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THE HIDDEN LOGIC OF INFORMATION STRUCTURE CONFLICTS

The present paper looks at the question of Information Structure (IS) conflicts, especially in the case of Figure and Ground assignment. It is observed that in typical uses in unmarked sentences, Figure-Ground assignment runs counter to the traditional notion of Information Structure. One of the main proposals of this study is that many cases of apparently problematic IS patterns are in fact the reflection of a two-level IS organization of sentences, where an element can bear two opposite IS values. An attempt is made to point out an experiential grounding of this double-layer organization of IS. Finally, the case of possession is examined, whose interpretation is argued to derive from the reciprocal referencing of the possessor and possessum, possible thanks to the double-layer IS and Figure-Ground assignment reversal.

1. Introduction

The question of information structure, which includes such issues as theme and rheme, accessibility, and givenness, has largely been taken for granted in the literature. Östman & Virtanen (1999: 93) express their dissatisfaction at the general attitude of researchers who operate under the assumption that “everyone ‘more or less’ knows what we are talking about when we refer to Information Structuring notions, and therefore, any further attempt at rigid specification or definition would be futile.” The fact of the matter is that the notions that go into Information Structuring are not very well understood. A closer look at many sentences shows that Information Structuring is governed by a number of principles that often conflict with each other and result in word orders that do not match expectations.

One obvious fact is that sentences are often ordered in ways that contravene IS requirements. That is, they can start with what looks like unequivocally new information and end with given information. This often results from haphazard planning that can be witnessed in what Jespersen (1949: 54) bluntly refers to as “the careless speech of undeveloped minds”. Another reason behind

the discrepancies in Information Structuring is the fixed word order in some languages. As Jespersen (p.59) explains, “speakers will unconsciously arrange their thoughts and words according to a certain pattern.” This pattern is dictated by syntax and does not necessarily concur with the given-to-new sequence.

The above are obvious factors that help understand why the expected given-to-new word order in sentences is often distorted. But there are other considerations, which are less obvious. Many distorted sentences reviewed here actually exhibit a deeper logic, and essentially turn out to be less suboptimal than one would initially think. A case in point here is the expression of possession. More specifically, the simplest sentences with the verb *have* show conflicting values of information structure parameters, where a participant can carry contradictory statuses of both presupposed and entailed content.

Such apparent conflicts are a hallmark of grammatical constructions that stand in a markedness relationship to their more basic counterparts. In fact, as the example of the possessive will show, perhaps even more than a distinctive attribute of such derived constructions, IS conflicts are what justifies their use.

This paper will look at how the choice of Figure and Ground may conflict with the information structure in a sentence. As should become apparent in the course of the following sections, such conflicts and imperfect Information Structure arrangements are the norm rather than the exception. Before these apparent anomalies can be appreciated in some detail, it is first important to review a few general principles of information placement within a sentence.

2. Information Structure

2.1. Consistent Information structure

The following variations demonstrate that syntactic constructions allow a number of options of information arrangement within a sentence.

- (1) a. [The board of directors] offered [the executive] [a one year severance].
 - b. [The executive] was offered [a one year severance] (by [the board of directors]).
 - c. [A one year severance] was offered to [the executive] (by [the board of directors]).
 - d. What [the board of directors] offered to [the executive] was [a one year severance].
 - e. t was [a one year severance] that [the executive] was offered.
- etc.*

The sentences (1a-e) do not differ in terms of the proposition they convey—the information is the same—but they each highlight a different part of the meaning content. In (1a), the newsworthy part is that a specific offer was made

to a specific person. By contrast, in (1d), the offer part is probably known from the preceding discourse, and the newsworthy part is specifying exactly what is being offered. These fine distinctions in the relative newness and givenness of the propositional content derive from the arrangement of elements in the sentence. Jespersen (1949: 54) noted that “what is at the moment uppermost in the speaker’s mind tends to be first expressed”, and the information that is uppermost in the speaker’s mind is often determined by the preceding discourse. Thus, the arrangement of information in a sentence is a function of the givenness / newness of that information. The given information is presupposed, and as a consequence, it is either omitted or placed toward the beginning of a sentence. Conversely, new information, which is the focus of the message contained in a sentence, is reserved for the end. It is a well-established fact that “items at the end of a sentence are naturally more prominent to a hearer than those which occur initially.” (Kempson 1977: 194). A similar point is made in Callies’ (2009: 20) study of information highlighting. Kuno and Takami (2004: 181) phrase this regularity in similar terms as the Flow-of-Information Principle for Reordering:

(2) Flow-of-Information Principle for Reordering:

Optional reordering of constituents in a sentence takes place in such a way as to place those that represent less important (given) information closer to sentence-initial position, and those that represent more important (new) information closer to sentence-final position.

