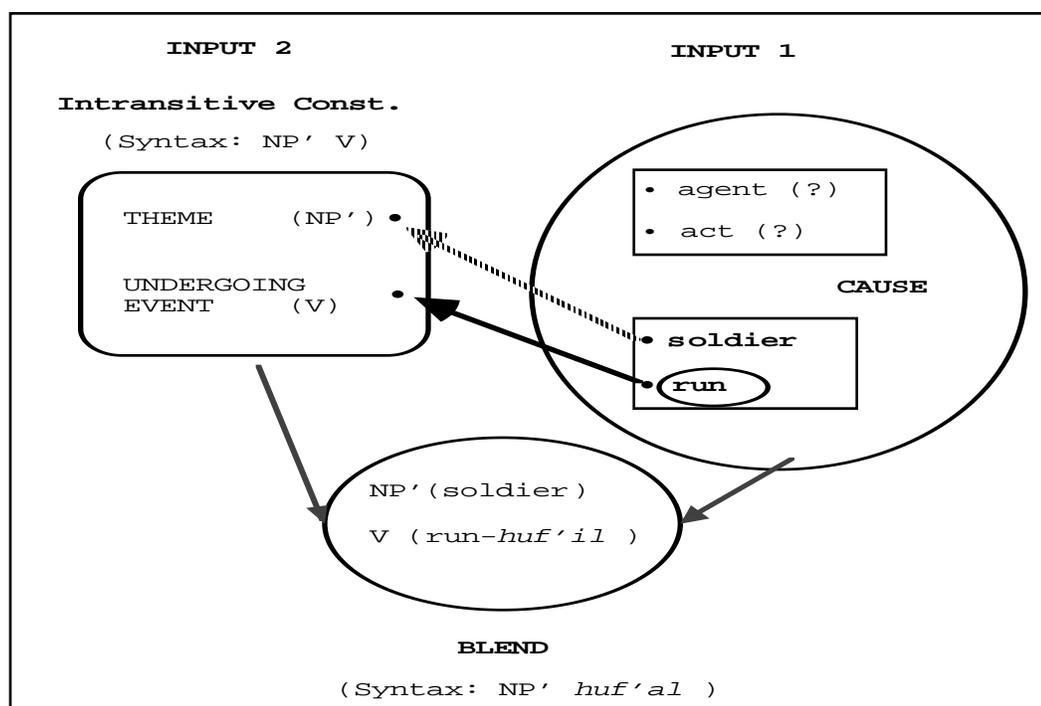
Figure 6-3: Comparing the blending operations underlying the generation of *hif'il* and *huf'al* sentences.
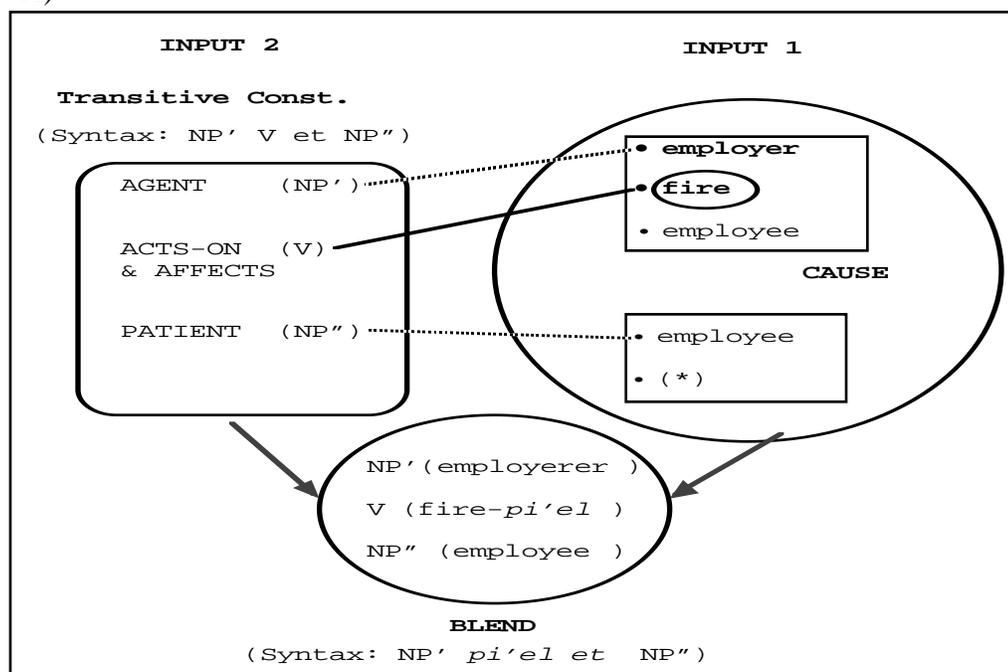
Now consider the *pi'el* and *pu'al* stems. The use of these two stems is exemplified in sentences 14a-14b. Figure 6-4 compares the blending operations involved in the generation of both sentences.

(14)   a.   *hama'asik*   *piter(p.t.r-pi'el)*   *et*   *ha'oved.*
                  the-employer   fire$_{past}$ ACC   the-employee.

                  `the employer fired the employee'

      b.   *ha'oved*   *putar(p.t.r-pu'al)* .
                  the-employee   fire-PASS$_{past}$

                  `the employee was fired'

The mapping of *predicates* between Input 1 and Input 2 in Figures 6-4-A and 6-4-B is the same, but the two figures differ in the mapping of *participants* onto the first NP (subject) position (just as in Figures 6-3-A and 6-3-B). The root semantics of the verb in the blend in both Figures 6-4-A and 6-4-B reflects the *causing* predicate in the causal sequence of firing, while the *effected* predicate associated with the event of `firing' (i.e., being *unemployed*) is left implicit.

Compare sentences 13b and 14b: both sentences denote an event whereby an entity (the soldier/employee) is undergoing some event, but while in sentence 13b the *root* (*r.u.c-* `run') denotes the actual activity of the theme, in sentences 14b the root (*p.t.r-'fire'*) denotes an event which was initiated by another participant. The difference in the interpretation of sentences 13 and 14 (which are syntactically the same and which refer to the same generic event structure) is reflected in (and triggered by) the different *binyanim* and is clearly illustrated in the blending configurations in Figures 6-3-B and 6-4-B: in 6-3-B the subject and verbal root are both mapped from within the same sub-event, while in 6-4-B they are mapped from different sub-events with different participants.
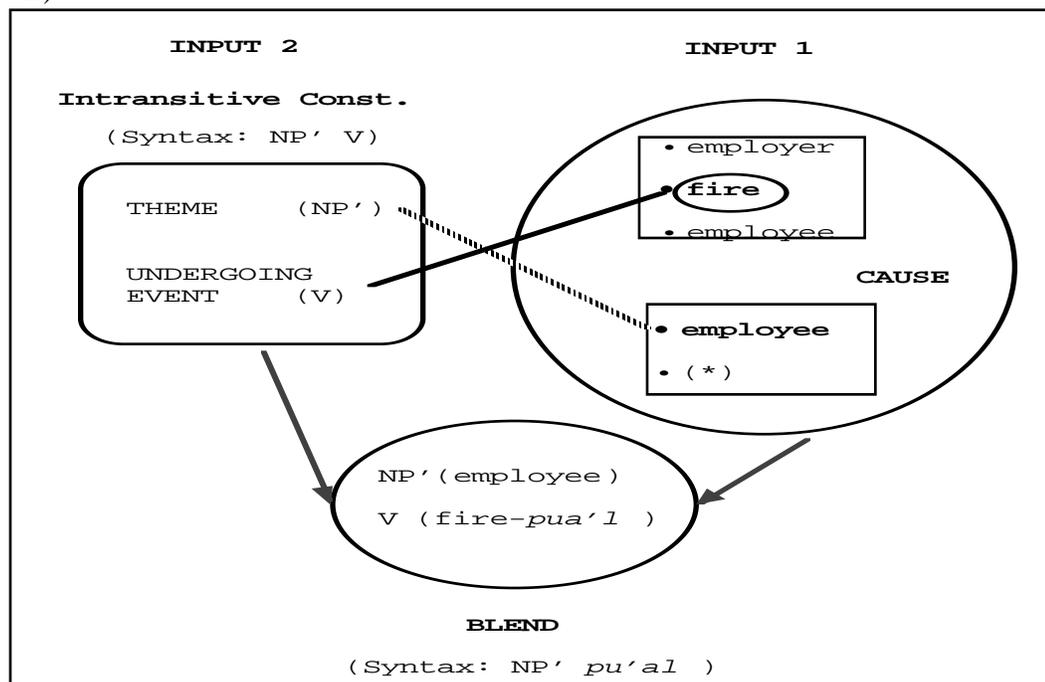
(6-4-A)

INPUT 2   **INPUT 1**

Transitive Const.

