A Conceptual (Re)Interpretation of the Possessor-as-Location Hypothesis*

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Abstract
This work evaluates the oft-made claim that possessors are (animate) locations. I argue this possessor-as-location hypothesis is valid only as a claim about conceptual structure rather than grammatical representation. I show that the apparent similarity between possessors and locations is largely due to morphological marking: possessors may be indicated with locative morphology. Argument realization patterns of possessive and locative predicates, however, indicate possessors and locations to have different semantic prominence relative to their respective co-arguments: possessors rank higher than possessee, while locations rank lower than themes. I account for alternative argument realization patterns of possessive predicates, i.e. own/have vs belong, through the interacting factors of semantic prominence and semantic class. The effects of semantic prominence are captured by the default argument realization principle Isomorphy, which preserves semantic prominence in syntactic prominence. The semantic class of possessors shows a preference for oblique morphological marking. Conceptual similarity with locations allows locative marking to satisfy this preference. In languages where oblique marking is disallowed on grammatical subjects, this preference conflicts with the higher semantic prominence of possessors, leading to different possibilities for possessive predication structures. The current approach better accommodates the various patterns found in possessive predication structures, many of which are non-locative.

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1 Introduction

The venerable question of whether possessive relations are a special kind of locative relation is one of the most basic for theories of argument realization. Apart from general considerations of comprehensiveness, the consensus in the field of the decompositional nature of lexical semantic representations increases the significance of this issue. This is because conclusions about locative and possessive encoding will yield consequences for their putative causative counterparts in the form of three-place locative and possessive predicates. Moreover, possessive and locative representation bear the further distinction of being often encoded in “light verb” sentences — those headed by the verbs BE and HAVE — and their analysis thus potentially affects analyses of copulas, HAVE-type verbs, and existential sentences.¹

Oddly enough, given its fundamental status for theories of argument realization, treatment of locative and possessive relations, and especially the relationship between them has been somewhat lacking. This is not due to any lack of theories that make assumptions about these relations, and in particular, that appeal to the representation of possessives as locatives. Indeed, the notion that possessors are a special kind of location has existed for several decades, and can be found as one of the standard assumptions in several theories of argument encoding (Ostler 1979, Jackendoff 1972, 1983, 1990, Croft 1990, Foley and Van Valin 1984, Van Valin 1990).

The possessor-as-location assumption plays a rather different role in different theories, however. The major distinction between them can be drawn at the level of representation where it applies. More specifically, we can distinguish between the possessor-as-location hypothesis as applying at a conceptual level of representation, or at a linguistic level of representation. In the conceptual category, I place works within the localist framework such as Ostler (1979) and Jackendoff (1990). Croft (1990), while not in the localist framework, would also fall into this category. While works of this category often structure their linguistic representations to conform with this conceptual-level assumption, it is possible (and indeed necessary, as I show in section 3), to divorce these levels and maintain at least some form of the conceptual level hypothesis without having to subscribe to its counterpart at linguistic representation. In contrast, works such as Freeze (1992) and in general works assuming some version of the Uniformity of θ Assignment Hypothesis (Baker 1988) such as Larson (1988), and more recently Harley (1995, 1996, 2003) fall into the category that assumes the possessor-as-location hypothesis to apply at a level of linguistic representation, and specifically for these authors, in the syntax.

In this work, I argue that the possessor-as-location hypothesis is best interpreted as applying at a conceptual, rather than a linguistic (i.e. grammatical) level of representation. If indeed a case can be made for grammatically representing possessors as locations, it should be made for individual languages rather than applying across the board as a universal principle of grammar. I propose an account for argument realization in possessive predication that does not need to treat possessors as derived locations, while recognizing the role of locative morphosyntax in encoding possession. This step crucially relies on separating the effects of two factors: semantic prominence and semantic class (Levin and Rappaport Hovav 2005). I argue that possessors differ from locations in terms of relative semantic prominence: specifically, possessors rank higher than their possessum coargument, whereas locations rank lower than their theme coargument. I show in section 5.1 that

¹Small caps, e.g. HAVE, BE are used for general reference to verb or predicate names across languages. Language-specific items are italicized, e.g. English have and be.
this contrast provides a better explanation for information structural contrasts in different kinds of possessive structures. In terms of semantic class, however, possessors and locations share a characteristic: both tend to be realized in phrases with oblique morphological marking. Under this view, then, there are two reasons possessors sometimes get realized with locative morphosyntax: one, they tend to be associated with oblique marking, and two, they can be conceptualized as locations.

My proposal is based on an investigation of the predictions and consequences of the possessor-as-location hypothesis, not only for the stated aims of the work where it is made, but also for two other areas: (i) information structural properties of alternative realizations of locative and possessive sentences (section 5.1), and (ii) the representation of existential sentences (section 6). This analysis assumes a non-derivational relationship between the lexical semantics and the morphosyntactic encoding of linguistic predicates and their arguments, and follows earlier works that relate syntactic prominence to semantic prominence (Ostler 1979, Carrier-Duncan 1985, Wechsler 1995). While it supports the uncontroversial assumption that semantic prominence is a major determinant of syntactic rank, my analysis suggests further that semantic class affects syntactic prominence only indirectly through morphological specification.

The paper is structured as follows: section 2 provides preliminary discussion on different kinds of possessive meanings. Section 3 discusses the different ways to interpret the possessor-as-location (PAL) hypothesis, then provides arguments for distinguishing the grammatical representation of possessors from that of locations. The main part of the paper comes in sections 4 and 5, which provide a theoretical account of the distinction between possessors and locations that should be made, i.e. PSR > PSM as opposed to TH > LOC. Section 4 opens the discussion from the point of view of locative predication. Section 5 deals with possession proper, and includes an argument against even a partial version of the PAL hypothesis as espoused in Pinker (1989) and Harley (1995, 1996, 2003). In section 6, I provide further evidence from contrasts between existential and what I call light verb possessive sentences that argue against structurally representing possessors as locations. Section 7 discusses the different kinds of structures that may encode possessive predication across languages, showing that locative morphology is only part of the picture, and also reconciling the “possessor as higher argument” proposal with these other ways of encoding possession. Section 8 concludes the paper.

Before proceeding further, I clarify my use of labels such as possession, location, etc. to prevent confusion with other ways they have been used in the literature. I reserve the term possession to design the conceptual category, which I assume is defined prototypically (Taylor 1989, Langacker 1991, Heine 1997), as discussed in section 2 below. The term possessive will be used ambiguously to refer either to morphosyntactic entities both lexical and phrasal, that encode core relations of possession, e.g. possessive construction, possessive verb; or to lexical semantic predicates of possession. I trust that context will disambiguate sufficiently between these senses. Participants in a possessive relation at a level of semantic representation are labelled in SMALL CAPS with the terms POSSESSOR (PSR) and POSSESSUM (PSM). The reference of each should need no explanation. The label POSS (always in small caps) will be reserved specifically for semantic representations of possessive predicates. Constituents of possessive sentences will be labelled as the discussion requires. I use locative analogously to possessive, either to name morphosyntactic elements (e.g. locative preposition, locative case-marking), or a relation at the level of semantic representation (a locative relation). For the participant roles of a locative relation, I use THEME (TH) and (quite unavoidably) LOCATION (LOC). In sections 5.2 and 6, I will also make use of the term “light verb”, which is intended to cover copular-like elements such as the counterparts of BE and HAVE across languages.
2 The conceptual content of possession

What conceptual content exactly constitutes the relation of “possession” is not a straightforward question to answer, and much discussion has taken place around this issue (Langacker 1990, 1991, 1999, Seiler 1983, Taylor 1996, Chappell and McGregor 1996, Heine 1997, Jensen and Vikner 1994, 1996, Partee and Borschev 2000). I shall not be directly concerned with this question in this paper, but, for the sake of concreteness, I assume three core instances of possessive relations, exemplified by each of the sentences in (1) below. These are: (i) a relation which can be termed “control”, of which ownership is a special case (1a); (ii) kinship (1b), and (iii) part-whole relations (1c).

(1) a. Mowgli has a pen.
   b. Mowgli has a sister.
   c. Mowgli has a crooked nose.

Although ownership seems to be a strong candidate for being a representative possessive relation, and it is certainly a natural interpretation for (1a), examples such as (2) show that (1a) only implicates, and does not entail ownership. On the other hand, there is a clear sense of an ownership-like relation of the possessum being at the disposal of, and being available to, the possessor, hence the term “control”, adopted from Jensen and Vikner (1996), see also Stassen (2001).

(2) Mowgli has a pen but it doesn’t belong to him.

Control differs from kinship and part-whole relations in constituting “alienable” rather than “inalienable” possession. Linguistically speaking, however, the most obvious distinction between (1a) and (1b,c) is that in the latter, the complement to the verb have is headed by a relational noun such as sister and nose. Relational nouns describe entities that must be defined relative to some other entity if they are to fulfill the description given by the relational noun. For instance, we may describe an individual as Mary, as a girl, or as a sister. An expression that describes the girl Mary as a sister entails the existence of another individual who is a sibling of Mary’s. In contrast, describing this individual as either Mary or as a girl does not commit the speaker to the existence of any other individual.

Kinship and part-whole relations can also be considered core instances of possession because in light verb possessive sentences (e.g., those headed by HAVE) relational nouns that encode kinship and part-whole relations consistently yield these relations as the meaning of the whole sentence. In contrast, other kinds of relational nouns do not necessarily provide a consistent interpretation in the same kind of sentence. For instance, eventive relational nouns such as performance and picture in have sentences yield different interpretations depending on context. So (3) could mean that the individual referred to by the subject NP (i.e. Laurence) is about to give a performance that night. This would certainly be the strongest interpretation available if we know that Laurence’s last name is Olivier. On the other hand, if Laurence were a reporter, the sentence could well mean that he had to attend a performance tonight.

(3) Laurence has a performance (tonight).
Other kinds of relations may be expressed via standard possessive constructions, e.g. human attribute, disease, but may not share all the characteristics of possessive constructions encoding the core possessive relations. For instance, in different languages, some sentences attributing properties such as intelligence, temper, height, weight, etc. may be more naturally expressed by adjectival constructions and others by possessive sentences. Some may be expressed by both kinds of constructions, but may show a preference for one or the other depending on the actual noun used. In contrast, kinship, part-whole, and control relations do not show this affinity with adjectival means of expressions. For more detailed discussion regarding the core status of kinship, part-whole, and control relations as possessive relations, with evidence from predicative possessive sentences, see Tham (2005, 2006). For arguments with the same thrust based on adnominal possessives, see Jensen and Vikner (1994). Although light verb possessive sentences, i.e. those headed by HAVE as illustrated above, or by BE, e.g. in case-marking languages such as Hindi, Finnish, etc., are compatible with other interpretations, these other interpretations are contextually-dependent, whereas control, kinship, and part-whole relations are always available to these sentences without contextualization (Tham 2005). These relations are also the most readily available to adnominal possession constructions (e.g. the girl’s car, the girl’s teacher) without need of further contextualization (Jensen and Vikner 1994). Therefore, the possessive sentences discussed in this paper are those encoding the core possessive relations. In some languages, these structures may also encode human attribute, disease, etc., but not in all. I set aside these kinds of relations as well as any special characteristics the structures encoding them may show.