At first glance, the above can be thought of as a restatement of the notions of theme and rheme, which are parts of a sentence viewed according to the kind of information they hold. The theme part, which most often coincides with the subject position, serves to establish the topic of a sentence—the information that has been introduced in the preceding sentences and can be assumed to be familiar to the listener. The rhematic part coincides with the predicate including everything else that follows the subject, and it carries the highest degree of communicative dynamism. This is at least the usual pattern in plain unmarked sentences, but the theme is not to be equated with the subject position of a sentence. The theme is the beginning of a sentence, where of course not only the subject may appear, but also a fronted object, cleft elements and so on, as in the sentence below, where the theme is the object of the verb, not the subject:

(3) This type of music, I do like, but not that ear-deafening noise.

Such rearrangements of syntactic constituents are performed precisely in order to satisfy the Flow-of-Information Principle. Most often, at some unconscious level, speakers are sensitive to the requirements of information flow and adapt the syntactic form of a sentence.

2.2. Imperfections

The above may give the impression that all sentences invariably follow the Flow-of-Information Principle. However, sentences are never smooth transitions from the given to the new, with each word representing increasing degrees of assertion. In reality, the information structure is an approximative tendency, such that the new may sometimes appear before the given.

In everyday language, the placement of new and given information in a sentence is rarely perfect, if only because the form of a construction selected for a sentence may be at odds with its information structure and affect the arrangement of constituents within a sentence. For instance, in the second sentence in (4), the information about the reviewing is a given, but the choice of the passive forces it well toward the end of the rhematic part of the second sentence, which unnecessarily confers on it the highest degree of prominence.

(4) The chapter will offer a review of new research on language acquisition.

First, the most recent insights into the acquisition of syntax will be reviewed. Also, cases of conflicting focus assignment are very common, where new information appears at the beginning of a sentence, but is brought into focus through intonation or other highlighting devices.

Although it has been assumed to be the single most powerful organizing factor, the theme-rheme division of sentences is not the only way to manage given and new information in sentences. Other considerations enter in which may countervail the ordering of constituents mandated by the theme-rheme division. One such competing factor is the dichotomy of the cognitive functions of Figure and Ground, which will be discussed next. As will be shown, the assignment of the Figure and Ground functions is not a simple case of a factor conflicting with the theme-rheme division, but a sort of compromise between the two factors reflecting a deeper intricacy of information structure.

3. Figure and Ground

Talmy (1972, 2000a, 2000b) noted that language uses a principled system that describes scenes by means of two cognitive functions, Figure and Ground. The Figure and Ground system is a relative reference system that involves anchoring less familiar elements to well established ones. Newly introduced elements of a scene that are in focus are specified with reference to elements that the listener can be assumed to be more familiar with. The latter are realized as the Ground (G), while elements that are more recently in awareness acquire the Figure (F) status. The functions of Figure and Ground can most typically be identified in the descriptions of location, direction of motion or orientation of objects, as is exemplified in the following sentences:

- (5) a. The boat (F) is floating on the lake's surface (G). (location)
 b. |The chicken (F) crossed the street (G). (direction of motion)
 c. The border (F) runs along the river (G). (orientation)

Here, in (5a) the lake's surface functions as the Ground, because by virtue of its size, it is more easily available to attention, and it is that part of the scene that the viewer is normally more familiar with. The boat is represented as the Figure, a smaller element that can be identified as being located relative to the larger Ground. In more mathematical terms, the Figure can be thought of as a "variable" established with reference to the "constant" Ground.

It is not only the location, direction or orientation of concrete elements of physical scenes that the Figure and Ground can jointly specify. They also establish the information structure of more abstract concepts, such as the location of two events in time, one of which is anchored relative to another, as in example (6a):

- (6) a. The phone rang (F) while I was cooking (G).
 b. The phone ringing (F) was (when I was) in the middle of cooking (G).

As the above examples illustrate, another property of this system is that these two functions correlate strongly with the sentence positions of subject and object. "[T]he subject(-like) constituent functions as Figure and the object(-like) constituent functions as Ground." (Talmy 2000a: 321) According to Talmy (p.320), this default order of Figure and Ground is determined by "cognitive-semantic processes" which prompt one to attend to the Figure first, and the Ground is mentioned second.

More generally, this system can be viewed as managing information structure in a sentence, such that the Figure phrase serves to convey new information, while the old familiar information is handled by the Ground. Talmy (2000a: 320) supposes that "[t]he notions of Figure and Ground may be related to the notions of asserted and presupposed and may in fact be a generalization over them by virtue of referring not only to propositions but also to entities." However, there is reason to believe that Figure and Ground are independent notions that do not correlate with the asserted and the presupposed.

The ordering of the two functions, where the Figure precedes the Ground is in conflict with what is otherwise known about the arrangement of presupposed and asserted information in a sentence. Specifically, the problem is that the presupposed Ground, typically associated with the object position, appears toward the end of a sentence, in its rhematic part, which is normally reserved for new information.