(Syntax: NP' V et NP")

AGENT   (NP')   • **employer**

                          • **fire**

ACTS-ON   (V)   • employee
& AFFECTS
                                         CAUSE

PATIENT   (NP")   • employee

                          • (*)

NP'(employerer)

V (fire-*pi'el*)

NP" (employee)

BLEND

(Syntax: NP' *pi'el et* NP")

(6-4-B)

INPUT 2   **INPUT 1**

Intransitive Const.

(Syntax: NP' V)

THEME   (NP')   • employer

                          • **fire**

UNDERGOING   • employee
EVENT   (V)
                                         CAUSE

                          • **employee**

                          • (*)

NP'(employee)

V (fire-*pua'l*)

BLEND

(Syntax: NP' *pu'al*)

Figure 6-4: Comparing the blending operations underlying the generation of *pi'el* and *pu'al* sentences.

6.3 Blending analysis of *nif'al*

In contrast to *huf'al* and *pu'al* which are traditionally associated with only one regular semantic/grammatical function (the passive voice), the stem *nif'al* (niCCaC) is associated with two major grammatical functions: *passive* for many transitive *pa'al*, and *middle* for quite a number of transitive *pa'al* (both are still semi-productively coined). In addition *nif'al* is associated with several other, less frequent voice categories: *inchoative* (i.e. `enter a state of...') for a few *pa'al* verbs, *reciprocal* for a few *pa'al*, and (rarely, not productively) *active-basic* (Berman, 1975; Glinert, 1989; Bolozky. 1996).

Note that all the grammatical voice functions traditionally associated with *nif'al* link the use of the *nif'al* stem to the *pa'al* stem (except for the `basic' function of *nif'al*, which applies only to a small number of roots and is not productive). Based on the assumption that co-occurrence of forms points to correspondence in conceptual structure and/or construal, I propose that *nif'al* is associated with a *blending schema* similar to that of *pa'al*, and similarly involves the construal of the event depicted by the root as *autonomous* (i.e., as a "stand-alone" event). The only difference between the mapping schemas of *pa'al* and *nif'al* is again in the mapping of *participants* from the conceived event onto the integrating construction. While in *pa'al* sentences, the causal agent is mapped onto the subject role of the integrating construction, in *nif'al* sentences it is the affected entity that is mapped onto the subject role.

In section 5.2, when discussing the *pa'al* stem, I suggested that there are in fact *two* possible characterizations for the blending operations underlying the use of transitive *pa'al* sentences (denoting an *autonomous* event in the world). The two characterizations differ in whether the underlying conceptualization of the event is of a causal sequence of events (with the integration taking place at the *linguistic* level only), or whether the transitive event is conceived as an integrated single-predicate event. A similar double characterization is thus required for the *nif'al* stem. Figure 6-5 characterizes the two alternative blending

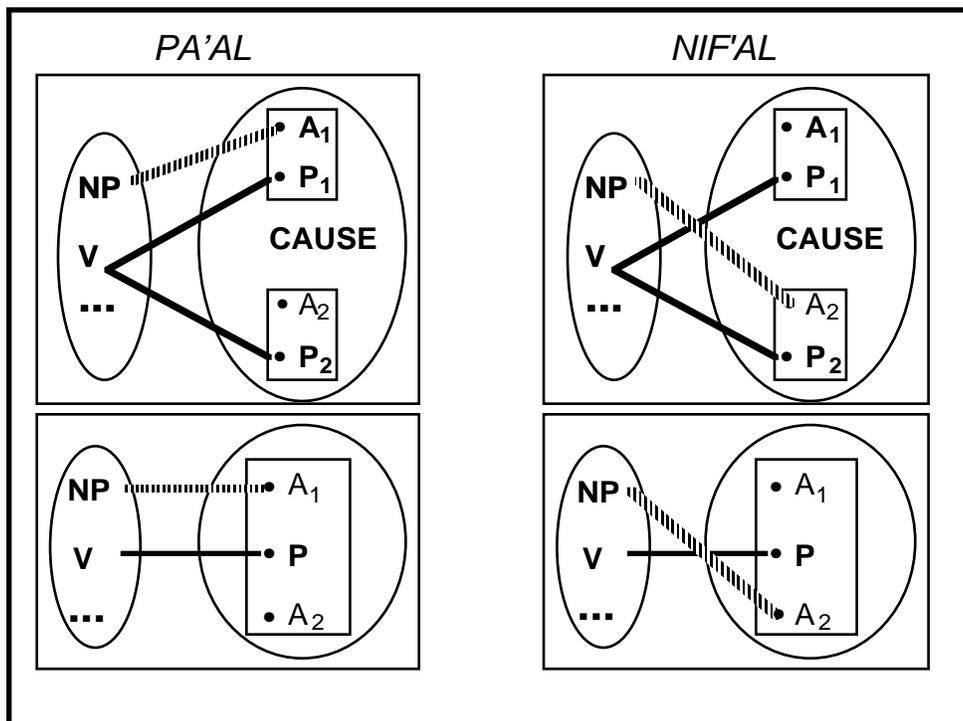schemas associated with each of the stems *pa'al* and *nif'al*.

Figure 6-5: Two alternative blending characterizations for *pa'al* and *nif'al*.

The two prominent grammatical functions associated with *nif'al* (the `passive' and `middle' voice) reflect, I suggest, two pragmatic elaborations on the single generic blending schema associated with the *binyan* (defined in Figure 6-5). In other words, from the grammatical blending point of view, *nif'al* (in its most productive use) is associated with only one grammatical function, just like the stems *pu'al* and *huf'al*.

Consider, for example, the following triplets of active *pa'al,* passive *nif'al*, and middle *nif'al* sentences in 16-17:

(16)   a.   *raxel*   *shavra(sh.b.r-pa'al)*   *et*   *hakos*   *etmol* .   **(active)**
                   Rachel   break-*pa'al* $_{past}$ ACC   the-glass   yesterday

                   `Rachel **broke** the glass yesterday'

	b.	*hakos* *nishbera(sh.b.r-nif'al)* *etmol.*	**(passive)**

          the-glass break-*nif'al* $_{past}$ yesterday

          `The glass **was broken** yesterday'

    c.   *hakos*   *nishebera(sh.b.r-nif'al)*   *bekalut*   **(middle)**

          the-glass break-*nif'al* $_{past}$ easily

          `The glass **broke** easily'

(17)   a.   *raxel*   *maxra(m.k.r-pa'al) et*   *hasefer*   *etmol*   **(active)**

          Rachel sell-*pa'al*$_{past}$ ACC   the-book   yesterday

          `Rachel **sold** the book yesterday'

    b.   *hasefer*   *nimkar(m.k.r-nif'al)*   *etmol.*   **(passive)**

          the-book sell-*nif'al*$_{past}$ yesterday

          `The book **was sold** yesterday'

    c.   *hasefer*   *nimkar(m.k.r-nif'al)*   *heytev.*   **(middle)**

          the-book sell-*nif'al*$_{past}$ well

          `The book **sold** well'

In (16a) and (17a), the *pa'al* pattern indicates the integration of a whole causal sequence into the semantics of the verbal root (an integration of a physical cause and effect on a patient in 16, and a 'transfer' causation of a patient to a recipient in 17). The passive sentences (16b and 17b) differ from the active sentences (16a and 17a) in the mapping of particpants onto the first NP (subject) slot of the integrating construction: in the active sentences, it is the causal agent that is mapped onto the subject slot, while in the passive sentences, it is the affected patient that is mapped onto the subject slot. Figure 6-6 compares the blending operations underlying the generation of sentences (16a) and (16b)[6].