3 Background: the PAL hypothesis

The background to this paper is perhaps best summed up by the following quote from Lyons (1977), which is one of the clearest statements of the PAL hypothesis:

“the term ‘possessive’, as it is traditionally employed by linguists, is somewhat misleading: it suggests that the basic function of the so-called possessive constructions that are found in languages is the expression of possession or ownership. . . . It can be argued that so-called possessive expressions are to be regarded as a subclass of locatives (as they very obviously are, in terms of their grammatical structure, in certain languages)”
Lyons (1977:474)

The time of publication and the survey nature of the work in which this quote appears should of course be taken into account, but there is no lack of later work which applies this assumption to theories of argument realization. In this particular quote, it is not clear which level of representation this claimed identity between possessives and locatives is supposed to apply at. Nevertheless, it effectively demonstrates the fundamental premise behind the PAL hypothesis: that because possessive relations are linguistically encoded by locative-encoding structures, they are a subclass of locatives. In this section, I discuss this hypothesis in some closer detail.
3.1 Reasons for treating possessors as locations

Whether at the level of conceptual representation or linguistic representation, the evidence cited for treating possessors as locations has been largely similar, and is based in morphological evidence.

First, in many languages, locative case marking and adpositions are employed to encode PSRs (Clark 1970, Freeze 1992). An example is Hindi, where the postposition (-ke) paas ‘near’ encodes both spatial proximity (4a) and possession (4b).²

(4) Hindi

a. raam baazaar-ke paas hai
    Ram-NOM market-OBL.GEN near be-PR
    Ram is near the market.

b. raam-ke paas ek hii makaan hai
    Ram-OBL.GEN near one only building be-PR
    Ram has/owns only one building.
    Mohanan (1994:179) (63)

Similarly, the Adessive case in Finnish, which encodes the locative relation expressed by English *on* (and which, like most spatial prepositions in English, covers a range of spatial configurations that may be more or less similar to *on*-ness: see Herskovits (1986)) also attaches to animate-denoting nominals that are interpreted as possessors.³

(5) Finnish

a. Kissa on mato-lla
    cat is mat-ADE
    The cat is on the mat.

b. John-lla on kissa
    John-ADE is cat
    John has a cat.

Second, possessive verbs exhibit argument realization patterns analogous to locative patterns. A familiar example is the argument encoding of the verb *belong* in English (6a), where the PSR role is realized by a PP, in structural analogy to the encoding of the LOC role in a locative sentence such as (6b).

(6) a. The book belongs to Mowgli.

b. The book lay on the table.

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² Abbreviations used: ABS = absolutive, ACC = accusative, ADE = adessive, CL = classifier, COM = comitative, ESS = essive, GEN = genitive, INE = inessive, NOM = nominative, OBL = oblique, PA = past, PL = plural, PR = present, SG = singular.

³ Nominals that denote inanimate possessors are marked with the Inessive case, which encodes a spatial relation largely corresponding to what English *in* provides.
This resemblance is dramatically instantiated in languages such as Scots Gaelic (see Freeze 1992) and Irish (Harley 1996), where locative (7a) and possessive (7b) copular sentences appear identical:

(7) a. Tá an mhin sa phota  
BE the oatmeal in.the pot  
The oatmeal is in the pot.  
Harley (1996):((8)a)  

b. Tá an peann ag Máire  
BE the pen at Mary  
Mary has the pen.  
Harley (1996):((8)c)  

Third, the encoding of PSRs is further linked to the encoding of LOCs through an animacy-based complementarity: where distinct, dative case (indicating PSR status) is restricted to or unmarked for animate-denoting nominals, whereas locative case is restricted to or unmarked for inanimate-denoting nominals (Aristar 1996). Diachronically, “The dative can and does arise . . . from the locative . . . the animacy-oriented variant of the locative can diachronically be interpreted as an indirect object.” (ibid. p.209). That is, morphological marking of PSRs can and do derive historically from LOC marking when attached to animate-denoting nominals, a fourth reason to consider PSRs as animate LOCs.

Given these generalizations, the hypothesis that PSRs are animate LOCs is eminently reasonable. This idea has thus been implemented in different ways, distinguished above as the linguistic versus the conceptual PAL hypotheses. I turn to these immediately.

3.2 The linguistic PAL hypothesis

A representative proponent of the linguistic PAL hypothesis is Freeze (1992) (see also Freeze (2001)), which draws inspiration from the observations on the similarities between BE and HAVE in Benveniste (1966/1971). In this approach, the derivational relationship between LOCs and PSRs is established via an intermediary structure: existential sentences. While locative, existential, and possessive sentences in English (8) look sufficiently distinct from one another, their counterparts in various languages show far greater surface similarities, as for instance in Hindi below (9).

(8) a. The/A pen is on the table.  
Locative  
b. There is a pen on the table.  
Existential  
c. Mowgli has a pen.  
Possessive

(9) a. raam baazaar-ke paas hai  
Ram-NOM market-OBL.GEN near be-PR  
Ram is near the market.  
Locative  

b. baazaar-ke paas ped hai  
market-OBL.GEN near tree be-PR  
There is a tree near the market.  
Existential
As noted earlier, locative case marking (here *ke paas*) is used to encode possession (9c). Furthermore, an existential sentence appears to be simply an ‘inverted’ locative sentence with the LOC phrase in subject position (9b). As will be detailed in section 6, Freeze’s analysis capitalizes on these similarities by assuming that (i) existential sentences are inverted locatives; (ii) PSRs are animate LOCS; and (iii) possessive sentences are structurally identical to existential sentences. For now, let us turn our attention to the PAL hypothesis. The core of Freeze’s analysis lies in the prepositional small clause in (10) below. The head preposition encodes a locative meaning, and possession is treated as a locative relation where the possessor is animate.

(10)

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(Ã¢â‚¬â€œ Freeze 1992:558) (7)
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From this basic PP, both theme subject locative sentences (8a, 9a) — Freeze’s “predicate locatives” — and existential sentences (8b, 9b), which in turn are equated with possessives (8c, 9c), are derived via the rules in (11) below.

(11) Given the arguments THEME and LOCATION within a predicate PP, either

a. Predicate locative: the theme moves to [Spec,IP], or
b. Existential: locative phrase moves to [Spec,IP]

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(Freeze 1992:559) (8)
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The following demonstration of Freeze’s analysis uses examples from Hindi because the locative marking on the PSR nominal is illustrative of what the PAL hypothesis attempts to capture. Before going on, a brief note about another aspect of this analysis is in order. Freeze’s analysis invokes a PREPOSITION INCORPORATION component (see section 5.2.3). For languages such as English with a lexical HAVE, the locative preposition is assumed to incorporate into Infl, thus capturing Benveniste’s original intuition that HAVE is an “inverse TO BE-TO”. An incorporation approach is adopted in another body of work on possessive predication. Kayne (1993) applies proposals of Szabolcsi (1983) for Hungarian, to derive English *have* from a genitive PSR (i.e., *John
has a book from John's book is). Here, it is presumably a D⁰ that has been incorporated. Despite the shared mechanism, it should be noted that the D-incorporation approach does not subscribe to the PAL hypothesis and is quite distinct from it. Indeed, by adopting the genitive NP as the base structure, the D-incorporation approach would seem to assume that the PSR is in a higher syntactic position than the PSM, which is in a way consistent with the current proposal. For further discussion and development of the D-incorporation approach, see Español Echevarría (1997), Muromatsu (1997), Postma (1997).

Returning to the PAL hypothesis, we can see that in the predicate locative in (12a) below, the TH NP occurs sentence-initially, and has presumably moved into [Spec, IP] from [Spec, PP]. (12b) provides the d-structure that would be posited under this analysis. (12c) represents the surface word order, and movement of the TH NP is indicated by sub-indices.

(12) Hindi

a. raam baazaar-ke paas hai
   Ram-NOM market-OBL.GEN near be-PR
   Ram is near the market.

b. d-str

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  IP
  |   I'
  \  PP
   | NP
   /  P'
  Raam bazaar-ke paas hai
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c. s-str

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  IP
  |   I'
  \  PP
   | NP
   /  P'
  Raam i t_i bazaar-ke paas hai
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For an existential sentence (13a), the d-structure is identical to that of the predicate locative (13b). Here, however, the LOC phrase (P’) moves into [Spec, IP] position. According to Freeze, this is prompted by the indefinite status of the TH NP, reflecting the definiteness effect in existential sentences. The s-structure representation of (13a) is given in (13c).
A PSR nominal can also be encoded with the locative marking *ke paas* 'GEN.near', as shown in (14) below. It originates from the same structure as (12a) and (12b), and is derived in exactly the same way as (12a). That is, its structure would be identical to that in (12c).

(13) Hindi
a. baazaar-ke paas ped hai
market-OBL.GEN near tree be-PR
There is a tree near the market.
b. d-str

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(13) Hindi
a. baazaar-ke paas ped hai
market-OBL.GEN near tree be-PR
There is a tree near the market.
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(14) raam-ke paas ek hii makaan hai
Ram-OBL.GEN near one only building be-PR
Ram has/owns only one building.
Mohanan (1994:179) (63)

Since locations and possessors emerge from identical d-structures in this approach, the analysis accounts straightforwardly for the use of locative morphology to express possessive meanings. As I discuss in more detail below, however, it cannot accommodate several other patterns in possessive encoding, such as the availability of “pure” possessive morphology, the presence of which seems surprising in a theory where possessive sentences are merely derived structures. It also does not provide a principled way to distinguish between true animate locations versus animate possessors with locative morphology.
3.3 The conceptual PAL hypothesis

The conceptual approach to the PAL hypothesis is manifested most clearly in works within the localist tradition (Gruber 1965, Jackendoff 1972, 1983, 1990). The localist hypothesis is based on the idea that the linguistic representation of location and motion concepts provides the primitives for the linguistic representation of other concepts in general, even those that may not be obviously locative or motional. The participants in location and motion events, also called thematic relations, typically invoked are: Theme (thing located or in motion); Goal or Location (where the Theme is located, or the location to which the Theme moves); Source (where the motion begins); and Path (the trajectory followed by the moving Theme). These relations also feature in the representation of non-locative and non-motional predicates: for instance, adjectives are represented as abstract Locations; the subject of an adjectival predication is a Theme. A change of state (e.g. *John became angry*) can similarly be represented as an abstract motion towards an abstract goal location of anger. These extensions of the localist metaphor are said to apply in different semantic fields (Jackendoff 1983, 1990). With respect to the representation of possessive predicates, then, possessors are Locations in the possessional field, and possesseees are Themes (Anderson 1971, Ostler 1979, Jackendoff 1990). On the face of it, this conclusion is very attractive as it provides a natural explanation for the widely-attested use across languages of locative-encoding morphosyntactic devices to encode possession.