Of course, the fact that mismatches like this can and do occur is hardly news. As was noted above, sometimes the choice of a syntactic construction may make it necessary to disregard the theme-rheme division and to organize information structure independently of its requirements. The point here is that the Figure and Ground mapping with the subject and object positions leads to not only

occasional but almost inevitable and invariable conflicts. While constructions like the passive voice may, on different occasions, either conflict or align perfectly with the theme-rheme ordering, the Figure and Ground seems to be inherently at odds with it. The following table shows that the Figure (new information) normally coincides with the theme (given information), and the Ground (given) with the rheme (new).

Table 1. Mismatches between the IS of Figure-Ground and that of the theme-rheme division

	The beginning of a sentence	The rest of a sentence
Part of a sentence:	The theme onto which <i>given</i> information is mapped	The rheme onto which <i>new</i> information is mapped
Cognitive function:	The Figure which represents <i>new</i> information.	The Ground which represents <i>given</i> information.

The above conflict occurs when the subject is occupied by the theme of the sentence, which may not always be the case, as was stressed in 2.1. However, the fact remains that typically, in unmarked sentences, the theme is the subject. Also, according to Talmy, a similar default mapping occurs in the case of Figure and the Ground, which coincide with the subject and object positions respectively. What this means is that in ordinary cases, the Figure (new information) normally appears in the theme position reserved for given information, and the Ground (given information) in the rheme position, which serves to hold new information.

Ideally, it seems that the elements should align according to the newness of the information that they carry: the Ground representing the familiar information should coincide with the theme part of the sentence, not the rheme, and the Figure should appear in the rhematic position, not the other way round, as is the case. This way the beginning of a sentence, the subject and the Ground would all concur in presupposing the given information:

Table 2. Ideal fit between the IS of Figure-Ground and that of the theme-rheme division

	The beginning of a sentence	The rest of a sentence
Part of a sentence:	The theme onto which <i>given</i> information is mapped	The rheme onto which <i>new</i> information is mapped
Cognitive function:	The Ground which represents <i>given</i> information.	The Figure which represents <i>new</i> information.

The givenness mismatch can be dismissed as a natural imperfection, an optimal compromise between two conflicting constraints competing with each other in an Optimality Theoretic fashion. However, the conflict reveals an interesting

regularity. It is an apparent inconsistency that occurs because there are two types of familiarity of information that can be handled by presupposition. Information conveyed in a sentence can be either discourse-familiar and generally familiar (background knowledge). That is, the lake's surface in (5a) can be presumed to be common knowledge shared by the speaker and listener and thus be a generally familiar Ground, but in a specific piece of discourse, it may come up for the first time (being discourse new), and thus receive some highlighting prominence too.

If it is discourse-familiar, that is if it was mentioned in the preceding discourse, it can be presupposed fully, by virtue of both being represented as the Ground and appearing in the sentence initial position. This is done especially if the Figure is less familiar than the Ground both in terms of general and discourse familiarity:

(7) On the lake's surface is floating a boat.

Typically, however, discourse familiarity is background knowledge familiarity in reverse. That is, information that is generally unfamiliar will be discourse familiar, and vice versa, generally familiar information is discourse-new. Although such reversals may seem counter-intuitive and somewhat idiosyncratic, this is actually what makes communication work. Describing new elements of knowledge, that is generally unfamiliar elements, is done by first introducing them in a piece of discourse and making them discourse familiar, which makes them eligible to be placed at the beginning of a subsequent sentence. Once there, they can then be characterized by means of generally-old elements. These, in turn, are familiar enough to be presupposed and introduced, somewhat out of the blue, at the end of a sentence as discourse-new.

In terms of Figure-Ground assignment, familiar information serves as the Ground and the newly introduced elements are Figures. But because an element can be generally familiar and discourse unfamiliar, it will therefore be both a general Ground and a discourse Figure. This apparently idiosyncratic double assignment will be shown to be the norm and indeed the motivation behind the use and interpretation of the possessive.

4. Reversals

4.1. Ways of ordering elements

The reversal between general familiarity and discourse familiarity is also evident in how events are expressed. When two consecutive events are reported, one of them, the earlier one, is automatically treated as generally familiar, and the later event is classified as unfamiliar, which in turn gets it promoted to discourse-familiar. As a consequence, events are presented in counter-chronological order.

Of course, events can be reported in a more straightforward fashion. In two coordinate clauses or separate sentences, they may be and usually are presented in chronological order, as in (8) below. Osgood (1980, 110) argues that ordering events as they happened, in “natural order”, is the ‘easiest’ way of conjoining elements.

- (8) The infection occurred in the morning. Complications followed within the next few days.

However, the chronology path of conceptual ordering does not have to and often does not align with the linguistic ordering of two events expressed within a single clause or a main-subordinate clause complex. Linguistic ordering is governed by syntactic considerations that follow from the background familiarity and discourse familiarity reversal. Rather paradoxically, in such situations, the earlier event comes second, in the subordinate clause, and the later event is expressed first in the subject position (9a). (Talmy 2000a, 321)

- (9) a. Complications occurred after an infection.
b. ?An infection occurred before complications.