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[6] Figure 6-6 represents one possible characterization of the blending operation in sentences 16a and 16b. The characterization starts with a conceptualization of the event as a *causal sequence of events* (Rachel acts on the glass thereby causing the glass to be in a new state, i.e., 'divided into pieces', from the Webster Dictionary definition of 'break'). The integration of the observed sequence of events in Figure 6-6 takes place at the *linguistic* level, with the sequence of predicates integrated and represented in the blend by a single verbal root -- *sh.b.r* -'break'. Another representation of the blending operation is also possible, where the event is *conceived* as an integrated single-predicate event (see Figure 6-5).
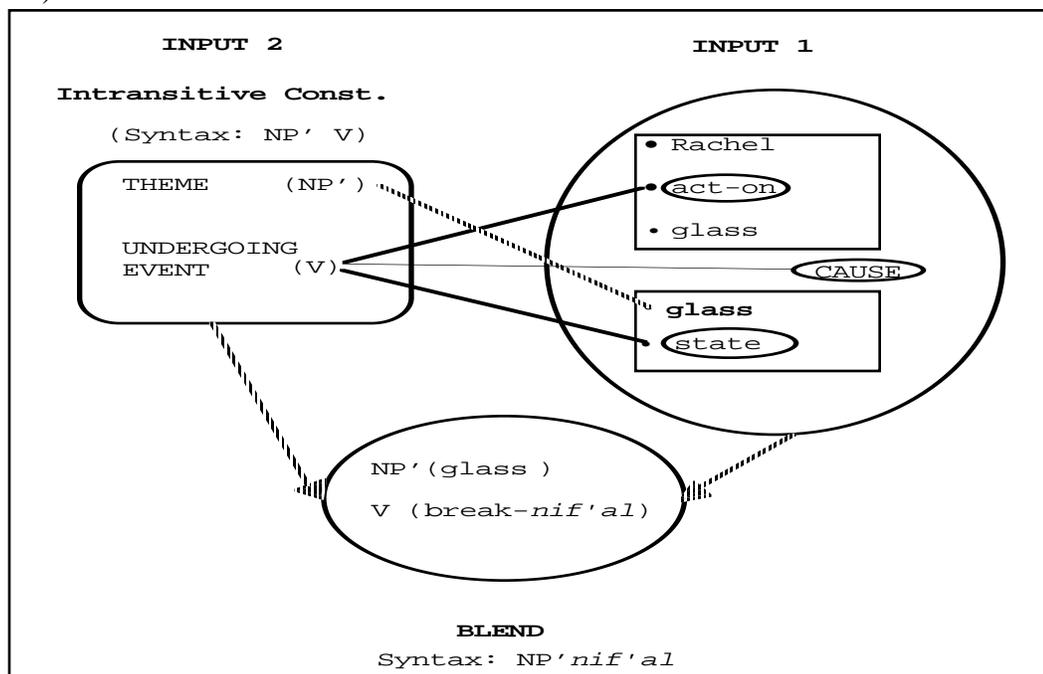
(6-6-A)

INPUT 2

INPUT 1

Transitive Const.

(Syntax: NP′ V et NP″)

AGENT   (NP′)

ACTS-ON   (V)
& AFFECTS

PATIENT   (NP″)

• **Rachel**

• act-on

• glass

CAUSE

• **glass**

state

NP′(Rachel)

V (break-*pa'al*)

NP″ (glass)

BLEND

Syntax: NP′ *pa'al et* NP″

(6-6-B)

INPUT 2

INPUT 1

Intransitive Const.

(Syntax: NP′ V)

THEME   (NP′)

UNDERGOING
EVENT   (V)

• Rachel

• act-on

• glass

CAUSE

glass

state

NP′(glass)

V (break-*nif'al*)

BLEND

Syntax: NP′*nif'al*

Figure 6-6: Comparing the blending operations underlying the generation of *pa'al* and *nif'al* sentences.

Note that the blending configuration underlying the middle *nif'al* sentences (16c and 17c) is exactly the same as the one underlying the passive sentences (16b and 17b, illustrated in Figure 6-6-B): a causal event sequence is integrated into the Intransitive construction (whose generic semantics is of a theme undergoing an event); In the blend, the subject-theme denotes the affected entity in the conceived causal event (the glass, in 16b-c), and the verbal root denotes the causal sequence of predicates ('breaking', in 16-c).

The only difference between the `passive' and `middle' sentences in 16b-c and 17b-c lies, I suggest, in the *implicit* profiling of the *causal agent* in the conceived macro-event: In the passive sentences (16b and 17b), the causal agent of the event is implicitly understood to exist and be an inherent part of the event depicted by the root (that is, the passive voice indicates that another participant, a causal agent which is not profiled linguistically, necessarily initiated the event which the profiled participant, the subject-theme, is undergoing). For example, in 16b and 17b, it is clear without saying that it is due to some external causal force (not specified in the sentence) that 'broke' the glass or `sold' the book, that the glass was effectively being 'broken' and the book `sold'. This implicit understanding of a necessary existence of an agent is traditionally associated with *passive* sentences[7].

The middle reading of *nif'al*, in contrast to the passive reading, "downplays" the role of an external causal agent in the communicated event, and promotes instead a construal of the event as something that "just happened", probably due to *internal* forces (inherent properties) of the theme undergoing the event (as Bolozky, 1996:xii, notes: "typically the change-of-state [in middle/inchoative *nif'al*] happens on its own, i.e., involuntarily"). In

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[7] See, for example, Kemmer (1993:204) who defines the passive as "constituted by situations in which the chief participant is an affected, but not volitionally initiating entity, and in which a second, agentive, participant exists within the awareness of the speaker (whether expressed or not)".

sentences 16c and 17c, for example, we assume that the book 'sold well' and the glass broke easily' because of their *internal* (inherent) properties (e.g., the material the glass is made of is breakable, or the book sells well because its an interesting book).

However, though I suggest that middle *nif'al* sentences promote a reconstruction of the event communicated in the sentence as an event that "just happened", I also suggest that in *nif'al* middle sentence (in contrast to *hitpa'el* middle sentences, to be discussed in section 6.4), the speaker (and hearer) are still dimly aware of the role of an external causal force in brining about the event denoted by the verbal root: the book wouldn't sell and the glass wouldn't break without an agent *selling* or *breaking* it (examples 16c-17c).In fact, I suggest that the very use of the roots `to break' and `to sell' (which are associated with transitive `causative' semantics) promotes a reconstruction of a causative event as part of the interpretation of the sentence. The implicit existence of an agent in the conceptual representation of both the passive and the middle readings of *nif'al* is represented in Figure 6-6-B in the "presence" of a causal agent in Input 1, a causal agent which is *not* mapped onto the integrating construction (and therefore is not linguistically expressed).

To summarize, I suggest that a *single* blending schema is associated with the *nif'al* pattern. The passive and the middle readings of *nif'al* represent different conceptual elaborations on the schema defined by the stem (with regard to the role of an external causal force in the causative event) *beyond* the grammatical information (i.e., the blending schema) defined by the *nif'al* stem itself. In both the passive and the middle sentences, the only linguistically *profiled* participant is the affected entity in the causal sequence, but the reconstruction of the actual communicated event by the listener involves a reconstruction of an external causal agent as well - strongly so in the case of the passive reading, and very vaguely so in the case of the middle reading.