Difficulties with the localist account arise when attempts are made to apply this conceptual metaphor to grammatical representation. Within the localist framework, argument realization is captured by means of a thematic relations hierarchy, where thematic relations are ranked relative to one another. Such issues as mapping of verb arguments to morphosyntactic entities, e.g. to the grammatical functions subject and object, or to positions in phrase structure, etc. are determined by relative position on the thematic hierarchy.

Given the two thematic relations crucial in a locative relationship — Theme and Location — there are two ways to arrange them relative to each other on a hierarchy: either Theme may be higher than Location, or vice versa. Indeed, both rankings have been posited.

Jackendoff (1972:43) assumes the hierarchy in (15) below, ranking Location over Theme. Although they do not assume the PAL hypothesis, the ranking of Location over Theme, and Possessum over Possessor, is also found in Van Valin and LaPolla (1997).

(15) a. Agent

   b. Location, Source, Goal

   c. Theme

   Jackendoff (1972:43)

In other works, e.g. Ostler (1979), and some of Jackendoff’s later work (e.g. Jackendoff 1983) the reverse prominence has been postulated. The ambivalent nature of the issue is of course, due to the encoding options available for possessive sentences (which under the PAL hypothesis are assumed to be locative) (16).

(16) a. Mowgli has a pen.
b. The book belongs to Mowgli.

This seems reason enough to question the soundness of the PAL hypothesis. Indeed, I show below that as long as the PAL hypothesis is maintained, both alternatives run into problems.

Assuming the ranking Theme > Location (Ostler 1979, Carter 1977, Jackendoff 1983) under the PAL hypothesis, possessive verbs such as have are treated as showing an inverse argument realization pattern. As Pinker (1989:189) points out, however, despite the intuitive appeal of such an approach, this kind of analysis predicts the primacy of the BELONG pattern, and the linking pattern of HAVE must be obtained by marked linking rules or idiosyncratic argument assignment conditions directly imposed by HAVE. This makes it surprising that HAVE is a high-frequency item which is acquired early without any reversals of grammatical functions or intrusions of spatial adpositions. Pinker thus proposes, in addition to the representation in (17a), a primitive HAVE (17b) that would be the lexical conceptual structure representation of HAVE-type possessive verbs.

\[(17)\] a. BE[Thing,Place]

\[\quad\quad\text{b. HAVE}[X,Y]\]

Alternatively, it is possible to follow the lines of Jackendoff (1972), and subscribe to the PAL hypothesis under the relative prominence of Location > Theme. This approach would get past the concerns raised by Pinker (1989), but it is now problematic for locative predicates. Under this alternative, such verbs as arrive, reach, go, stay, etc. show a mismatch between their lexical semantic representation and their mapping to syntax. While this is a possible analysis, I show in section 4.1 below that the ranking for locative roles should be that of TH over LOC, and the ranking in (15) is inappropriate for capturing argument realization of locative verbs.

Crucially, whichever ranking is assumed, the same difficulty arises: in either case, locative and possessive predicates are predicted to display one and the same argument realization pattern. Yet possessive sentences can exhibit two realization patterns. In the next subsection, I discuss further reasons that possessors should not be treated as animate locations at a linguistic level of representation.

### 3.4 Reasons for distinguishing possessors from locations

If PSRs are animate LOCs, it is only to be expected that they are encoded like LOCs, but it now becomes surprising that there should be instances where PSRs are not encoded like LOCs. For example, there are cases of ‘pure’ possessive morphology that do not impart any locative interpretation to a sentence. In Hindi, besides the locative *ke paas*, PSRs can also be encoded with the genitive case, also in a copular sentence.

\[(18)\] raam-*kaa* ek hii makaan hai
Ram-GEN one only building be
Ram owns only one building.
Mohanan (1994:179) (63)

Similarly, ‘pure’ possessive verbs such as own, possess, acquire etc. in English which do not encode the PSR argument as a LOC must be accounted for otherwise.
Moreover, the PSR as animate LOC hypothesis runs the risk of simply being a paraphrase for saying that PSRs can be marked with locative case. Motivation for the PAL hypothesis often appeals to the animacy-conditioned complementarity in the interpretation of a locative case-marked nominal as either a LOC (when inanimate) or a PSR (when animate). If correct, this would make the corollary prediction that an animate-denoting nominal should not be interpreted as a LOC, and can be interpreted only as a PSR.

There are two difficulties with this idea: first, in languages where PSRs are encoded with locative case, the same case marker can be ambiguous between a locative or a possessive interpretation when attached to an animate-denoting NP. This is the case in Marathi, where a sentence such as (19a) is ambiguous between either a locative or a possessive interpretation, although the former admittedly does not arise as easily. Yet these interpretations are clearly distinct – only the locative interpretation can be paraphrased with the sentence in (19b), where the LOC-denoting NP is replaced by locative tithe ‘there’.

(19) Marathi
   a. māzhā-jawal ek pustak āhe
      my-OBL-near one book is
      I have a book. OR
      There is a book near me.
   b. tithe pustak āhe
      there.loc book be
      There.loc is a book.

Second, even in languages where PSRs are encoded by a locative case and the PSR interpretation is the only one possible for an animate-denoting nominal marked by this case, true animate locations are always available for expressing such spatial relations as BEHIND, BESIDE etc. For example, the Adessive case in Finnish when attached to an animate-denoting nominal, allows only a PSR interpretation. (20a) cannot mean that there is a cat on John, for instance, sitting on his back. Yet animate-denoting nominals can be interpreted locations with the right sort of locative morphology. For instance, the spatial relation BEHIND is encoded identically for both animate and inanimate nominals (20b,c). That is, the PSR interpretation of an animate-denoting NP in the Adessive case is not due to an across-the-board prohibition on animate locations, but is a result of a possessive interpretation provided by the Adessive case marker in addition to its locative interpretation.

(20) Finnish
   a. John-lla on kissa
      John-ADE is cat
      John has a cat.
   b. John on Bill-in  taka-na
      John is  Bill-GEN back-ESS
      John is behind Bill.
c. kirja on pull-on  **taka-na**  
book is bottle-GEN back-ESS  
The book is behind the bottle.

Of course, treating PSRs as animate LOCs does not necessarily preclude the existence of animate LOCs that aren’t possessors. That is, the PAL hypothesis might amount to no more than saying that all PSRs are encoded with locative morphosyntax, and not that all animate LOCs are PSRs. But this step is empirically inadequate in the first place, given the existence of non-locative PSR encoding morphosyntax. So we are left with saying that PSRs can sometimes be encoded as LOCs — which is simply a restatement of the facts.

Whether couched in terms of thematic roles or derivational relations, the PAL hypothesis, interpreted as a grammatical claim, cannot be correct for all languages. But it is possible to interpret the PAL hypothesis as applying in the conceptual domain, although again only as an existential rather than a universal rule i.e. PSRs can be treated as conceptual LOCs. This allows for the overlap in their morphological encoding without requiring that PSRs and LOCs show the same argument realization patterns.

The generalizations concerning whether to treat PSRs as LOCs alike are summarized in tabular form below for ease of reference.

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4 The lexical semantics of location and possession

In this section, I consider the argument realization patterns of two-place locative and possessive verbs, and argue that locative and possessive predicates should be represented differently. Specifically, I argue that the semantic roles of these predicates should have the following (distinct) rankings:

\[(21) \quad \text{a. PSR} > \text{PSM} \quad \text{but} \quad \text{b. TH} > \text{LOC}\]

I argue for this distinction based on contrasts in semantic and information structural properties of locative and possessive sentences that exhibit different mappings of semantic roles to syntax.

4.1 The representation of location

I begin by considering first the question of what kind of argument structure a locative predicate should be assigned. The question is so basic as to appear trivial, but having seen the preceding discussion of the conceptual PAL hypothesis, it might perhaps merit some discussion after all. I argue that the ranking for locative arguments should be TH > LOC, rather than the LOC > TH prominence assumed in Jackendoff (1972).

The first important issue to resolve, then, is to determine the “canonical” morphosyntactic pattern for verb meanings that exhibit more than one realization pattern. Even for simple two-place locative predicates, there are choices to make. Given a two-place predicate, there are only two logically possible ways to realize the arguments relative to each other: either TH takes precedence (in some way or other), or LOC takes precedence. If we define “precedence” as relative syntactic prominence, i.e. in terms of grammatical function (GF) or phrase structure, this means “realization as a higher GF” or “realization in a higher phrase structural position”. Indeed, both kinds of realization patterns — with either TH or LOC realized as syntactically more prominent — are attested.

4.1.1 Canonical versus “inverted” locative verbs

The standard examples of locative sentences cited typically feature the realization pattern of TH=Subj(ect). The LOC may be realized as a PP oblique (22b) or an NP object (22c). In (22a) the PP would be part of the predicate, and the LOC-denoting NP (or more precisely, the NP denoting the reference entity based on which the location is defined) is the object of the preposition.

\[(22) \quad \text{a. The book is on the table.} \quad \text{b. The book lay on the table.} \quad \text{c. The train reached the station.}\]

These kinds of argument realization patterns suggest that at argument structure, we should posit the ranking of TH > LOC. We are prevented from immediately reaching such a conclusion, however, by an ostensibly inverted linking pattern of LOC=Subj, TH=Obj, as exemplified by verbs
such as *contain* and *support*, which seem simply to be an inverted realization pattern of such locative predicates as *in* and *on*.

(23) a. The bottle contained a ship.
    b. A ship was in the bottle.

(24) a. The table supported a vase.
    b. A vase was on the table.

There is reason to suspect, however, that containment and support relations are not run-of-the-mill locative relations. As Croft (1998) argues, the location argument of verbs such as *contain* and *support* bear certain force-dynamic entailments which force linking to subject, much in the same way as a causative entailment does for the ‘stimulus’ role of psych verbs such as *frighten* (Grimshaw 1990:22–25). Note firstly that despite the apparent synonymy of (23a,b) and (24a,b), *contain* is really not equivalent to *in*, nor *support* to *on*.

The containment relation makes an additional entailment of encasement that is not present for *in*: consider, for instance, the rather different scenarios described by the examples in (25).

(25) a. Little Jack Horner’s finger was in the pie.
    b. The pie contains Little Jack Horner’s finger.

There is also a requirement on the container argument that it somehow be able to ‘hold itself together’. So while it is perfectly coherent to say (26a), to describe a pot of daffodils wrapped with red foil, (26b) is quite inappropriate.

(26) a. The pot of daffodils was in some red foil.
    b.#Some red foil contained the pot of daffodils.

In similar fashion, *support* also entails some kind of force exerted by the ‘supporter’ against the ‘supportee’. It expresses a more specific relation than either *against* or *on* (27b). It is possible, with judicious selection of accompanying verbs, to express the meaning of *support* with locative prepositions (27c).