Here it is tempting to venture a statistical speculation that when two events are reported, the earlier one tends to be more familiar and therefore presupposed. In an unmarked linguistic expression, such an event serves as a reference point for the later event, and is therefore treated as a Ground. Its Ground status may be further reinforced by the fact that apart from the referencing function of the earlier event, it may also be the cause of the later event. According to Talmy (p. 328), the causing (earlier) event is treated as the Ground and is therefore expressed in the subordinate clause, in the second part of a sentence.

Thus, the placement of the earlier and later events is marked by an asymmetry, where the later-earlier order is more basic and is preferred to the earlier-later order. Talmy (2000a, 325) notes that this asymmetry is evident from the absence of prepositions taking the later event as their objects.

- (10) a. The president resigned *because of* the scandal.
b. *The scandal happened *to-the-cause-of* the president’s resignation.
c. The president remained in office *despite of* the scandal.
d. The scandal occurred *in-unsuccessful-precluding-of* the president’s staying in office.

Apart from descriptions of temporal sequences, a similar reversal pattern is found in spatial descriptions, where individual elements are characterized in terms of their location or motion within a larger scene. Such descriptions have a form motivated by how visual perception works. When observing a scene, one first captures its gestalt image of the entire space. The impression of holding the

entire scene in view is an illusion, because one cannot simultaneously focus on a complete picture including all the details of the scene. The gestalt view is the initial general focus of the observer's attention, but this focus quickly shifts onto a given individual element.

However, these differ slightly from temporal ones. Visuo-spatial descriptions can be about information that is entirely background unfamiliar. They most often involve novel, never previously viewed scenes that cannot be part of general knowledge stored in long-term memory. But the information structure of a sentence makes it necessary to partition a scene into familiar and unfamiliar elements. The "lake's surface" in example (5) above would unquestioningly be considered familiar to the speaker and addressee, even if it is seen for the first time, because it is a larger frame (psychological Ground) that is apprehended first, before the smaller details (psychological Figures) are spotted. Thus, even an age difference of a few seconds makes the scene sufficiently older than its details to be passed off as background knowledge. At this point, the general frame of a scene, including the Ground elements will be viewed as being more familiar / longer in attention, and the details more recent and less familiar. This warrants the speculation that the spatial frames will be accommodated as if they are generally familiar elements retrieved from long-term memory, because they are the "oldest" portion of the information under discussion.

The above discussion proposed that a sentence can have a two-layered IS organization, where an element can have two opposite familiarity values. The following section will attempt to explain why sentences tend to organize their Information Structure in psychological Figure-first order.

4.2. Language patterns grounded in physical experience

In terms of Figure-Ground assignment, this represents a conflict in that each shift of focus results in a change of status of the elements of a scene. This conflict can be resolved if it is assumed that salience is a dynamic phenomenon. In appreciating a scene, the relative levels of salience of the Figure and Ground shift. Initially, the Ground is more salient – it is larger and more easily perceived than the details that are embedded in it. But once the Figure is perceived, it stands out prominently, and the Ground moves to the background of attention. This is most typically how objects are identified when they find themselves at some distance from the viewer. For example, when one tries to find a train heard riding through a remote valley, first the general area (Ground) is scanned and then the train (Figure) is spotted. Langacker (2008: 500-501) notes that because it occurs through time, conceptualization—even the activation of established concepts—is inherently dynamic. In cases of any complexity, different facets of the total conception are activated at each successive instant.

However, this order is not mirrored in sentence processing, where the Figure is typically named first before the Ground is provided. Typically, descriptions follow the unmarked subject-first order, as in *The train chugged through the*

valley. The difference between the order of real-life scene perception and sentence-processing order is illustrated in (11a) and (11b) respectively. One major difference is that in sentence processing, the first stage of a salient Ground is skipped, and the Ground does not come into view until the end of the sentence.

- (11) a. Salient Ground > Salient Figure > Backgrounded Ground
 b. () > Salient Figure > Backgrounded Ground

However, when the Ground does get named, by virtue of being sentence-final, it receives a degree of salience, so a more accurate diagram would be

- (12) () > Salient Figure > Backgrounded Ground > Salient Ground

Of course, the order of sentential presentation can match that of real-life scene perception, and a faithful reflection of the natural order of perception would be (13). Here, the Ground is considered first and serves as a reference frame for locating the train, and once the train is apprehended, the Ground recedes into the attentional background. However, because of the markedness of the subject-final order, this is not how scenes are normally described in informal production.

- (13) Through the valley (G) chugged a train (F).

Sentences are not precise representations of how psychological Figures and Grounds are processed. Scene perception is a dynamic process of salience gradation in Figure and Ground assignment. High salience is attached to the object that is attended to at a given moment, and because attention shifts between the elements of a scene, automatically, the degrees of salience attached will change accordingly. First, the attention is on the general scene, then on smaller elements. Before these elements are identified, depending on their visibility, the observer's attention may first focus on smaller regions of the scene in search of elements of interest.