In various languages other than Hebrew, the two conceptualizations of the causal event associated with *nif'al* (the `passive' and `middle' ones) are marked differently in the grammar (e.g., note the very different grammatical verbal forms in the translation of the passive and middle *nif'al* sentences 16-17 above into English). The distinction in grammatical forms led Hebrew scholars to suggest that the Hebrew *nif'al* is grammatically ambiguous. But in fact, I suggest that within the Hebrew system of *binyanim*, the *nif'al* form is not ambiguous at all. It provides (like all other *binyanim*), a set of grammatical cues (the mapping schema), which can then be *elaborated* in different ways in the interpretation process (i.e., in the reconstruction of the communicated event)

Note that from the grammatical blending point of view, the two alternative reconstructions of *nif'al* (as either `passive' or `middle') are practically not any different from alternative reconstructions of the sense of the main verb in a caused-motion sentence in English (discussed in chapter 2) as linked to alternative sub-events in the conceived caused-motion macro-event. Both cases of "disambiguation" require the conceptual reconstruction of a possible event, beyond the cues explicitly provided by the grammatical form[8].

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[8] These two examples of "disambiguation" differ however in the "level" at which the ambiguity is resolved: in the English caused-motion sentences, the ambiguity of the verb is resolved at the level of *mapping* reconstruction (i.e., which aspects of the communicated event were mapped onto the integrating construction during sentence generation). In the Hebrew *nif'al* sentences, the ambiguity is not at the level of mapping configuration (since the linguistic mapping is the same in both the passive and middle readings of *nif'al*), but rather at the level of further pragmatic elaboration .

Compare these two levels of "disambiguation" to Brugman's (1996) distinction between *semantic* and *pragmatic ambiguity*. Brugman suggests that various apparently distinct meanings associated with the verb HAVE in different contexts result not from distinct senses of the verb ("semantic ambiguity"), but rather follow from different conceptual configurations ("pragmatic ambiguity") set up for each instance of the verb (in particular, cross-space mappings in the "mental spaces" sense of Fauconnier, 1985). Brugman suggests that the principles defining the meaning of the verb in each of the sentence she discusses exist at two levels: the first is the lexical level in which one of four senses of the polysemous lexeme HAVE is invoked, and the second is at a higher level of conceptual mental space construction.

As a final note, it is interesting to compare the use of *nif'al* in describing prototypical physical causative events (such as 'breaking', example 16), or social causative events (such as transfer of possession in 'selling', example 17), to non-causative transitive events such as events of perception and cognition, as in example 18:

(18)	a.	*raxel*	*ra?ata (r.?.h-pa'al)*	*et*	*Dani*	*basuper.*	**(active)**
		Rachel	see-*pa'al* $_{past}$	ACC	Danny	at-the-supermarket.	

`Rachel **saw** Danny at the supermarket.'

	b.	*dani*	*nir?a (r.?.h-nif'al)*	*basuper.*	**(passive)**
		Danny	see-*nif'al* $_{past}$	at-the-supermarket.	

`Danny **was seen** at the supermarket.

	c.	*dani*	*nir?a (r.?.h-nif'al)*	*mesahge'a/nexmad*	**(middle)**
		Danny	see-*nif'al* $_{past}$	gorgeous/nice	

`Danny **looked/seemed** gorgeous/nice'

In section 5.2, when discussing the *pa'al* stem, I mentioned various scholars who suggest that experiencers and stimuli of perception events are metaphorically construed as agents and patients (and expressed as such in the language, cf. Givón, 1984). Interestingly, we find the same conceptual ambiguity between passive and middle readings of *nif'al* verbs of prototypical transitive roots (see discussion above with regard to sentences 16b-c and 17b-c) in *nif'al* verbs of perception and cognition roots (18b-c). In the passive *nif'al* sentence 18b, an external agent is implicitly understood to exist (e.g., it is due to some unspecified agent that `saw' Danny, that the event of Danny being `seen' in the supermarket could actually happened). The middle reading (sentence 18c), in contrast, promotes a construal of the event as something that "just happened", probably due to *internal* forces (inherent properties) of the theme undergoing the event (Danny looks gorgeous or seems to be nice because this is just the way he is). However, I suggested

before (when analyzing sentences 16-17) that the speaker (and hearer) of middle *nif'al* sentences are also aware of the role of an implicit *external* force (a causal agent). This observation seems to apply to example 18c as well: Danny would not be considered (*seem* or *look*) gorgeous or nice, without someone *looking* at him (perceiving his beauty and character).

The analysis of *nif'al* in this section locates the middle use of *nif'al* closer to its passive use (in comaprison to traditional accounts which list them as two separate independent functions of the stem). The passive and middle construal functions lie in the blending account on a conceptual continuum associated with the characterization of the causal force, a continuum similar to the one proposed by Kemmer (1993). In Kemmer's cross-linguistic study, the passive is related to middle spontaneous actions or processes "in terms of the affectedness of the chief participant and the low-to-vanishing saliency of any participant that might be conceived as the originator of the event" (p.205). Kemmer also suggests that "the passive is midway between a two- and a one-participant event in the sense that like the prototypical transitive event, it has two participants, but like the intransitive, the event is treated as having only one salient entity, which is brought into grammatical focus" (p.205). In the blending analysis provided in this chapter, the "one-participant character" of passive sentences is reflected in the integrating Intransitive construction (Input 2) and its associated one-participant event schema; the "two-participant character" of the passive sentences is reflected in the underlying conceptual representation (Input 1) of the causal event sequence (minimally involving a causal agent and an affected patient).

6.4 Blending analysis of *hitpa'el*

The fourth intransitive-only stem in the Hebrew verbal system is *hitpa'el* (hitCaCeC).

Following are some examples of *hitpa'el* verbs, and their translation into English (from

Bolozky 1996)[9]:

(20)	a. *hitgaleax* (g.l.x)	==	`shave(intr.)'
	b. *hit?aper* (?.p.r)	==	`make up oneself '
	c. *histarek* (s.r.k)	==	`comb one's hair'
	d. *hitpater* (p.t.r)	==	`resign' (intr.)
	e. *hit'orer* (`.u.r)	==	`wake up' (intr.)
	f. *hishtage'a* (sh.g.')	==	`become / get crazy'
	g. *hitparec* (p.r.c)	==	`burst out' (also used metaphorically)
	h. *hizdaken (z.k.n)*	==	`get old / grow old'
	i. *hit?ahev* (?.h.v)	==	`fall in love'

The stem *hitpa'el*, like *nif'al*, is traditionally associated with more than one

grammatical/semantic function, the major functions being *reflexive, middle, inchoative,* and

reciprocal. Hebrew grammarians differ as to which function/s they view as the major or

most frequent function of the *binyan* (and in particular, they differ in the association of a

grammatical function to a particular *hitpa'el*-root combination in the lexicon). Waltke and

O'Connor (1990:429) suggest that *hitpa'el* (in Biblical Hebrew), is used primarily as

double-status (reflexive/reciprocal). Berman, in contrast, identifies the *middle* voice as the

principal function of *hitpa'el* (Berman, 1975), and as the "intransitive reflex of *pi'el*"

(Berman, 1978). Bolozky (1996) associates *hitpa'el* mainly with *change-of-state inchoative*

function, as well as *reflexive*, and few *reciprocals.* Productivity tests with adult speakers

suggest that Hebrew speakers conceive the *hitpa'el* mainly as a productive way to express

reflexivity: Bolozky (1978) reports a preference of almost 100% to use *hitpa'el* as

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[9] A phonological rule in the use of *hitpa'el* is that if the root begins with a sibilant, then the *t* and the sibilant metathesize, i.e., the pattern becomes hiCtaCeC (as in examples 20c, 20f, 20h, and 20i).

inchoative or as reflexive. The *hitpa'el* stem is also the second productive stem (after *pi'el*) in new verb coinage in standard and colloquial Israeli Hebrew[10] .