(27) a. The sandbags supported the crumbling hillside.
    b.#The crumbling hillside was/leaned on/against the sandbags.
    c. The hillside was crumbling/sagging on(to)/against the sandbags.

It is not possible, however, to replace a simple locative sentence with a PP predicate using *support*:

(28) a. The vase was on a doily.
    b.#The doily supported a vase.

These contrasts imply that the subject arguments of verbs such as *contain* and *support* are not simple locations. They are realized as subjects because of the additional entailments they bear. In Dowty’s proto-role theory (Dowty 1991), for instance, these added force dynamic conditions would render the location participant a proto-agent.
4.1.2 The status of locative inversion

To show further that the argument realization pattern of contain-type verbs is not canonical for locative arguments, I turn to another locative sentence pattern which is similarly compatible with the relative prominence of LOC > TH, namely locative inversion sentences, e.g. (29).

(29) a. On the landing was a chair.
   b. On the wall hung a large painting.
   Hartvigson and Jakobsen (1974:11) (6) and (5)

As its name suggests, however, locative inversion should really be treated as a non-canonical structure in that it is associated with a particular discourse, or information structural, condition, which has been termed a presentational function (Hetzron 1975, Bolinger 1977, Penhallurick 1984, Bresnan 1994, Levin and Rappaport Hovav 1995, Birner and Ward 1998). The presentational function can be described as one of introducing or bringing attention to the presence or existence of a discourse referent (Hetzron 1975, Bolinger 1977, Breivik 1981, Penhallurick 1984). This function can be illustrated by the appropriateness conditions on the examples in (30). It is easy to imagine a context for a locative inversion sentence such as (30a), e.g. as part of the description of a room. It is important, however, that the post-verbal locatum or theme NP, must not constitute material that is “under discussion” in the discourse. So if we were, for instance, describing a particular dictionary, the locative inversion sentence in (30b) is a not felicitous way of indicating its whereabouts. In contrast, the “regular” locative sentence in (30c) has no such restriction.

(30) a. On the table lay a huge dictionary, next to a lamp.
   b. The dictionary was huge. #On the table lay it, next to a lamp.
   c. The dictionary was huge. It lay on the table, next to a lamp.

Note that the infelicity of On the table lay it in (30b) is not the result of a constraint against definite theme nominals in locative inversion sentence, as (31) shows.

(31) Among the guests was sitting my friend Rose.
   Bresnan 1994, 75 (2a)

Following the presentational function analysis, the locative inversion sentence in (30a) is appropriate because the NP a huge dictionary introduces an unfamiliar participant into the discourse. In contrast, its counterpart in (30b) is inappropriate because the dictionary is not only familiar, the previous sentence establishes that it is under discussion, i.e. a topic (Vallduví 1992, Lambrecht 1994). We are now ready to see why the ranking PSR > PSM should be accepted for possessive predicates.
4.2 Theoretical assumptions

Before delving into realization patterns of possessive predicates, I lay out some assumptions concerning lexical semantic representation and the morphosyntactic realization of arguments, as I will be discussing argument realization patterns via how they are lexically specified. The crucial assumptions for the analysis are first, a distinction between the levels of lexical semantic and morphosyntactic representation; and second, within syntactic representation, a distinction between grammatical relations and grammatical category. Grammatical information is thus distributed over several levels, in the spirit of L(exical) F(unctional) G(rammar) (Kaplan and Bresnan 1982, Bresnan 2001). The generalizations presented here can, however, be captured in any framework which allows for a mismatch between semantic and syntactic rank (and thus presumably assumes a non-derivational relationship between the semantics and syntax of predicates), and a way of encoding relative prominence at both levels of representation, as well as a distinction between LOCs and PSRs.

4.2.1 Lexical semantic representation

First, I assume that languages define a level of lexical semantic representation which is distinct both from the more cognitive level of conceptual structure and from syntactic representation. This level represents the linguistically relevant elements of word meaning, analogous to Pinker’s (1989) semantic structures, Semantic Form in Lexical Decomposition Grammar (Wunderlich 1997, Kiparsky 2001), and the level of Semantic Structure in Mohanan and Mohanan (1999), among others. Following these approaches, I will simply term this level of representation SEM-STR.

Since this is a paper about possessive (and locative) predication, we will largely be concerned with verb meaning and occasionally the meanings of adpositions and case markers. SEM-STR, verb meaning is represented as a decompositional predicate-argument structure. Arguments are represented as variables such as x, y. The main point for current purposes is that the semantic representation allow for a principled way of capturing relative semantic rank between participants in a relation. This ranking is encoded in the order of semantic arguments in SEM-STR representations, with rank decreasing from left to right.

The analysis to be proposed here is equally compatible with an approach that employs thematic role hierarchies, but the choice of a predicate argument structure is intended to reduce the possibilities for thematic role co-occurrences that a role-based hierarchy would potentially allow. For instance, while we often see predicates that specify role pairs such as theme and location, agent and patient, instrument and patient, etc., we do not see, nor do we expect to see, such role combinations as instrument and location, or beneficiary and patient.

Of course every theory can find its own way to restrict the possible semantic role combinations specified by a predicate. The choice of predicate argument structures over thematic role lists is a theoretical claim of the current work in this respect. This choice in turn raises questions about what kinds of predicates can be found in SEM-STR. As noted above, SEM-STR represents the linguistically relevant components of meaning, as opposed to contentful elements of meaning that do not affect the grammatical behaviour of lexical items. This distinction between the structural and contentful aspects of lexical semantics is the basis of Pinker’s (1989) Grammatically Relevant Subsystem, Grimshaw’s (1993) distinction between “semantic structure” and “semantic content”, the separation of structural or templatic meaning from idiosyncratic meaning in Rappaport Hovav
and Levin (1998), among others. Various well-studied and widely accepted structural semantic predicates are already available, some stemming from the generative semantics tradition (McCawley 1973, Lakoff 1965). These include such operators as CAUSE, BECOME, and DO which capture transitivity, aspectual and agentivity properties (Dowty 1979, Wunderlich 1997, Van Valin and La Polla 1997).

As part of this greater research programme in the investigation of structural elements of meaning, the current work argues not only for a predicate POSS, which in itself is not necessarily controversial, but also for the ranking of PSR over PSM. The latter point has often been glossed over in previous work, but the varying assumptions made about it suggest that it is a point worthy of further investigation.

Below, I provide some sample English verb lexical semantic representations. Predicate names are given in lowercase, with first letter uppercase. As a placeholder for the conceptual content of a predicate, the name of the relevant verb or adposition is subscripted to the right of the predicate, enclosed in angled brackets. (32) provides SEM-STR representations for the verbs own and put. The leftmost argument is the most prominent at SEM-STR. For own, POSS indicates that it is a possessive verb, x represents the possessor and y the possessum.\(^4\) The SEM-STR representation for put is standard for decompositional analyses, reflecting the causative nature of the verb with the operator CAUSE, and its locative component with the locative predicate BE.AT, which is meant to encode location at a place without specifying a particular spatial configuration (Wunderlich 1991).

\begin{equation}
\text{(32) a. SEM-STR for own} \\
\text{POSS}_{\text{own}}(x, y)
\end{equation}

\begin{equation}
\text{b. SEM-STR for put} \\
\text{CAUSE}_{\text{put}}(x, \text{BECOME}(\text{BE.AT}(y, z)))
\end{equation}

4.2.2 Lexical entries

It is by now standard in theories of argument realization to assume a level of argument structure that does not encode actual semantic content about participant roles of a predicate (Zubizarretta 1987, Rappaport and Levin 1988, Grimshaw 1990, among many others). The use of a separate level of argument structure allows for a more constrained interface between semantics and syntax. For instance, it allows optionally realized semantic participants to be represented separately (at SEM-STR but not at argument structure) from obligatorily realized ones.

My analysis of locative and possessive predicates is certainly compatible with a theory that assumes a level of argument structure, but given the paucity of semantic participants under consideration, it is not necessary for purposes of discussion, and for perspicuity, my representations and generalizations below will simply be stated between SEM-STR and the syntactic levels of grammatical function structure (GF-STR) and grammatical category structure (GC-STR). GF-STR lists the grammatical functions of the syntactically realized arguments of a predicate. Grammatical functions are drawn from a hierarchy, and are thus inherently ranked with respect to each other.

\(^4\) Here and below, I use own as representative of the PSR > PSM ranking instead of have. This is to simplify the discussion by sidestepping the definiteness effect (DE) found in English have sentences, which is similar to that found in existential there sentences (Partee 1999, Keenan 1987). For arguments that the DE for English have is lexically encoded, and a proposal for incorporating inalienable and alienable possessive meanings in the lexical semantic representation of have see Tham (2005, 2006).
For current purposes, the hierarchy of Subj(ect) > Obj(ect) > Obl(ique) (also see the following subsection) is all that is needed. Finally, a lexical entry for a predicate contains a level of grammatical category (part-of-speech) specification including case specifications, for each realizable argument of the predicate. G(rammatical) C(ategory) structure (henceforth GC-STR) specifications are not ordered. Correspondences between levels are indicated by co-indexation, and are assumed to be derivable from a set of argument realization principles, of which some important ones will be presented below.

For illustration, the lexical entries assumed for English own and put are given below. The lexical entry of own reflects the current proposal that PSR ranks above PSM. These semantic arguments map to grammatical subject and object respectively, preserving relative semantic prominence, and in agreement with the default correspondences between GF-STR and GC-STR argued for below.

(33) Lexical entry for English own:

```
own: V SEM-STR POSS_{own} (x_i, y_j)
GC-STR NP_i, NP_j
GF-STR Subj_i, Obj_j
```

(34) Lexical entry for English put:

```
put: V SEM-STR CAUSE_{put} (x_i (BECOME(BE.AT(y_j, z_k))))
GC-STR NP_i, NP_j, PP_k
GF-STR Subj_i, Obj_j, Obl_k
```

### 4.2.3 Syntax-semantic correspondences in argument realization

Lexical entries interact with phrase structure rules and with argument realization conditions to determine the mapping of arguments to syntax. The main condition I adopt for argument realization is called Isomorphy, which takes the prominence-matching approach in Ostler (1979), Carrier-Duncan (1985), Wechsler (1995). The label Isomorphy is borrowed from Wechsler (1995). I state the principle as follows:

(35) **Isomorphy:**

The mapping of semantic roles to grammatical functions preserves relative semantic prominence.

The effect of Isomorphy is essentially to ensure that higher semantic roles are mapped onto higher syntactic constituents, here represented by a hierarchy of grammatical functions, the relevant portion of which is given below:

(36) Hierarchy of grammatical functions:

```
SUBJ > OBJ > OBL
```

Isomorphy interacts with other factors, such as the categorial and morphological realization of arguments. For instance, Wechsler (1995:3) relativizes Isomorphy to whether an argument is restricted, indicated by an association with a formal element in the language such as an adposition or semantic case and a concomitant semantics. In this case, Isomorphy does not apply, and the
restricted argument is typically realized as an oblique. This provision is a recognition of a correlation between special formal marking on an argument, and a non-canonical syntactic pattern of argument realization. It assumes first, that oblique functions are marked (in the sense of being non-canonical); second, that the presence of certain morphosyntactic items in argument realization is marked; and third, that the marked status of one signals the marked status of the other.