This dynamism of scene perception is why the linguistic pattern is figure-first, and not background-first. A single sentence cannot reflect the shifting of attention found in scene observation, so instead it freezes one of the frames, namely the one where the focus is on an element located within a larger scene, rather than freezing the first glimpse at the general gestalt scene which is searched for the element of interest.

But because the general scene was initially the focus of attention, it was the psychological Figure, a status which then changes to Ground, as the focus shifts onto smaller elements. It is possible that apart from shifting from Figure to Ground status, an element can hold these two functions at the same time. Scene descriptions which freeze a frame from a dynamic attention-shifting observation retain a trace of the original focus where elements had different cognitive functions. This organization will be argued to hold in possessive descriptions, to

which we turn now. Indeed, it will be argued that the double-layered organization is at the heart of the elusive nature of the possessive.

5. Possession

5.1. The versatility of possession

It has been observed that possessive constructions are used in ways that go far beyond the notion of ownership. Whereas some abstract uses such as *my idea*, *chef's special*, *my cousin*, or *the sheriff's prisoner* can be understood as extensions of the original prototype of the possessive meaning, some other uses are harder to relate in terms of their conceptual content to the notion of possession. There is very little by way of prototypical ownership in *the president's replacement*, *the jury's choice*, *the decision's consequences*, or *today's top score*. Langacker (1995: 56) identifies around a dozen types of possessed entities, among which some of the less prototypical examples include “something at one's disposal” (*my office*), “physical quality” (*his weight*), or “transient location” (*my spot*).

This striking diversity of uses of the possessive category has prompted some scholars to assume an almost defeatist attitude. For example, it has been postulated that the possessive is a vague notion implying nothing more than a mere occurrence of a relationship between two entities. Bendix (1966: 120) claims that “*A has B* expresses that there is some state relation between ‘A’ and ‘B’...” Herslund and Baron (2001: 1) note that the “meaning ‘have’, (...) ha(s) numerous uses that only with difficulty can be reconciled with a common pretheoretical understanding of possession.” They point out that “even the genitive, which, where it exists, should be the expression of possession *par excellence* has in most languages numerous uses unlikely to qualify as possessive.”

It is tempting to approach possession as a prototype concept, where the most typical (ownership) senses are accompanied by peripheral uses which must evince at least some of the prototypical properties such as ‘human possessor, concrete possessee, possessor having the right to use the possessee, spatial proximity between the two, no temporal limit on the possessive relation’ (Heine 1997: 39)

While all these characterizations have an initial appeal, they are not entirely satisfactory. For example, Bendix's characterization stating that the possessive conveys some kind of relationship between two entities, is too broad, as it suggests that the relationship is rather unstructured and indistinct. Although the relationship between the two entities is broader than the notion of ownership, there is more to be said about it. First, as Langacker notes, the possessive relationship is marked by a intrinsic asymmetry manifested in the irreversibility of the relationship. That is, the assignment of the possessor and possessed roles is not a free choice operation, and the roles are not interchangeable. One can say *the officer's badge*, but not *the badge's officer*.

The asymmetry suggests the existence of necessary conditions that must be met in order for the possessive to sound natural. Many analyses of the possessive limit themselves to postulating characteristics presented as sufficient conditions. As long as only one of them holds true, it is enough for the use of the possessive. However, what they lack is a specification of necessary conditions. It is easy to think of cases where some of the sufficient conditions proposed in the literature would not yield a natural sounding possessive descriptions. Such cases will be presented in section X, where a more thorough analysis of the possessive will be attempted.

5.2. Reference points

A preliminary approximation of necessary conditions for the use of the possessive will be possible based on an account of the possessive offered by Langacker. According to Langacker (2008: 505), many instances of the linguistic phenomenon of possession are motivated by the need for reference point relations, where the possessor participant is invoked to serve as a familiar ground for a less salient element. In Langacker's terminology, the former is referred to as the reference point (R), and the latter as the target (T), a convention corresponding to Talmy's Ground (for the reference point) and Figure (for the target). For example in *his decision's consequences*, the word "consequences" would be a vague target, but placed within a context of a specific decision, it becomes sufficiently clear. The reference point can be not only a specific referent, but a category that serves to determine the target: *a children's story*, *child's play*, *a man's world*, *men's fashion* (categories are more conventional, and the possessor is usually used in a fixed form).

This referential system of possession is motivated by the way the world is conceptualized. Langacker (2004:83) points out that "[w]e think of the world as being populated by people, each of whom has an assortment of possessions, rather than thinking of the world as being populated by wallets, beds, bank accounts, etc., each of which has a person attached."

Also, because there are fewer possessors than their possessions, possessors are also easier to remember, and thus a possessor provides a background that helps identify the possessum referent. Typically, the possessor is fairly well established, especially if it is presupposed. If it is not, especially if it is less definite than its possessee, the resulting possessive description is odd:

(14) ?A city's sewer system was leaking.

Theoretically, the possessum could be referred to in isolation, without the mediation of the possessor, but the backgrounded familiarity of the larger and thus more prominent possessor makes the identification more intuitive.