I suggest that *hitpa'el*, like *nif'al*, marks in fact a *single* schema of conceptual blending from the generic causative event schema to the integrating Intransitive syntactic construction, with the different "grammatical functions" associated with the stem corresponding to different conceptual elaborations on the basic blending schema. The basic blending schema of *hitpa'el* involves, I suggest, the mapping of *both the causal agent and the affected entity* onto the subject slot of the integrating construction, when the two are also conceived as two different aspects of the same entity. Figure 6-7 characterizes the blending schema associated with the stem *hitpa'el* (a dotted line connecting the causal force and affected entity marks their conceptualization as part of the same entity).

Figure 6-7: The blending schema of *hitpa'el*.

The characterization of *hitpa'el* in Figure 6-7 is in line with the traditional

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[10] Sivan (1964) collected 955 new verb forms in Israeli newspapers, and found they are divided into *binyanim* as follows: about 30% of the verbs were in *pi'el*, 28% in *hitpa'el*, 14% in *hif'il*, 11% in *pu'al*, 6% in *huf'al*, 5% in *pa'al*, and 5% in *nif'al* (see also Bolozky, 1986). The productivity of *hitpa'el* to express reflexivity seems to decrease however in Israeli Hebrew: Berman (1978) reports a tendency in colloquial Hebrew to replace the *hitpa'el* by a pronominal reflexive·

characterization of *hitpa'el* as primarily denoting `reflexivity', and the definition of `reflexivity' in the literature. For example, in the Dictionary of Linguistics and Phonetics (Crystal 1991:284), reflexivity is defined as a grammatical term for referring to "a verb or construction where the subject and the object relate to the same entity". In the case of Hebrew *hitpa'el* sentences, there is no explicit object in the linguistic expression, but the *binyan* triggers a reconstruction of a causal event sequence (Input 1) where the causal agent and the affected entity are (or are part of) the same entity.

Berman (1978) notes that the *hitpa'el* reflexive in Hebrew can be characterized as "a paraphrase of a *causative* construction where the agent and the goal refer to the same individual". The blending characterization of *hitpa'el* (Figure 6-7) also starts with a conceptual structure (Input 1) of a *causal* event sequence (the "generic causative schema"). Though the actual event in the world involves only one-participant, its *conceptualization* (Input 1) is like an event involving two participants. The two "participants" may be either two physical parts of the same entity, or "external" and "internal" aspects of an entity (see discussion below). Kemmer (1993:204) also suggests that "the reflexive is like a two-participant event in that the participants are distinguished from one another - either because the event they express normally involves two distinct entities, or, in the case of events which normally involve one, because two distinguishable aspects of an individual are made reference to".

Consider, for example, the following *pi'el* and *hitpa'el* pair of sentences (21-22):

(21)   *Hasapar   gileax (g.l.x) et   Dani*
        The-barber shave-*pi'el*$_{past}$ ACC   Danny

        `The barber shaved Danny'.

(22)   *Dani   hitagleax (g.l.x)*
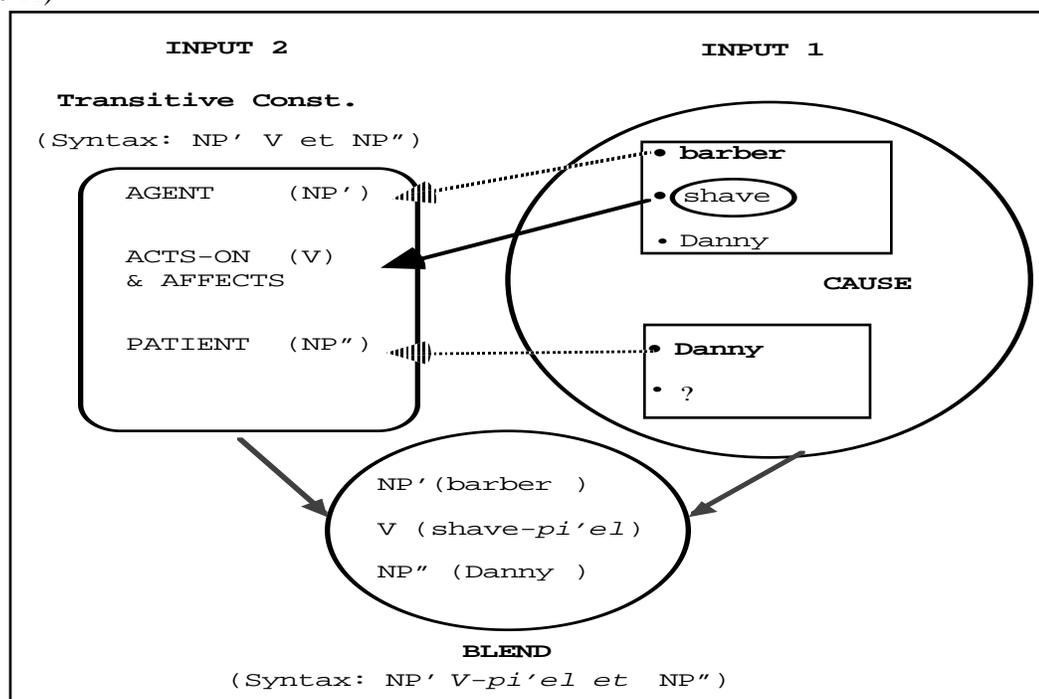   Danny   shave-*hitpa'el*$_{past.}$

        `Danny shaved'.

A causal sequence of events is communicated in both sentences (21-22). The causal

sequence in both involves a *causing* event (in which the causal agent acts on a patient - shaving), and an implied resulting event (e.g., the patient's skin being smooth). The sequence of events in sentence 21 is integrated into the Basic Transitive construction, while in 22 it is integrated into the Intransitive construction. The root of the verb in both sentences (*g.l.x* - 'shave') denotes the *causing* predicate, while the effected predicate is left unspecified. As predicted by the analysis in chapter 5, the *binyan* of the main verb in the transitive sentence 21 is *pi'el*. (*pi'el* is proposed to mark the mapping of a causing predicate into the verbal slot of the integrating construction).

In example 21, the agent (the barber) and the patient (Danny) are construed as two distinct entities. In example 22, the agent and the patient are construed as part of the same entity (Danny), but as *distinguished aspects* (cf. Kemmer, 1993) within this entity (in 22, a prototype is imposed of Danny's hand as the causal agent, and Danny's face as the patient)[11]. Figure 6-8 compares the blending operations involved in the generation of sentence 21 (Figure 6-8-A) and 22 (Figure 6-8-B).