The assumption that special formal marking indicates semantic restrictedness has a corollary, namely, that unrestricted arguments have no special marking, or that structural (non-semantic) case is the default, elsewhere case. Therefore, I assume that argument realization also manifests a set of default correspondences between the semantic category of arguments and their morpholexical realization, which can be understood in the vein of Grimshaw’s (1981:174) canonical structural realizations (CSRs). A tentative and incomplete list of these correspondences is provided in (37) below. Here LocP is a symbol that ranges over a set of non-verbal relational elements that typically realize locations, whose exact category varies across languages. In familiar languages such as English, LocP would be set to PP.

(37) Semantic/GC correspondence:

<table>
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<th>Semantic category</th>
<th>Grammatical category</th>
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</thead>
<tbody>
<tr>
<td>Individuals</td>
<td>NP</td>
</tr>
<tr>
<td>Locations</td>
<td>LocP</td>
</tr>
<tr>
<td>Predicates</td>
<td>VP</td>
</tr>
</tbody>
</table>

In addition, individual languages may also determine other semantic categories that are indicated by special morphosyntactic elements. For instance, many languages have specialized ways of marking instruments, recipients (see below), spatial goals, etc. I assume the existence of language-particular semantic/morpholexical correspondences apart from those in (37) above, which are assumed to be universal. Likely candidates on this list would be classes of semantic arguments such as instruments, experiencers, recipients, etc. I leave the issue of such a list and its complete content open for future research. Anticipating later discussion, though, I will mention the need for a default correspondence between PSRs and a nominal-denoting phrase with oblique marking.

A lexical entry that shows the syntax-semantic interface in accordance with Isomorphy and default correspondences at all levels is given in (38) below. This would, for instance, be the lexical representation found for most transitive activity verbs, e.g. push, kick, touch, etc.

(38) SEM-STR PRED(x_i, y_j)
GF-STR Subj_i, Obj_j
GC-STR NP_i, NP_j

With these provisions, and the SEM-STR representation given so far for the verb own, the assumption of course is that the argument realization of have respects Isomorphy. This point is indeed what I will argue for in detail below.

At this juncture, however, I wish to return briefly to the preceding discussion of locative inversion and consider it in light of Isomorphy, introducing a final argument realization principle. Why have sentences such as (30a) (repeated below) traditionally been named ‘inversion’ sentences?

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5This organization assumes a universe of semantic types among which locations constitutes one type. In a typical two-sorted type theory, individuals would be of type e and predicates of type < e, t >, and sentences would be type t.
On the table lay a huge dictionary, next to a lamp.

Such a convention really reflects two implicit assumptions: first, that argument realization respects relative semantic rank: the very intuition expressed by Isomorphy, and second, that the ranking between locative arguments is \( \text{TH} > \text{LOC} \). This is presumably also the reason for so much ink having been spilled over the presentational function of locative inversion sentences. The underlying motivation for such works is the notion that being non-Isomorphic must signify something. To capture this intuition, I introduce the Condition on Non-Isomorphic Structures in (39) below.

(39) Condition on Non-Isomorphic Structures:
A sentence with a non-Isomorphic argument realization pattern is compatible with a proper subset of information structure or semantic interpretations available to its Isomorphic counterpart.

Note that (39) is not an argument realization principle per se, but rather a methodological generalization that serves to distinguish between Isomorphic and non-Isomorphic argument realization patterns when alternative analyses are available. Looking at locative inversion in the light of (39), we would conclude that the Isomorphic pattern for the linking of locative predicates is \( \text{TH}=\text{Subj}, \text{LOC}=\text{Obj/Obl} \). That is, the ranking of locative arguments is \( \text{TH} > \text{LOC} \). This conclusion can be arrived at by considering two locative patterns: the contain type argument realization pattern, and locative inversion.

As discussed above, verbs such as contain and support arguably describe locative relations, but map the location argument to subject and theme argument to object, potentially contradicting the proposal that \( \text{TH} > \text{LOC} \) at the level of lexical semantic representation. Yet it was also shown that contain-type verbs include a force-dynamic entailment on the location argument. Their non-Isomorphic argument realization pattern can thus be said to show a more restrictive semantics than regular locative sentences. In locative inversion sentences, the LOC PP appears in a phrase structure position higher than the TH NP. This configuration is, however, associated with a special information structural function, as argued by many (see discussion above), thus conforming with the expectation based on (39).

In short, locative inversion and the existence of contain-type verbs can both be interpreted in accordance with Isomorphy and the assumption that the TH, and not the LOC, is the higher ranking semantic argument for a locative predicate.

5 The Have pattern as Isomorphic

With this background, I now turn to the question of how possessive arguments should be ordered. Based on information structural contrasts between have and belong sentences in English, I argue that have shows the Isomorphic argument realization pattern. I then consider locative patterns of possessive encoding in languages such as Irish, showing how they can be reconciled with the ranking of PSR > PSM without subscribing to the PAL hypothesis.
5.1 Information status contrasts between *have* and *own*

As noted above, the contrast in argument realization patterns between English possessive verbs such as *own* and *have*, as opposed to *belong*, has led to different proposals as to which exemplifies the underlying ranking between PSR and PSM. The HAVE pattern maps the possessor to the subject position in [Spec, IP], c-commanding the possessum object. The BELONG pattern has an almost reverse pattern: the possessum maps to subject position and the possessor is realized by a *to* PP.

(40)  
\[ \begin{align*}
&\text{a. HAVE pattern: PSR NP syntactically more prominent.} \\
&\text{b. BELONG pattern: PSM NP syntactically more prominent.}
\end{align*} \]

(41)  
\[ \begin{align*}
&\text{a. Mowgli has/owns a book.} \\
&\text{b. The book belongs to Mowgli.}
\end{align*} \]

Which of these shows the ‘original’ semantic ranking, and which the ‘inverted’ one? That is, which mapping pattern is Isomorphic? I show below that information status contrasts between *own* and *belong* sentences suggest that the HAVE pattern is the Isomorphic one. That is, the lexical entries for *belong* and *own* should be as follows:

(42) \[ \text{SEM-STR } \text{POSS}_{<\text{belong}>}(x_i, y_j) \]  
\[ \text{GC-STR } \text{NP}_j, \text{PP}_i \]  
\[ \text{GF-STR } \text{Subj}_j, \text{Obl}_i \]

(43) \[ \text{SEM-STR } \text{POSS}_{<\text{own}>}(x_i, y_j) \]  
\[ \text{GC-STR } \text{NP}_i, \text{NP}_j \]  
\[ \text{GF-STR } \text{Subj}_i, \text{Obj}_j \]

Note in both (42) and (43) that the SEM-STR representation remains constant: both *belong* and *own* encode the possessive relation. The major distinction between these verbs lie in the morphosyntactic realization of the PSR: as an oblique PP by *belong* but as the subject NP by *own*. I now present evidence from the information structural behaviour of *own* and *belong* sentences to show that *own* manifests the Isomorphic argument realization pattern.

It is well-known that, out of context, sentences with a topic-focus information structure are more felicitous than one with initial focus or sentence focus (Lambrecht 1994). In addition, sentences with a subject that is in some sense more identifiable (Chafe 1976, 1987, Lambrecht 1994, Prince 1986, Birner and Ward 1998, among others) are preferred to those where it is not. The examples below show that, other things being equal, *own* is more tolerant to violations of these general principles of pragmatic well-formedness. For instance, the sentences in (44) both have non-specific, non-topical subjects. While the *own* sentence (44a) is felicitous (imagine for instance, a math problem), the *belong* sentence (44b) is rather less so (even for a math problem). Since (44a,b) share the same truth conditions, the asymmetry in their felicity should be attributed to the difference between *own* and *belong*.

---

As noted in footnote 4, although I refer to the HAVE and the BELONG patterns, I demonstrate my analysis using *own* instead of *have*, sidestepping issues raised by the definiteness effect of English *have*.
(44) a. A rich man owns a slave.
   b.? A slave belongs to a rich man.

A similar point is demonstrated by the mini-discourses in (45) and (46). These mini-discourses illustrate the relative information structural flexibility of own over belong. In (45), the first sentence in the mini-discourse is set up to ensure that the possessum in the following sentence (the yacht) is the topic, and thus both referential and specific. In contrast, the possessor is non-specific, and thus less identifiable than the possessum. Both belong and own sentences are felicitous in such a context.

(45) PSM topic, PSR focus
   a. That’s a good yacht. It belongs to a Belgian millionaire.
   b. That’s a good yacht. A Belgian millionaire owns it.

In (46), however, the first sentence sets up the possessor of the following sentence to be the topic of the next sentence. Now the own sentence in (46a) is felicitous, but its belong counterpart in (46b) is not.

(46) PSR topic, PSM focus
   a. That man’s a Belgian millionaire. He owns a good yacht.
   b.#That man’s a Belgian millionaire. A good yacht belongs to him.

These examples suggest that belong requires its PSM subject to be specific, or at least more specific than the PSR oblique, whereas own does not impose such a requirement. This means belong is information structurally more restricted than own, and according to the Condition on Non-Isomorphic Structures (39), we should interpret belong as being the ‘inverted’, or non-Isomorphic, possessive verb.

Given this contrast between own and belong, the condition on non-Isomorphic argument realization patterns would then point to the conclusion that the belong pattern is non-Isomorphic, and thus that for a possessive predicate, PSR > PSM is the ranking at lexical semantic structure.

Based on the argument realization patterns of verbs such as contain, and on locative inversion, it was concluded that TH > LOC represents the correct lexical semantic relative prominence for locative predicates. Now independently based on contrasts between different types of possessive verbs, I have argued that PSR > PSM is the argument ranking for possessive predicates at lexical semantic structure. Therefore, although in terms of morphosyntactic realization, PSRs may appear like LCSs, in terms of lexical semantic representation, they should be distinguished.

The assumption that the HAVE pattern, rather than the BELONG pattern, is Isomorphic, is also compatible with Pinker’s (1989) observation that HAVE is crosslinguistically frequent and acquired early. As Pinker observed, this generalization would be unexpected if, in accordance with the PAL hypothesis, the opposite is true.

This section has argued that the SEM-STR representations for locative and possessive predicates are distinct. For a locative predicate, the theme is the more prominent semantic argument, whereas for a possessive predicate, the possessor is the more prominent argument. This suggests that PSRs
are not LOCs at the level of linguistic representation. In the next subsection, I argue that even in languages in which locative, possessive, and existential sentences appear identical, it is still possible to maintain the ranking of PSR > PSM, thus obviating the need for what I call partial PAL hypotheses proposed in Pinker (1989) and Harley (1995, 1996, 2003) that also attempt to accommodate HAVE-type argument realization patterns for possessive predicates.