Langacker's analysis will be a starting point for the present characterization. The notion of the reference point is a useful insight into the nature of possession.

The present analysis will maintain the view that possession is a referencing category, but that is not all there is to it. A look at some peculiarities of IS patterns found in possessive sentences will reveal further functions of the possessive going beyond specifying the possessum. The first step will be to consider the IS.

5.3. Double Figure-Ground assignment

We will now turn to the issue of alternating Figure and Ground labeling in possessive descriptions. Despite the seemingly unending diversity of the possessive senses, one common characteristic they share is spatial proximity. It is either literal (things possessed are usually nearby) or metaphoric (the possessed can be imagined as being close to the possessor). In fact, possession has been hypothesized to be a relationship constructed on the locative, such that “X has Y” is understood as “Y is at X” (Benveniste 1966), or in other words, the verb *have* is an inverted *be*. What this means is that the possessum Y is a Figure located near the Ground. To take a specific example, the possessive pattern with the verb *have* in (15a) can be viewed as a paraphrase of the locative pattern with the verb *be* in (15b).

- (15) a. The house has an orchard.
b. The orchard is near the house.

Of course, the possessive (15a) is not a mere paraphrase of the locative (15b). The existence of two perfectly co-synonymous constructions would run counter to the Principle of Contrast (Clark 1987) which says that complete synonymy is resisted in language.

Some differences are rather easy to point out. For one, there is the obvious difference involving the theme-rheme organization of the sentence. Because the two patterns are syntactically inverted versions of each other, each one has a different subject, and in turn a different theme.

This locative-possessive inversion postulated by Benveniste has one more consequence, namely that the two have inverted Figure and Ground assignments. In (16b), which exemplifies the more basic pattern, the orchard is the Figure located relative to the house, which serves as the Ground whose location is known. In (16a), which shows the possessive pattern, the roles are reversed, and it is the house that is the Figure described by reference to the orchard, which is the Ground in this sentence.

- (16) a. The house (F) has an orchard (G).
b. The orchard (F) is near the house (G).

(The question of different Figure-Ground assignments is not to be confused with the different theme-rheme organization. The Figure does not always coincide with a theme. For example, one can say *Near the house is the orchard*, where the

orchard functions as Figure, because it is the grammatical subject, but it is not the theme of the sentence).

This does not mean that in the possessive description, the house is now viewed as a Figure located near the orchard by virtue of the orchard being near the house. This would be a tautology incapable of justifying the use of a possessive (to express a reverse locative relationship, one would simply say *The house is near the orchard*, without the need for an additional pattern.)

Instead, in the possessive pattern, the Figure-Ground assignment involves a locative description of a metaphoric nature. The Figure “house” is viewed as being located on an abstract plane, where it is seen to be located within the set “with an orchard”. Put another way, possessing an orchard is a characteristic feature (Ground) that defines the Figure. It is this need for the possessum to define the possessor that is the real rationale behind the possessive. In most typical cases of the possessive, this defining force of the possessum gives rise to the ownership interpretation, which is nothing but an implicature arrived at by reasoning that since the possessor is somehow strongly characterized by a possessum, it is likely to be the owner of that possessor.

This reciprocal referencing is a crucial characteristic of the possessive and a necessary condition that the previous analyses failed to specify. To be fair, the need for a reciprocal referencing is easy to overlook, because most possessive descriptions and most examples reviewed in the literature quietly satisfy it, so anomalies are not observed. However, it is possible to think of examples of relationships that do not justify the use of a possessive. For example, while it is possible to say (17a), the examples in (17b) sound odd, even if there is a newspaper on the front seat or if a rock hit the car’s hood damaging it.

- (17) a. This car has insurance / a parking ticket / white paint / a scratch.
 b. *This car has a newspaper / a rock.

What makes (17a) natural and (17b) rather odd is that in the first sentence, the possessor, which serves as a Reference Point (Talmy’s Ground) specifying the Target possessum (Figure), is distinctly specified back by that possessum, while in the second sentence, no such reciprocal specification occurs. It is rather hard to see how the possessed objects in (17b) could serve to characterize the possessor. This difficulty creates a sort of interpretive dissonance caused by the unfulfilled expectation for the subject to be distinguished somehow by the object. Recall that this expectation follows from obligatory Figure-Ground assignment to the subject and object of a sentence. According to Talmy (2000a: 314), one cannot avoid Figure-Ground assignment because “language inescapably imposes that semantic addition upon a basic proposition...” The car in the subject position in (17b) resists its figure status, because possessing a newspaper can hardly be considered a defining ground.

Thus, possessive descriptions have a two-layer structure, each with a different assignment. Under the locative interpretation, the possessor is the Ground

(G-location), where the possessum (F-locatum) is found (18a). But in the characterization sense where the possessor is being defined by its possessa, the car is a Figure (F-definiendum) placed in a definitional set made up by properties, one of which is the possessum represented as the Ground (G-definiens).

- (18) a. This car (G-location) has passenger airbags (F-locatum).
 b. This car (F-definiendum) has passenger airbags (G-definiens).