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[11] A prototypical meaning is associated with the *hitpa'el* form *hitgaleax* that it is *the hand* shaving *the face*. Thus, for example, to use form *hitgaleax* to refer to a man shaving his chest would sound odd (though perfectly grammatical). In the latter case, it is more common to integrate the conceived reflexive causal event into the *Transitive* construction (as in 21), profiling the "non-common" affected part as well, while using the stem *pi'el* (rather than *hitpa'el*) with the reflexive pronoun *acmo* - `himself'. Junger 1987:88 makes the point that though reflexivity in Hebrew can be expressed both morphologically and by means of a reflexive pronoun, the pronominal form is used only when no reflexive *hitpa'el* form exists in the lexicon. The 'shaving' example mentioned here suggests that the pronominal form is also used as a semantically marked form - when either the causal force or the affected entity is unexpected (as another example, if it is always the barber that is shaving Danny, it is possible to use the pronominal form, rather than the morphological form, to communicate an unusual event in which Danny shaved himself).
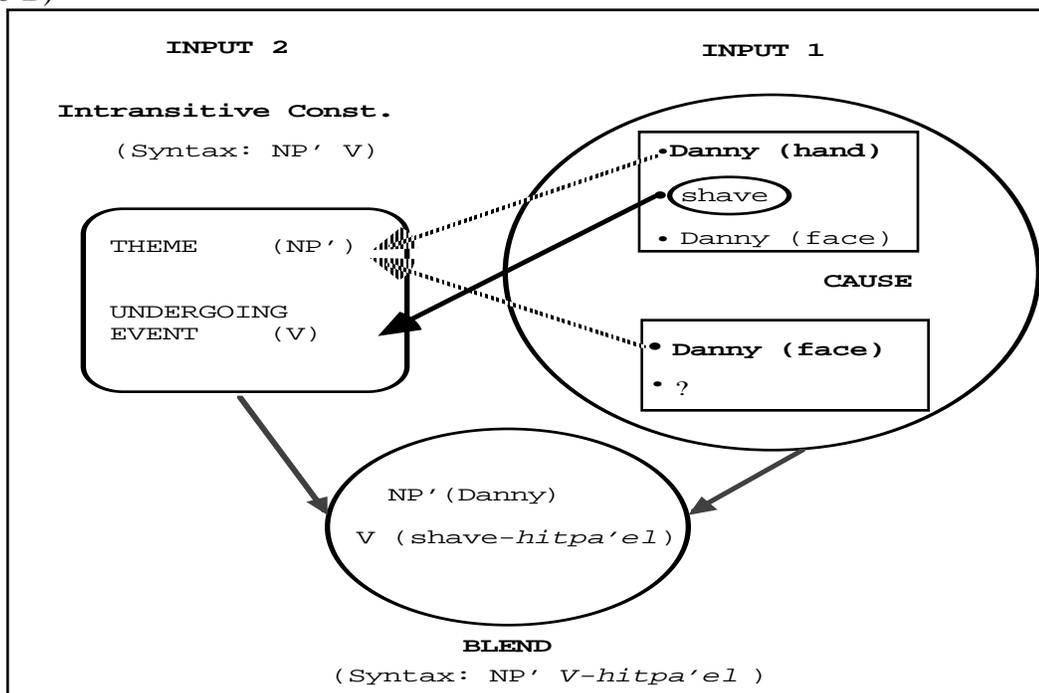
(6-8-A)

(6-8-B)

Figure 6-8: Comparing the blending operations underlying in the generation of *pi'el* and *hitpa'el* sentences.

Note a striking parallelism between the blending characterization of *pa'al* and *hitpa'el*: the integration in the *pa'al* blending schema of *both* the *causing* and the *effected predicates* from the conceived event onto a single *verbal* slot in the integrating construction (Figure 6-9-A below) can be equated with the integration in the *hitpa'el* blending schema of *both* the *causing* and the *affected participants* from the conceived event into a single *nominal* slot in the integrating construction (Figure 6-9-B). And, just as it was suggested (in section 5.2) that transitive *pa'al* verbs can be equated with *lexical causative* verbs in English (in both the lexical root represents what is conceived at one level as a single integrated predicate and at another level, when "zooming" into the semantics of the root, as a complex set of predicates), so does the subject NP of a reflexive *hitpa'el* verb represents what is conceived at one level as a single integrated entity (e.g., 'Danny' in example 22) and at another level as a complex set of entities (e.g., Danny's hand acting on Danny's face in example 22).
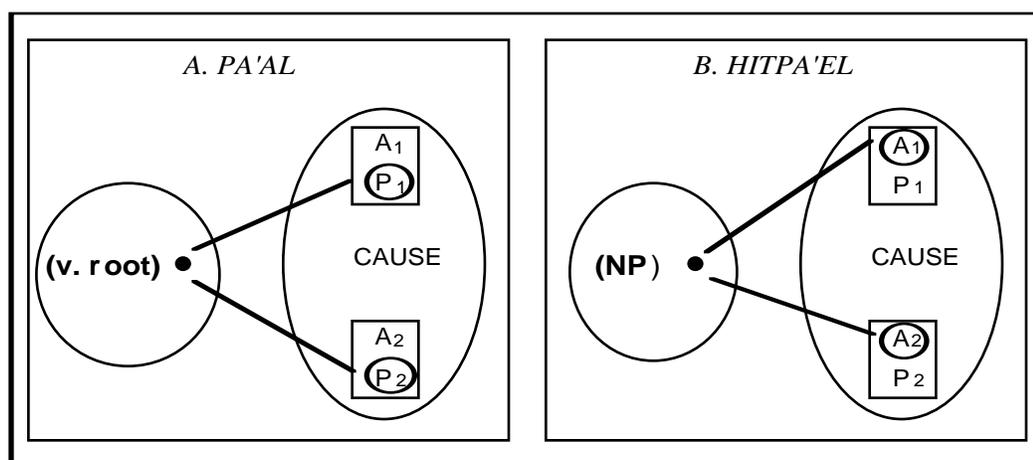

Figure 6-9: Comparing the blending schemas of *pa'al* and *hitpa'el*.

The parallelism noted between the blending schemas of *pa'al* and *hitpa'el* with respect to the mapping of predicates and participants defines a general systematic pattern in the blending schemas associated with the *binyanim* system as a whole: each *binyan* is a function of one of three patterns of predicate mapping and parallel three patterns of participant mapping , as will be discussed in chapter 7 (summarizing the *binyanim* system).

6.4.1 The 'reflexive' vs. the 'middle' functions of *hitpa'el*

In section 6.3, I discussed the different event reconstructions associated with the passive and middle readings of *nif'al*. I suggested that the two readings differ in their reconstruction of an external causal force in the event denoted by the root. In both readings the existence of an external causal force can only be implied, but the `middle' reading strongly "downplays" the role of an implicit agent, and promotes instead the role of *internal* (inherent) properties to the theme (the affected entity) as the causer for the (communicated) event.

In this section, I similarly suggest that the *reflexive* and *middle-inchoative* voices associated with *hitpa'el* are different conceptual elaborations on the same blending configuration (defined in Figure 6-7). While *hitpa'el* marks that the causal force and the affected entity in the conceived event are part of the same larger entity, I suggest that the *reflexive* reading promotes a conception of the implicit causal force as *physically separate* from the affected entity, while the *middle-inchoative* reading promotes a conception of the implicit causal force as an *internal* aspect of the affected entity. The *middle hitpa'el* and the *middle nif'al* differ, I propose, in that the middle *nif'al* suggests the existence of an *external* causal force *in addition to* the causality attributed to the internal properties of the affected entity. In the *hitpa'el* case no such external force (distinct from the affected entity) is implied.

To see the distinction between the reflexive and middle readings of *hitpa'el*, consider the following prototypical reflexive *hitpa'el* verbs (i.e., verbs which Hebrew grammarians all define as reflexive, cf. Berman, 1978:86, and Bolozky, 1996:xiii)[12].

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[12] Note that in other languages, grooming verbs such as the ones in examples (21a-d) are sometimes marked with (what is considered to be) a *middle* marker rather than a reflexive one, as in the case of the Dutch *zich* used with grooming verbs and proposed (by Kemmer, 1993) to mark the middle voice (vs. the `reflexive' *zichself*). But see also Van Everbroek's proposal (unpublished ms.) and his quotation of Faltz (1985:129) suggesting to "leave it open whether *zich* should be considered a middle strategy with pronominal reflexive syntax, or a pronominal reflexive with extended application to some middle contexts".

(21)   a. *hitgaleax* (g.l.x)   ==   `shave' (intr.)

        b. *hit?aper* (?.p.r)   ==   `make up oneself '

        c. *histarek* (s.r.k)   ==   `comb one's hair'

        d. *hitlabesh* (l.b.sh)   ==   `dress oneself', `get dressed'

In all the examples in 21 (defined as `grooming' verbs by Kemmer, 1993), we can physically differentiate the `hand' as the causal agent affecting another physical part of the body (the cheeks 'being shaved', the face `being made up', the hair `being combed', etc.).

In contrast to examples (21a-d), the *hitpa'el* examples (22a-e) are considered middle-inchoative:

(22)   a. *hit'orer* (`.u.r)    ==    `wake up' (intr.)

        b. *hishtage'a* (sh.g.')   ==   `become/get crazy'

        d. *hizdaken* *(z.k.n)*   ==   `get old/ grow old'

        c. *hitparec* (p.r.c)   ==   `burst out' (also used metaphorically)

        e. *hitpocec* (p.c.c)   ==   'explode' (intr.)