5.2 A typology for possessive structures

Even more persuasive in support of the PAL hypothesis than the data from Hindi and Finnish discussed earlier are languages such as Irish and Scots Gaelic, in which light verb locative, existential, and possessive structures look identical. The relevant examples from Irish are provided below.

(47) a. Tá an mhin sa phota
    BE the oatmeal in.the pot
    The oatmeal is in the pot.
    Harley (1996):(8a)

b. Tá mhin sa phota
    BE oatmeal in.the pot
    There is oatmeal in the pot.
    Harley (1996):(8b)

c. Tá an peann ag Máire
    BE the pen at Mary
    Mary has the pen.
    Harley (1996):(8c)

Irish-type languages seem to provide direct support for the linguistic PAL hypothesis. The possessive reading of (47c) is easily interpretable as arising from the animacy of the LOC in this case. The apparent identity of these structures also raises a question for the distinction between locative and possessive predication I am proposing.

I show below, however, that the current analysis can be extended to capture Irish-style possessive predication patterns without having to subscribe to the linguistic PAL hypothesis, maintaining the PSR > PSM ranking even for languages such as Irish. This involves bringing the morphosyntactic effects of individual semantic roles into the picture. How such effects play out in different languages leads to a typology for possessive predication structures which includes locative structures.

5.2.1 The PSR as a role with semantic marking

As discussed above (see (37)), across languages, there seems to be a general tendency for certain semantic roles to be realized with oblique marking. This is clearest for predicates with three arguments. In addition, roles of certain two-place relations also show this tendency. These roles usually share the characteristic of not being easily classifiable as agent or patient. Roles of this sort include instruments, experiencers, PSRs, presumably other non-typical agents and non-typical themes, as well as LOCs, which in terms of ontological and semantic entailments are indistinguishable from THs and from another perspective of the speaker, could well be realized as a TH. I submit that PSRs exhibit this preference, expressing this correlation with the principle ObliquePSR in (48) below.
(48) ObliquePSR: A PSR receives oblique marking.

I assume argument realization principles such as Isomorphy and ObliquePSR to be violable, in the vein of Optimality Theoretic constraints, or as Jackendoff (1990)-style preference rules. Keeping consistent the prominence of PSR over PSM. Isomorphy and ObliquePSR make for different possibilities of realizing possessive arguments. Moreover, assuming Isomorphy and ObliquePSR to be violable principles, their interaction also allows for the possibility of a mismatch between lexical semantic representation and syntactic realization.

5.2.2 Deriving a typology

Given the violable status of these principles, there are four logical possibilities for possessive argument realization: both principles are respected (49i), one of them is respected (49ii), or both are violated (49iii).

(49) (i) Isomorphy, OblPSR

(ii) *Isomorphy, OblPSR Isomorphy *OblPSR

(iii) *Isomorphy, *OblPSR

As far as I am aware, only the first three of these possibilities are attested, listed in Table 1 below. The absence of the fourth pattern is very much in keeping with the avoidance of the “marked of the marked”, familiar from the principle of Harmonic Alignment in Optimality Theory (Aissen 1999).

Table 1 below lists the three possibilities for the realization of possessive arguments with up to one obliquely marked, keeping SEM-STR consistent.

<table>
<thead>
<tr>
<th>SEM-STR</th>
<th>GC-STR</th>
<th>GF-STR</th>
<th>Example</th>
<th>Violates</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>PSR &gt; PSM</td>
<td>PSR[PP], PSM[NP]</td>
<td>Pss[PP]Subj &gt; PsmComp</td>
<td>Hindi, Finnish</td>
</tr>
<tr>
<td>II</td>
<td>PSR &gt; PSM</td>
<td>PSR[NP], PSM[NP]</td>
<td>PssSubj &gt; PsmComp</td>
<td>English have, own</td>
</tr>
<tr>
<td>III</td>
<td>PSR &gt; PSM</td>
<td>PSR[PP], PSM[NP]</td>
<td>Pss[PP]Obl &gt; PsmSubj</td>
<td>Irish; belong</td>
</tr>
</tbody>
</table>

Table 1: Effects of semantic rank and semantic role in possessive argument realization.

In Table 1, PP is a cover label for the presence of oblique marking on a constituent. In addition to actual adpositional phrases, it includes semantic case marking in case marking languages. Also, to accommodate light verb constructions where the non-subject argument may not be amenable to being treated as an object, I have used the label Comp(lement) as a variable over non-subject, non-oblique functions that includes objects.

Option I describes the case in languages such as Hindi and Finnish which allow subjects in semantic case (see discussion in sections 6 and 7). The PSR receives semantic or oblique marking, satisfying OblPSR. Being realized as a subject, it also satisfies Isomorphy. Under the current analysis this represents the ‘best case scenario’ for possessive predication. Option II lists the case where oblique marking is not present. Isomorphy reigns, and what emerges is the HAVE pattern shown by verbs such as own, acquire, possess, etc. Finally, option III lists the contrasting case: in
which OblPSR is satisfied, but Isomorphy is violated. This is the case of Irish-type languages and belong-type verbs.

These principles only deal with the shape of possessive sentences, but they do not yet capture a relationship between oblique marking and the grammatical status of PSRs. This relationship is best demonstrated by the contrast between English own and belong. In the former, the PSR is an NP subject, in the latter a PP oblique. The alternate violation of OblPSR and Isomorphy by each verb’s argument realization pattern is clearly correlated with the marked status of PPs as grammatical subjects in English (see e.g. Bresnan (1994)). There is thus an inherent competition between Isomorphy and OblPSR for English possessive predicates (see Wechsler (1995) for an alternative way of capturing this tension). This is presumably the case also in languages such as Irish and Scots-Gaelic. In contrast, languages such as Finnish and Hindi are known to allow grammatical subjects with semantic case (Kiparsky 2001, Mohanan 1994) although they may also show marked behaviour for subjects to varying extents.

To capture this conflict between Isomorphy and OblPSR, we can posit a third principle governing the interface between morphology and syntax, which I call Oblique Marking, given below:

(50) **Oblique Marking:** An argument-realizing constituent with oblique marking is realized as an oblique function.

As suggested by the preceding discussion, Oblique Marking may thus interact with Isomorphy, yielding the range of possessive predication patterns in Table 1. The principles respected and violated by each kind of structure are provided below in Table 2.7

<table>
<thead>
<tr>
<th>Structure for</th>
<th>Isomorphy</th>
<th>OblPSR</th>
<th>Oblique Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>own</td>
<td>√</td>
<td>*</td>
<td>N/A</td>
</tr>
<tr>
<td>belong, Irish</td>
<td>*</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Hindi, Finnish</td>
<td>√</td>
<td>√</td>
<td>*</td>
</tr>
</tbody>
</table>

Table 2 Principles satisfied and violated by each possessive predication pattern

My account maintains the ranking of PSR > PSM for possessive predicates, but it also takes into account the effect of semantic class on argument realization, mediated through morphosyntactic specification. Moreover, it separates semantic rank from syntactic rank by recognizing the effect of morpholexical formatives on syntactic status, thus allowing for mismatches between lexical semantics and syntax. The first two factors — semantic ranking and semantic class of PSRs — are also reflected in a modified variant of the PAL hypothesis, what I will call a partial PAL hypothesis, exemplified by such approaches as Pinker (1989) and Harley (1995, 1996, 2003). I argue below, however, that it is not necessary, and potentially less useful, to adopt even a partial linguistic PAL hypothesis, and thus that the PAL hypothesis should still be considered a generalization at the conceptual level.

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7Hindi and Finnish are indicated as violating ObliqueMarking because their case-marked possessors are assumed to be grammatical subjects (see section 6.2 and discussion on p.40).
5.2.3 A partial PAL hypothesis

The unmarked status of the HAVE pattern over the BELONG pattern in possessive predication has not gone unnoticed. For instance, Pinker (1989) noted that HAVE is crosslinguistically frequent and acquired early. In that work, taking the localist approach to lexical semantic representation and implementing a linguistic PAL hypothesis, Pinker assumed the BELONG pattern as basic for possessive predicates. Under this approach, however, the acquisition pattern was unexpected, and to accommodate this inconsistency, Pinker postulated two basic possessive predicates, including a locative version for BELONG, as well as a HAVE predicate (Pinker 1989:189) (see also section 3.3). More recently, reinterpreting in lexical semantic fashion the syntactic asymmetries noted by Larson (1988) between (caused) PSR and PSM arguments in the dative alternation, Harley (1995, 1996, 2003) also posits two kinds of possessive predicates, one locative and one of the HAVE pattern. We can talk of proposals in this vein as assuming a partial PAL hypothesis, which seem more adequate for capturing the contrasts between HAVE and BELONG patterns than the simpler linguistic PAL hypothesis. In this section, I argue that it is possible to do away even with this partial version of the PAL hypothesis, and maintain the lexical semantic prominence of PSR over PSM even for languages where possessive predication structures seem obviously derived from a locative source.

In her account of the relationship between location and possession, Harley assumes locative and possessive relations to be respectively represented by the (abstract) prepositions P_{LOC} and P_{HAVE}, the major distinction between which is that P_{LOC} provides a structure where TH has structural prominence over (i.e. c-commands) LOC, whereas with P_{HAVE} PSR c-commands PSM. For Harley, the Irish facts in (47) are a major motivation towards maintaining a P_{LOC} representation for some possessive predication structures. A second motivation for her approach is based on the well-known dative alternation (51), the to variant of which (51b) seems to be locative-based.

(51) a. Calvin gave Hobbes a newspaper hat.
   b. Calvin gave a newspaper hat to Hobbes.

The structures Harley posits for each variant are given below. For the double object variant (51a), it is assumed that P_{HAVE} is at work (52), whereas for the to variant, the resultant possessive relation of the giving event is represented with P_{LOC} (53).

(52) Calvin gave Hobbes a newspaper hat.

```
EventP
   Calvin
   CAUSE
   ...
   PP
      Hobbes
      HAVE
      a newspaper hat
```

Harley (1996) (1a)
Below, I compare the partial PAL hypothesis proposed by Harley with the current analysis.

### 5.2.4 A comparison of the two approaches

In terms of two-place possessive predication, the predictions made by my approach and by the partial PAL hypothesis are similar in certain respects. Both share the insight that possession is not a ‘prototypically transitive’ relation in the sense of Hopper and Thompson (1980). In my proposal, this is reflected by the principle Obl<\textit{PSR}. In Harley’s, it is through placing the semantic core of possession in the category P. In addition, the partial PAL hypothesis acknowledges the ranking of \textit{PSR} > \textit{PSM} albeit only for some possessive structures, viz. those in which the \textit{PSR} bears a syntactically more prominent status than the \textit{PSM}. One important distinction, however, is that in my proposal, the \textit{PSR} > \textit{PSM} ranking is constant for all possessive predicates regardless of their surface realization. On this point, I believe my proposal is preferable for the following reasons.