In an obvious way, passenger airbags are a feature essential for the description of a car's standard, and therefore justifies the use of the possessive construction. The same would be true of any vehicle options such as cruise control, power steering or other features.

This Figure-Ground organization explains why the possessive in sentence (19a) below sounds more natural than the simple locative in (19b).

- (19) a. He (F-definiendum) has a gun (G-definiens).
 b. ?A gun (F-locatum) is in his hand (G-location).

The latter is a description of the location of the gun, which in itself is a rather unconvincing intimation of danger, a suggestion whose indirectness is at odds with the urgency of the situation. A warning makes more sense if the focus is on the agent who is made dangerous by the possessum (Ground-definiens).

The following are some other clearly non-ownership examples of the possessive where the possessor is characterized by the possessum.

- (20) a. The cow has a branded number.
 b. If the kitchen regularly has a haze of smoke, then you need an exhaust fan. (<http://chowhound.chow.com/topics/754468>, retrieved March 14, 2011)
 c. You have a sniper at your 3 o'clock.
 d. The fugitive has a bounty on his head.

5.4. Palimpsest layers

The possessive-locative correspondence could be explained as an abstract-concrete mapping similar to mappings between the target and source domains in metaphoric expressions. After all, there are countless examples of such dual patterns, where a surface form is hypothesized to have a deeper-level metaphoric logic. Each metaphoric expression can be shown to involve a two-level pairing between different domains. However, the possessive locative pairing is not a typical example of a metaphoric mapping. Metaphoric correspondences are usually coherent mappings between elements of the two domains¹, where the

¹ Even in Blending Theory, where blending two conceptual spaces often results in conceptually incongruous scenes where some incompatibilities are disregarded, the blended spaces are related by clear correspondences between key elements.

general order of the elements of the two concepts is preserved. “Image-schema structure is preserved in the mapping—interiors of containers map to interiors, exteriors map to exteriors; sources of motion to sources, goals to goals, and so on.” (Lakoff and Johnson 1980: 265). Because the source domain is where metaphoric reasoning takes place, that is, the source domain is where concepts from the target domain are simulated, the corresponding elements in the two domains should be readily recognizable for that simulation to be instinctive and effortless. In the well known example of the LOVE IS A JOURNEY metaphor, the lovers are easily associable with travelers, the growth of the relationship is thought of as a progression along a path, misunderstandings correspond to complications in the way, etc. These elements do not play musical chairs the way the possessive-locative complex rotates Figure and Ground labels for its elements.

In the case of the possessive-locative pairing, we’re dealing with a sort of a palimpsest where the possessive pattern has its own cognitive organization superimposed over the original form. The two do not match as clearly as in other metaphoric mappings. Each level has its own Figure-Ground division, and the possessive level overrides the organization dictated by the original locative level.

5.5. Similar reversals

The possessive is hardly the only category that reverts Figure-Ground assignment. Talmy (2000a: 333) considered two sentences *The smoke slowly filled the room* and *The room slowly filled with smoke*, which express basically the same proposition, but differ in terms of perspective. Although Talmy views both of them as assigning the same functions to the elements of the scene, that is the room being treated as Ground and smoke as Figure in both patterns, it seems that a more accurate analysis would be to explain the difference between the two sentences in terms of which participant is assigned which function. Of the two, the locatum-as-subject pattern (*The smoke slowly filled the room*) is an unmarked variant with a straightforward Figure-Ground assignment, but the other pattern has the same two-level organization as the possessive. Specifically, the place-as-subject pattern has a palimpsest Figure-Ground assignment. First, by virtue of being a location, the room functions as a Ground at a “raw” level of perception (21a). At the more “processed” level, the interpretation of the place-as-subject form ascribes an additional characteristic to the room, so that it is now a Figure, an entity under consideration defined by the Ground “smoke” (21b).

- (21) a. The room (G) slowly filled with smoke (F). [Example (54b) in Talmy]
 b. The room (F) slowly filled with smoke (G).

This analysis differs from the one offered by Talmy, who argues that “*the room* retains its Ground function as a reference entity or anchor that serves to characterize the path of *the smoke*, with its Figure function as a variably located

entity.” (2000a: 333) For Talmy, the above is an example of exceptional Figure-Ground assignment. But if the room acted only as a Ground, a basic description like *The smoke filled the room* would suffice. Under the two-level assignment analysis, what is being distinguished is not the path of *the smoke*, but the other way round—the room is characterized by the presence of smoke.

Similar effects can be observed in instances of the *Swarm-with* alternation (Dowty 2001). Examples (22a-b)

- (22) a. Snakes were crawling on the floor.
b. The floor was crawling with snakes.

In the marked variant in (22b), at the superimposed level of interpretation, the floor functions as a Figure described by Ground. Indeed, this is an extreme version of a Figure defined by reference to its Ground, as the Figure seems to copy the activity performed by the Ground—the floor is conceptualized as pretending to do what the snakes are doing.