In all the scenarios communicated in (22), it is impossible to physically differentiate the causing and the affected aspects of the entity undergoing the event, and while in many cases it is not clear at all what is the causal force that brings about the observed effect (change of state), people tend to impose internal forces (e.g., biological/mental forces in humans, or physical properties inherent to materials) as the causal force "behind" observed events such growing old, waking up, exploding, etc[13].

Compare now middle *nif'al* verbs, such as *nimkar* - 'sell' (intr.), *nishbar* - 'break' (intr.), and *niftax* - 'open (intr.)', to middle *hitpa'el* verbs such as *hit'orer* - `wake up', *hitparec* - 'burst out', and *hit?ahev* - `fall in love'. The prototypical scenario associated with all the middle *nif'al* verbs involves an external force that brings about the event denoted by the root though this external force is left implicit (e.g., something would not sell, break, or open, without some external force causing the event to happen). In middle *hitpa'el* verbs,

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[13] Philosophers such as Hume and Kant have discussed in their writings the apparent human tendency to attribute causality to almost any observed event.

in contrast, no external force is implied (aside from internal, physical properties of the entity undergoing the event).[14].

Two comments should be made at this point about the analysis of *nif'al* and *hitpa'el* :

(1) Clearly, the distinction between the passive and middle readings of *nif'al,* and the reflexive and middle readings of *hitpa'el* are not binary oppositions, but rather lie on a conceptual continuum. Each reading (or construal) defines a "radial category" (in the sense of Lakoff 1987; see also the use of the term in Kemmer's discussion of middle type situations, 1993) with the most prototypical examples in the center, and less prototypical cases at the peripherals. The peripheries of the two radial categories overlap to a large extent (a fact which also explains why different scholars often assign different voice categories to the same lexical verb). We would also expect to find cases where two very similar interpretations will be associated with the same root in two different *binyanim* (as will be discussed in section 6.4.2).

(2) The analysis of *nif'al* and *hitpa'el* above refers only to the most frequent and productive usages of each *binyan*, and leaves out, for the time being, the other (less common) grammatical categories associated with each pattern. Further empirical work is needed to decide whether the less-frequent functions of each *binyan* (such as the reciprocal function) define a different blending (mapping) schema, or whether they can be associated with the same blending schemas defined in this chapter[15]. The analysis also leaves out

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[14] The hypothesis that the middle *hitpa'el* reading does not incorporate an external agent does not mean that no external force was involved in the observed event in the world (i.e., the event communicated by the *hitpa'el* sentence). It only means that the *linguistic* expression does not imply external force - i.e., the *hitpa'el* stays "neutral" with regard to the existence of external forces

[15] There is good likelihood that with further research the other functions of *hitpa'el* and *nif'al* could be identified as part of the same blending schema. For example, both *binyanim* are associated with *reciprocal* semantics (more frequently so in *hitpa'el* and rarely in *nif'al*). The reciprocal function has been often linked to the reflexive one. Kemmer (1993) identifies the reciprocal function as one extension in the radial category of *middle* situation types. These proposals suggest that there is a strong conceptual-semantic link between the passive, middle, reflexive and reciprocal grammatical functions across languages.

idiosyncrasies found in the Modern Hebrew lexicon, that do not conform to the more regular morphsemantic patterns of the Hebrew verbal system (for example, there is no directly observed motivation for the fact that *hityashev* - `sit down' is in *hitpa'el*, but the semantically very similar predicate *nishkav* - `lie down' is in *nif'al*). For a discussion of irregularities in the Modern Hebrew lexicon, see Berman (1987:88-90). As Berman notes, it is quite probable that many of these irregularities did not apply at some earlier stage of the Hebrew language[16].

The results of the rather brief blending analysis of *nif'al* and *hitpa'el* in this section are very much in line with some of Kemmer's (1993) findings in her study of cross-linguistic semantic links between middle situation types. For example, Kemmer suggests that the direct-reflexive situation (the "archetypal reflexive context") and body action middles (events in which a human being acts out on her own body), both discussed in this chapter with regard to the *hitpa'el* stem, are alternative ways of viewing particular types of events where "participants that essentially refer to the same entity are distinguished to different degrees" (p.207). Among the different alternative views she identifies, she also suggests that "[in the direct-reflexive case] greater separation is entailed by reference to purely physical aspects of an entity... in opposition to the conscious aspect of the individual [in the middle case]" (p.207). Kemmer also links the "passive" semantic category and the category of "spontaneous event situation types" (discussed in this chapter with regard to the *nif'al* stem), and suggests that the main difference between the two is that in the spontaneous process type, "there need be no causer identified as Agent... But, in principle, one could always imagine a natural or super-natural initiator of such event types" (p.208).

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[16] For example, the fact that *nif'al* was associated primarily with a reflexive function in Biblical Hebrew (Glinert, 1989; Siebesma, 1991) may explain modern idiosyncrasies such as *hityashev* - `sit down' and *nishkav* - `lie down' (n.m.).

The discussion in this chapter suggests a conceptual association between the `passive' and `middle' voice categories (as reflected in the analysis of the *nif'al* stem), and between the `reflexive' and `middle-inchoative' voice categories (as reflected in the analysis of the *hitpa'el* stem). Thus, the analysis also links conceptually the `reflexive' and `passive' schemas via the `middle-inchoative' one. The three conceptual schemas can be described as lying on a continuum [passive--middle/innovative--reflexive], a continuum similar to the one found as part of Kemmer's (1990:211) characterization of the radial category of middle situation types.

6.4.2 What the root of *hitpa'el* verbs denotes

In sections 6.2-6.3, I contrasted the use of the three intransitive stems *pu'al, huf'al*, and *nif'al* on the basis of which predicates in the causal event sequence the *root* of the verb depicts: it was suggested that the root of *pu'al* (and *pi'el*) verbs depicts the causing predicate within a causal sequence, *huf'al* (and *hif'il*) roots depict the effected predicate, and *nif'al* (and *pa'al*) roots depict an autonomous event (where the root semantics itself may integrate a whole causal sequence of predicates). In section 6.4, I contrasted the three "intransitive" patterns *pu'al, huf'al*, and *nif'al* with the *hitpa'el* pattern suggesting that *hitpa'el* differs from the former three in that it grammatically denotes that the causal force and the affected entity are physically the same entity and both are mapped onto the subject slot of the integrating construction. The question that still remains to be answered is which predicates in the causal event sequence the *root* of *hitpa'el* verbs profiles.

In all accounts of Hebrew *binyanim*, *hitpa'el* is primarily linked to the *pi'el* stem. The link between *hitpa'el* and *pi'el* is based both on the frequent co-occurrence of these two stems with the same consonantal roots, and on a morphological link: *hitpa'el* is formally derived from *pi'el* and a *t* prefix (Waltke and O'Connor, 1990:429). Following the blending analysis of *pi'el*, we would expect the root of the corresponding *hitpa'el* verbs to depict the *causing* predicate as well (but within a reflexive event structure). An example of

such a *pi'el -hitpa'el*: pair is given in sentences 21-22 in section 6.4.1 (the blending patterns of which are described in Figure 6-8).

In this section, I would like to briefly discuss the less frequent examples of *hitpa'el* verbs whose roots do not occur with *pi'el* forms in the standard Hebrew lexicon. These *hitpa'el* verbs typically denote a `middle' (rather than `reflexive') construal of the causal event sequence (i.e., one where the causal forces are "internal" to the affected entity). The roots of these *hitpa'el* verbs typically denote the *effected* predicate in a causal sequence, and co-occur in the lexicon with either an intransitive *hif'il* stem, and/or intransitive *pa'al* stem. In such cases, the sense of the *hitpa'el* verb is often indistinguishable from the corresponding intransitive *pa'al* or *hif'il* verbs (with the same root), a fact which is not surprising, given the blending account of these patterns, as will be discussed below.