First, by dissociating the morpholexical realization of PSRs from their semantic representation, my analysis accommodates more efficiently the range of forms possessive predication may take. As will be discussed further in section 7, structures encoding possessive predication are often derived from other forms, not the least likely of which would be locative. According to Heine (1997), this range of possibilities is attributable to diachronic sources for the forms of possessive predication, so the morphological marking of PSRs may reflect the historical paths of their encoding. Regardless of what forms they take, however, possessive predication retains its semantic identity.

The partial PAL approach taken by Harley can cover a similar range of data, but it potentially proliferates morphological categories without fully exploiting them. Although Harley (1995) claims to represent possession with the preposition HAVE (thus effectively assuming PSR > PSM), languages without \textit{P}_{\textit{HAVE}} are assumed to use \textit{P}_{\textit{LOC}} to encode possession. This essentially means that possession is sometimes encoded by \textit{P}_{\textit{HAVE}} and sometimes with \textit{P}_{\textit{LOC}}. Indeed, for languages such as English, which show both a \textit{HAVE} and a \textit{BELONG} pattern, this must be the case.

Harley’s proposal seems to draw the correspondences schematized in (54) between semantic relations and morphosyntactic configurations:
Yet her discussion suggests that $P_{HAVE}$ and $P_{LOC}$ are abstract morphemes that do not bear a one-to-one correspondence with meaning. So the relationship between these abstract morphemes and the semantics of location and possession mirror (54) above, except that it does not hold for actual morphological formatives but rather for these abstract morphemes:

(55) Semantics Possession Location

Morpheme $P_{HAVE}$ $P_{LOC}$

Morphosyntactic devices ... ...

This means there is yet another level of correspondences these abstract morphemes should capture: their relationship with actual morphological formatives or syntactic configurations. But Harley’s discussion does not seem to exploit this additional power. The correspondence between concrete morphosyntactic devices and abstract morphemes seems to be direct. The correspondences described can be schematized as in (56) below.

(56) Semantics Possession Location

Morpheme $P_{HAVE}$ $P_{LOC}$

Morphosyntactic devices PSR c-commands PSM TH c-commands LOC

It seems questionable then, what (56) has gained that is distinct from (54). That is, what do the abstract prepositions give us that we cannot capture by simply stating directly that locative morphemes in some languages may encode either locative or possessive semantics?

Second, under my proposal, Universal Grammar provides one meaning for possessive predicates and one for locative predicates. Learners acquire the mapping of these meanings to morphosyntax, rather than different meanings for the same kind of relation, in addition to these mappings, potentially within the same language. This arguably makes for a simpler grammar. The argument realization principles I appeal to are built into the system of lexical representation I assume, and not special to the realization of possessive sentences alone. Two factors of my analysis
potentially add complexity to the account: One is the violable status of the argument realization principles. But it is not clear that optional satisfaction of principles in different languages or for different lexical items is any less desirable than a choice between $P_{LOC}$ and $P_{HAVE}$. Another is the morphological condition OblPSR, which does indeed target PSRs. Still, as discussed above, it has long been recognised that the semantic class of arguments has effects on their morphosyntactic realization (Fillmore 1968, Smith 1996, Maling 2001, Wunderlich and Lakämper 2001, among others). Moreover, it seems that semantic class correlates more strongly with morphological marking than with syntactic rank. OblPSR provides my analysis with a way to capture the presence (or absence) of semantic marking. Neither the linguistic PAL hypothesis nor the partial PAL hypothesis stipulates this possibility, but they thus share the corresponding inability to predict the morphological shape of PSR arguments across languages. The extra condition OblPSR in my analysis yields additional descriptive power which in any case will be needed. Moreover, it is also assumed to be part of the larger syntax-lexical semantics interface in which certain semantic classes of arguments are associated with similar conditions.

Finally, separating morpholexical realization from lexical semantics also differentiates the two proposals in terms of the predictions they make for three-place possessive predication. In Harley’s analysis, the presence of $P_{HAVE}$ is inherently tied to whether a double object construction is found in a language: since $P_{HAVE}$ is posited specifically to allow for the $PSR > PSM$ pattern, the lack of this pattern in two-place possessive predication predicts the absence of the double object construction.

Languages such as English with both have and belong-style possessive verbs are predicted to show the dative alternation (see (57) below), where the double object variant (57a) is correlated with $P_{HAVE}$ and the to variant (57b) with $P_{LOC}$.

(57) a. John gave Mary the book.

b. John gave the book to Mary.

In line with this prediction, Irish does not allow a double object construction. Harley observes that (58a) below is the only way to encode a three-place possessive in Irish – the putative double object variants in (58b-d) are all unacceptable.\(^8\)

(58) a. Thug Mileó caisearbhán do Bhinclí
   Gave Milo dandelion to Binkley
   Milo gave a dandelion to Binkley.
   Harley (1996):((9)a)
   No double-object constructions:
   b.*Thug Mileó do Bhinclí caisearbhán
     Gave Milo to Binkley dandelion
     Milo gave a dandelion to Binkley.
     Harley (1996):((9)b)

\(^8\)Harley (1996) lists (58b) among the ungrammatical putative double object variants of (47a), although the recipient is encoded in a to PP.
c. Thug Míleo caisearbhán Bhinclí
   Gave Milo dandelion Binkley
   Milo gave a dandelion to Binkley.
   Harley (1996):((9)c)

d. Thug Míleo Bhinclí caisearbhán
   Gave Milo Binkley dandelion
   Milo gave Binkley a dandelion.
   Harley (1996):((9)c)

These correlations appear highly suggestive, but on closer scrutiny, such patterns really provide an argument for predicate decomposition (in the syntax), rather than for the PAL hypothesis. At most, we can conclude from Harley’s observations that the structural relations of the arguments of a predicate U (here a possessive component) are preserved in its causative counterpart [x CAUSE[U]]. They do not directly lend support to the need for positing two underlying structures for possessive predication.

Under the current approach the predicate POSS(x,y) maintains the same ranking between PSR and PSM in both two- and three-place predicates. The dative alternation may be obtained in my account by appealing to Oblique Marking: if a two-place predicate of a language morphologically marks its PSR, and obeys Oblique Marking by violating Isomorphy, it is certainly reasonable to assume that the same principles can apply for a three-place predicate.9

I take it as an advantage of my approach here, however, that unlike in Harley’s approach, the PP recipient of a dative verb such as give is still considered a caused PSR, and not a spatial goal (i.e. caused LOC). Recent work on the dative alternation (Rappaport Hovav and Levin 2008) shows that despite surface similarities, true verbs of giving such as give, hand, pass, etc. should be distinguished from verbs of caused motion such as throw and toss, which also participate in the dative alternation. While both recipients and spatial goals can be realized as a to PP (59b), only with verbs of caused motion such as throw and toss can the to PP be replaced by other path PPs (59c).

(59) a. John gave/ threw Mary the ball.
   b. John gave/ threw the ball to Mary.
   c. John *gave/ threw the ball towards/at Mary.

Under my approach, such a contrast is not surprising. Under the PAL hypothesis, though, the to PP variant of the dative alternation is actually a locative structure, so there is no reason for the contrast between give and throw in (59c).

9It does also mean that the same verb, e.g. give, can either obey Isomorphy or Oblique Marking, but I think the added complexity is no different from allowing give to sometimes incorporate P_{HAVE} and sometimes be associated with P_{LOC}. The main text discusses a further advantage of treating the to variant for give as a result of Oblique Marking rather than stemming from a locative meaning.
5.3 Summary

The three options for possessive predication discussed in this section are summarized below:

I. Linguistic PAL
PSM = TH
PSR = LOC
TH > LOC

II. Partial PAL
P_{HAVE}: PSR > PSM
P_{LOC}: TH > LOC
Sometimes PSR = LOC, PSM = TH

III. Conceptual PAL hypothesis
PSR > PSM
PSRs may be conceptualized as LOCs

I have argued that the best alternative is option III, a conceptual interpretation of the PAL hypothesis: PSRs may be conceptualized as LOCs, and so they can be realized with locative morphology, but this does not mean that animate locations are always interpreted as PSRs. The semantic ranking for possessive arguments is PSR > PSM, while that for locative arguments is TH > LOC. The ranking of PSR > PSM accounts for the information structural contrast between own and belong. This is unexplained under a linguistic PAL hypothesis which, in assuming the ranking of TH > LOC, must also assume PSM > PSR. The effect of semantic class marking (OblPSR) and its interaction with Isomorphy allows for a range of possessive argument realization patterns across languages. I have also argued that a partial PAL hypothesis, which posits two representations for possessive predicates, proliferates the semantics of possession unnecessarily, provides no explanation for the correlation between oblique marking on PSRs and non-Isomorphy, and also makes incorrect predictions for the dative alternation.

6 Distinguishing possessives from existentials

Another area where the PAL hypothesis has come into play is the analysis of what we can call ‘light verb’ possessive and existential sentences. By these I mean possessive and existential sentences headed by a copula or by a HAVE-type verb. Examples in English would be possessive have sentences (as opposed to own and belong sentences), and existential there be sentences respectively.

In some languages, light verb possessive sentences look very similar, sometimes identical, to existential sentences, to the extent that they have been given identical analyses (Freeze 1992, 2001). Part of this goes back to the encoding of possessors with locative case, as in the Hindi example (60b). This morphological overlap in encoding LOCs and PSRs allows for apparent structural identity between existential (60a) and possessive (60b) copular sentences.
(60) Hindi

a. baazaar-ke paas peḍ hai
   market-OBL.GEN near tree be-PR
   There is a tree near the market.

b. raam-ke paas ek hii makaan hai
   Ram-OBL.GEN near one only building be-PR
   Ram has/owns only one building.
   Mohanan (1994:179) (63)

Apart from this, in some languages, the same verb heads possessive and existential sentences. Examples can be found in Mandarin (61), where the verb yǒu ‘have’ is used both in possessive and in existential sentences, and in French, which has similar uses for avoir ‘have’.

(61) Mandarin\textsuperscript{10}

a. zhuō-shàng yǒu shū
table-upon have book
   There is a book/are books on the table.
   Lyons (1968:393)

b. wǒ yǒu shū
1SG have book
   I have a book/books.
   Lyons (1968:393)

(62) French

a. Il y a un livre sur la table
   it there has a book on the table
   There is a book on the table.
   Clark (1970)

b. Jean a un livre
   John has a book
   John has a book.
   Clark (1970)

Finally, light verb possessive sentences may exhibit a definiteness effect, as do existential sentences.\textsuperscript{11}

(63) a. There is a boy/someone/a strange book in the room.