6. Conclusions

Not all Information Structure conflicts are a result of careless planning. They often make sense if one bears in mind the distinction between discourse familiarity and general familiarity. That is, elements of meaning content carry naturally conflicting familiarity values, which means that while at the general familiarity level, an element can be a given, it will normally be new at the discourse level.

It was also proposed that this two-level organization may be a product of adapting the static nature of sentences to the dynamic fashion of scene perception. Observing a scene is usually a multi-stage process starting with the Gestalt-fashion illusion of whole. One cannot possibly include in the scope of attention all the details in a scene, so instead at first only a general outline of the entire scene is created, which allows one to shift focus onto individual elements. Expressing this process involves the compression of its multiple stages into a single sentence. While at the discourse level a sentence centers on a single stage of scene perception, at the general familiarity level, it will also contain traces of the previous frames.

The two-level Information Structure of a sentence was demonstrated on the example of possession, where Figure-Ground assignment reversals were claimed to play a key role in the interpretation of possessive sentences. Specifically, the reversals make it possible for both the possessor and possessum to characterize each other. While at one level the possessor serves as the Ground for the identification of the Figure possessum, at the other level, the roles are reversed, and the possessum serves as a reference point Ground for the possessor.

This reciprocal characterization offers an account of the ownership interpretation of possession without invoking prototype organization. The ownership

interpretation, typically considered to be a prototypical feature of possession, is really an inference drawn from the fact that the possessum located near the possessor characterizes that possessor.

References

- Bendix, E.H. 1996. *Componential Analysis of General Vocabulary: The Semantic Structure of a Set of Verbs in English, Hindi, and Japanese*. Bloomington: Indiana University Research Center in Anthropology, Folklore, and Linguistics.
- Benveniste, É. 1966. 'Etre' et 'avoir' dans leurs fonctions linguistiques. *Problemes de linguistique generale*, 176–186.
- Callies, M. 2009. *Information Highlighting in Advanced Learner English: the Syntax-Pragmatics Interface in Second Language Acquisition*. Amsterdam: John Benjamins.
- Clark, E. 1987. The Principle of Contrast: A Constraint on Language Acquisition. In B. MacWhinney (ed.), *Mechanisms of Language Acquisition*, 264–293. Hillsdale: Erlbaum.
- Dowty, D. 2001. The semantic asymmetry of argument alternations (and why it matters). In G. van der Meer and A.G.B. ter Meulen (eds.), *Making Sense: from Lexeme to Discourse. Groninger Arbeiten zur germanistischen Linguistik Nr. 44*, 171-186. Groningen: University of Groningen Center for Language and Cognition.
- Heine, B. 1997. *Cognitive Foundations of Grammar*. Oxford: Oxford University Press.
- Herslund, M. and I. Baron 2001. Dimensions of Possession. In I. Baron, M. Herslund and F. Sorensen (eds.), *Dimensions of Possession*, 1-25. Amsterdam: John Benjamins.
- Jespersen, O. 1949. *A Modern English Grammar on Historical Principles*. Volume 7. Copenhagen: Einar Munksgaard.
- Kempson, R.M. 1977. *Semantic Theory*. Cambridge: Cambridge University Press.
- Kuno, S., and K.-i. Takami 2004. *Functional Constraints in Grammar*. Amsterdam: John Benjamins.
- Lakoff, G., and M. Johnson 1980. *Metaphors We Live By*. Chicago: University of Chicago Press.
- Langacker, R.W. 1995. Possession and Possessive Constructions. In J.R. Taylor and R.E. Maclauray (eds.), *Language and the Cognitive Construal of the World*, 51-79. Berlin/New York: Mouton de Gruyter.
- Langacker, R.W. 2004. Possession, location, and existence. In A. Soares da Silva, A. Torres and M. Gonçalves (eds.), *Linguagem, Cultura e Cognição: Estudos de Linguística Cognitiva [Language, Culture and Cognition: Studies in Cognitive Linguistics]*, 85-120. Coimbra: Almedina.
- Langacker, R.W. 2008. *Cognitive Grammar. A Basic Introduction*. Oxford: Oxford University Press.
- Osgood, C.E. 1980. *Lectures on Language Performance*. New York: Springer.
- Östman, J.-O., and T. Virtanen 1999. Theme, Comment, and Newness as Figures in Information Structuring. In K. van Hoek, A.A. Kibrik and L. Noordman (eds.), *Discourse Studies in Cognitive Linguistics. Selected Papers from the Fifth International Cognitive Linguistics Conference, Amsterdam, July 1997*, 91-110. Amsterdam: John Benjamins.
- Talmy, L. 1972. *Semantic Structures in English and Atsugewi*. Doctoral dissertation. Berkeley: University of California.

- Talmy, L. 2000a. *Toward A Cognitive Semantics. Volume I: Concept Structuring Systems*. Cambridge, MA: MIT Press.
- Talmy, L. 2000b. *Toward A Cognitive Semantics. Volume II: Typology and Process in Concept Structuring*. Cambridge, MA: MIT Press.