Consider, for example, the use of the root *z.k.n* in (24) (translations into English are from Bolozky, 1996):

(24)   a.   *zaken* (adjective) - `old'

           b.   *zakan* (*pa'al*) - `grow old'

           c.   *hizdaken* (*hitpa'el*) - `grow old', `become old'

           d.   *hizkin* (*hif'il*) - `render old' (tr.), 'become old' (intr.)

To account for the very similar senses (and translations) of the intransitive *pa'al-hitpa'el* and *hif'il-hitpa'el* forms of *z.k.n*, we need to analyze first the blending (and construal) function of each intransitive stem. I will start with a discussion of the intransitive use of *pa'al*, and then discuss the intransitive use of *hif'il*.

I suggested in section 5.2, that the *pa'al* form construes the event denoted by the root as an *autonomous* event. With transitive *pa'al* verbs, communicating a *causal* sequence of events, the root of the *pa'al* verb integrates the whole causal sequence of predicates and represents it as a single autonomous predicate. In intransitive *pa'al* verbs, the root indicates a *non-causative* one-participant event (which again is represented as autonomous) as, for example, in motion verbs such as *halax* (h.l.k, *pa'al*) - `walk', or *rac* (r.u.c-*pa'al*) `run', or

in verbs describing bodily actions, as in *baxa* (b.k.h-*pa'al*) - `cry', or *caxak* (c.x.k-*pa'al*)-`laugh'. Since the *middle* reading of *hitpa'el* refers really to a *one-participant* event, where the causal force is internal to the participant (as discussed in the previous section), the *hitpa'el* schema is largely compatible with the *pa'al* intransitive schema of a one-participant autonomous (non-causal) event.

In section 5.2, I pointed out that we can characterize the blending operations underlying the use of transitive *pa'al* verb, such as *harag* (h.r.g-*pa'al*) - `to kill', in two different ways (Figure 5-7, chapter 5). In one description (5-7-A), we start with a *conceptualization* of the event of 'killing' (*harag*) 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 three original predicates come to be realized as a single predicate (expressed in a single clause structure). The blending process in the latter case is possible only because the lexicon provides a single lexical root *h.r.g* (or a single stem in English - `to kill') whose semantics already integrates the whole causal sequence. In the same way, we may characterize *hitpa'el* sentences (such as 22, *Danny hitgaleax* - `Danny shaved') in two ways. In one description (Figure 6-10-A), we start with a *conceptualization* of the entity undergoing the event ('Danny' in example 22) as a single entity undergoing a single 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 (Figure 6-10-B), we start with a conceptualization of the event as composed of two separate sub-events with two different entities (Danny's hand and Danny's face) undergoing different sub-events, and *only through the conceptual and linguistic blending operation* the two sub-events and the two entities come to be realized as a single entity 'Danny' undergoing a single event 'shaving'.
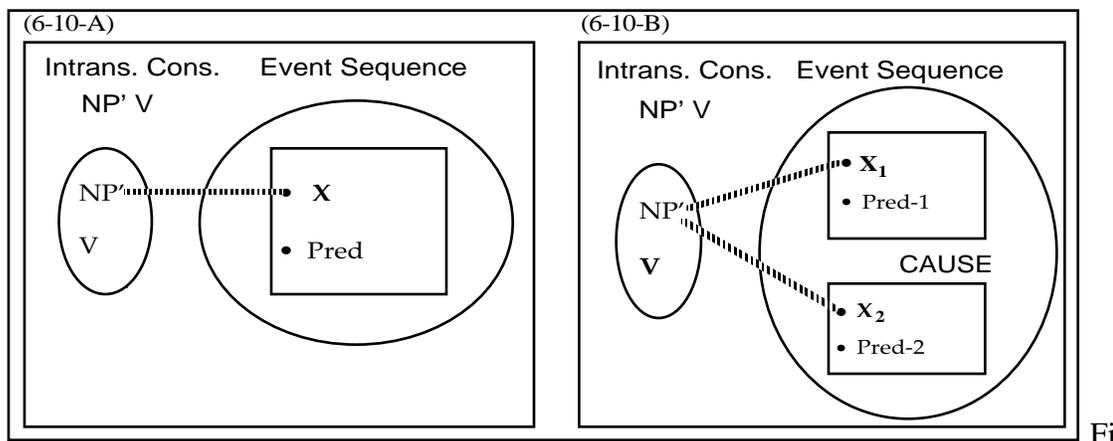
gure 6-10: Two possible blending schemas for the stem *hitpa'el* .

We may now also assign the characterization of *hitpa'el* in Figure 6-10 to middle *hitpa'el* verbs such as *hizdaken*:('growing old'). On one hand, it is possible to conceptualize the event of growing old as an event caused by biological forces internal to the living animal which then bring about the effected state of the external body becoming 'old' (Figure 6-10-B). Such a conceptualization of the event motivates the use of the reflexive-middle *hitpa'el* stem. On the other hand, the event of 'growing old' may be conceptualized as a simple one predicate event (something that just happens) to a single entity. The latter conceptualization fits the blending description in Figure 6-10-A. The important point to note is that the characterization of *hitpa'el* in Figure 6-10-A is *exactly the one* associated with the basic intransitive *pa'al* stem. It is therefore not surprising that sometimes we cannot distinguish the meaning associated with the same root occurring in both *pa'al* and *hitpa'el*, as in the case of *zakan* and *hizdaken* - `grow old' (example 24b-c) .

Now consider the *hif'il* stem used intransitively. I suggested in chapter 4, that the transitive *hif'il* pattern, denotes a causal sequence, with the root profiling the *effected* predicate. The *hif'il* stem is sometimes also used intransitively, in which case it has an inchoative sense (Berman, 1975). The root of inchoative *hif'il* verbs, I suggest, also denotes an *effected* predicate.

Following are a few examples of *hif'il* inchoative verbs (25a-e). The roots of the inchoative *hif'il* verbs denote color and physical properties (Glinert, 1989:465). The adjectival word whose root is used in the *hif'il* form is provided in brackets:

(25) a. *hivri* (b.r.?) == cure(tr.), recover(intr.) (*bari-* healthy)

b. *hilbin* (l.b.n) == whiten (tr., intr.) (*lavan* - white)

c. *hivshil* (b.sh.l) == ripen (tr., intr.) (*bashel* - ripe)

d. *hexmic* (x.m.c) == make sour/acidify(tr.), turn sour (*xamuc* - sour)

e. *himtik* (m.t.k) == sweeten (*matok* - sweet)

Most of the *hif'il* verbs above (25a-d) are ambiguous between a transitive-causative and intransitive-inchoative readings. For example, *hivri* means both `to cure' (cause to be healthy), and `to recover' (to become/turn healthy). Similarly, *hilbin* means both `to bleach' (cause to be white), and `to whiten' (to become/turn white). The verbal root in every example denotes a *resulting state*. The only difference, I suggest, between *hif'il* transitive (causative) and intransitive (inchoative) is that the causal force is assumed to be *external* in the transitive-causative reading (as in *hivri* - 'cure', 'cause to be healthy'), and unknown (or "internal") in the intransitive-inchoative one (as in *hivri-* - 'recover, 'become healthy'). In addition, in the transitive *hif'il* schema (as in all transitive sentences), the subject NP denotes the causal force. In the intransitive schema, it denotes the affected entity.

Note that the characterization of the intransitive *hif'il* stem, and the `middle' *hitpa'el* stem in terms of the blending operation involved and the underlying conception of the causative schema is very much the same (both denote a causal event sequence where the causal force is unknown or internal to the affected entity). The two differ only in that the root of *hitpa'el* verbs typically profiles the *causing* event (when the *hitpa'el* root co-occurs with the *pi'el* stem), while the root of the *hif'il* verbs typically profiles the *effected* state in the causal sequence. There are only few cases, where the root of the *hitpa'el* verb denotes the effected event, in which case its meaning is expected to be equivalent to the intransitive *hif'il* form with the same root (as in *hizdaken* and *hizkin* - `grow old', example 24c-d).