\textsuperscript{10}English have also exhibits a range of other uses such as the causative have (John had Bill open the door), the experiencer have (John had Bill step on his toe), among others. For discussion of these other uses of have, and how they may be related to possessive and existential uses of have, see den Dikken (1997), Belvin and den Dikken (1997), Ritter and Rosen (1997), and references in the same journal volume.
b. #There is my sister/everyone/the strange book in the room.
   Safir (1987:71) (1)

(64)  a. John has a/some/three/at least three/several/many/a few/no/few/at most three/exactly three
      sisters.

b. #John has the/every/both/most/neither/all/all three/the three sisters.
   adapted from Partee (1999) (4)-(6)

Not surprisingly, these similarities raise questions about the relationship between light verb possessive and existential sentences, essentially, whether they should be given a unified treatment or if they should be distinguished in some way.

The usual answer takes place in two steps, and appeals to the PAL hypothesis. The first step is to treat an existential as a locative sentence, which contains a location role and a theme role. Differences between existentials and non-existential locative sentences, e.g. in terms of word order, have been attributed to (a) a different syntax (Freeze 1992), (b) a different information structure (Borschev and Partee 1998, following Babby 1980) or (c) a different Perspectival Centre (Partee and Borschev 2002). The next step is to say that a light verb possessive sentence is an existential sentence because possessors are (a kind of) locations. As noted earlier (see section 3.2), this is the approach taken in Freeze (1992). While the analysis of existentials as inverted locatives could be correct for some languages, the next sections show that there are languages in which existential and possessive sentences should be distinguished.

### 6.1 Mandarin

In Mandarin, existential and light verb possessive sentences are headed by the verb `yǒu` ‘have’.

Despite the shared verb form, light verb possessive (65a) and existential (65b) sentences are not structurally identical.

(65) a. Sānmào yǒu yī zhī māo
    Sanmao have one CL cat
    Sanmao has a cat. (possessive)

b. shù-shānɡ yǒu yī zhī māo
    tree-upon have one CL cat
    There is a cat on the tree. (existential)

While the PSR in a possessive sentence is the subject, for at least some speakers, the LOC in an existential sentence is not. This is demonstrated by the following minimal pair in (66). In (66a) the pre-verbal NP may bind the reflexive complement, whereas for some speakers in (66b) it cannot do so. This contrast cannot be due to any animacy-related factor since in both examples in (66), the pre-verbal NP refers to an inanimate entity. The only difference is that in (66b), the pre-verbal NP has a spatial particle `-lǐ` ‘inside’ attached to it.\(^\text{13}\)

\(^{12}\)The % sign indicates differences in speaker judgements.

\(^{13}\)The inability of `zhù wò-fāng` ‘master bedroom’ in (66b) to bind the reflexive should not be understood as being due to its being subordinated to say, a postposition. Tan (1991:126–128) provides diagnostics showing that the spatial particles do not change the nominal category of these location NPs.
(66) Mandarin

a. zhǔ-wò-fáng, yǒu zìjì, de yūshì
   master.bedroom have self DE bathroom
   The master bedroom has self’s bathroom.

b. zhǔ-wò-fáng-li  yǒu zìjì, de yūshì
   master.bedroom-within have self DE bathroom
   The inside of the master bedroom has self’s bathroom.

Rather, the contrast can better be understood thus: since master bedrooms often come with their own bathrooms, it is possible to interpret the pre-verbal NP zhǔ wòfáng ‘master bedroom’ in (66a) as a possessor, but in (66b) the spatial particle requires that it be interpreted as a location. We can interpret the speakers who disallow the spatial zhǔ wòfáng-li as an antecedent for the reflexive as disallowing location subjects.

A distinction between possessors and locations is also found in verb-initial existential sentences. Without a context that provides an antecedent for pro-drop, it is possible to interpret a verb-initial yǒu sentence as having a missing LOC, but not a missing PSR (see also Huang (1987)). So (67b) but not (67c) is a sensible question to address towards the assertion in (67a).

(67) a. yǒu māo
   have  cat
   There’s a cat!

b. nǎr yǒu?
   where have
   Where is there one?

c. #shuí yǒu?
   who have
   Who has one?

There are two ways to interpret the status of the location phrase in existential yǒu sentences. One is to assume that existentials have an implicit location argument that even if unexpressed, is understood to be present, and thus possible to ask questions about. A possible lexical entry for the existential verb would then look as below (parentheses around the locative argument at GC-STR is shorthand for the optional syntactic realization of this argument):

(68) lexical semantic representation for locative yǒuexist

   SEM-STR   EXIST(⟨x_i, y_j[loc]⟩)
   GC-STR    [S (NP_j[loc]) [VP V NP_i]]

Alternatively, we can assume an impersonal analysis for the existential, and posit a rule that allows existential sentences to be augmented with a locative-denoting phrase, in which case the lexical representation would look as below:
Regardless of how we characterize the location-denoting phrase in an existential sentence, it does not alter the need to distinguish between existential yǒu (in (67b)) and possessive yǒu (in (67c)). That is, the contrast between (67b,c) is sensitive to a distinction between locations and possessors, whether the location phrase in an existential sentence is an argument or an adverbial.

Unlike a location in an existential sentence, a possessor in a possessive sentence is always an argument. Its absence is allowed only when an available referent can be found in the preceding discourse, as in (70) below:

(70) tā shì gè zuànshí wáng-lào-wū, ∅, yǒu chē, ∅, yǒu fāng ěrqiē ∅, hěn xiàoshun.
    3sg be CL diamond bachelor have car have house furthermore very filial
    He is an ideal bachelor, (he) has a car, a house, and (he) is a dutiful son.

Without such a context, a sentence such as yǒu chē ‘there is a car’, can only be interpreted existentially, for instance, as a warning that there is a car coming by, but not as a possessive. Therefore, despite the shared verb form, existential sentences in Mandarin have a different structure from possessive sentences. The location phrase in existential sentences is optionally realized and can be interpreted non-anaphorically, whereas the possessor in a possessive sentence, if unrealized, must be interpreted anaphorically. This means the possessor in a possessive sentence is an argument, whereas the location phrase in an existential sentence need not be treated as one. This contrast implies that there are two verbs yǒu in Mandarin: one existential and one possessive.¹⁴

6.2 Finnish

Similar arguments can be made even for languages such as Finnish, where light verb possessives and existentials can look surface identical. The surface form of locative, existential, and possessive sentences in Finnish may appear at first to be a showcase for the PAL hypothesis. Possessors are indicated with the locative adessive case, and a light verb possessive (71c) appears identical to an existential sentence (71b).

(71) Finnish
   a. Kissa on mato-lla
cat is mat-ADE
    The cat is on a/the mat.

   b. Mato-lla on kissa
mat-ADE is cat
    There is a cat on the mat.

¹⁴Of course, we are now faced with the question of accounting for this morphological overlap. This issue can be accounted for by appealing to a presentational function shared by existential and light verb possessive sentences (see Tham (2006) for an account in this vein proposed for English have).
Yet as for Mandarin, anaphora facts indicate again that the PSR is a subject, but the LOC in an existential sentence is not. In (72a), the adessive possessor *Liisa-*lla serves as an antecedent for the subject of the participial adjunct clause, but in the existential sentence (72b), the location nominal, also an adessive NP, cannot antecede the subject of the participial clause.

(72) Finnish

a. Liisa-*lla, ol-i häne-t poikaystävä-nä olle:ssa-an, Ruotsissa
   Liisa-ADE be-PA3SG 3SG-ACC boyfriend-ESS being-INE-3POSS Sweden-INE
   Liisa had him as a boyfriend when she was in Sweden.
   Kiparsky (2001:355) (69a)

b.*Mato-*lla, ol-i kissa olle:ssa-an, taka-n luo-na
   mat-ADE be-PA3SG cat-NOM being-INE-3POSS fireplace-GEN at-ESS
   There was a cat on the mat, when it was by the fireplace.

This distinction cannot simply be attributed to the animacy distinction between the two adessive nominals in (72a,b). (73) shows that even with an inanimate possessor, the same anaphora facts as for the possessive sentence in (72a) obtain.

(73) Avautue-ssa-an, kuka-*lla, on vaaleanpunaise-t terähde-t
    open-ESS-3POSS flower-ADE is pink-PL petal-PL
    When it opens, this flower has pink petals.

That is, it is not that an adessive NP denoting an inanimate entity cannot be a subject, rather, an adessive NP that denotes a location, as opposed to a possessor, cannot be a subject. Like Mandarin, then, despite shared surface similarities, existential and light verb possessive sentences in Finnish should be distinguished. To conclude, while it is possible that light verb possessive sentences are existential sentences in some languages, this cannot be a universal generalization. If possessives are not existentials, then regardless of whether existentials are inverted locative sentences, we cannot treat possessive sentences as inverted locative sentences, and thus we cannot automatically assume possessors to be locations, regardless of their similarity in form.

7 Ways of encoding possession

The preceding sections have argued that possessors should not be linguistically represented as animate locations. Rather, possession is a semantic relation independent of location. The morphosyntactic similarities that hold between possessive and locative structures should be attributed to similarity at the conceptual level. Moreover, I show in this section that location is only one possible metaphor for construing possession, among various other options. This point is demonstrated at length in Heine (1997), where it is argued that possessive predicates can be historically
derived from various conceptual source structures. Heine (1997) identifies eight event schemas from which the encoding of possessive predication may be derived. These are listed in (74) below. In these schemas, X would be the participant that, in the target structure, encodes the possessor, and Y would encode the possessum.

(74)

<table>
<thead>
<tr>
<th>Formula</th>
<th>Label of event schema</th>
</tr>
</thead>
<tbody>
<tr>
<td>X takes Y</td>
<td>Action</td>
</tr>
<tr>
<td>X is located at Y</td>
<td>Location</td>
</tr>
<tr>
<td>X is with Y</td>
<td>Companion</td>
</tr>
<tr>
<td>X’s Y exists</td>
<td>Genitive</td>
</tr>
<tr>
<td>Y exists for/to X</td>
<td>Goal</td>
</tr>
<tr>
<td>Y exists from X</td>
<td>Source</td>
</tr>
<tr>
<td>As for X, Y exists</td>
<td>Topic</td>
</tr>
<tr>
<td>Y is X’s (property)</td>
<td>Equation</td>
</tr>
</tbody>
</table>

Heine (1997: 47 Table 2.1)

Some of these are also discussed in Stassen (2001), who additionally notes the existence of possessive predication using two clauses, typically existential. I set aside these biclusal strategies in the following discussion.

It was proposed above that argument realization patterns are determined in part by the relative prominence of arguments at SEM-STR, and also by required correspondences between categories at different levels of representation. In this section, I discuss each of the schemas in turn, showing how each schema can be seen to be compatible with the ranking of PSR > PSM, if we take into consideration the effects of morpholexical category. The point of the discussion is to demonstrate that whatever the source schema, if a possessive relation is encoded, it is at least conceivable that the sentence at hand is compatible with a PSR-as-subject interpretation.

In general, based on the approach espoused here, there are two major kinds of realization patterns for possessive predicates:

- **SEM-STR and GC-STR in agreement**
  prediction: PSR/Subj
- **SEM-STR and GC-STR in mismatch**, then either:
  - Isomorphy is respected: PSR/Subj
  - Oblique marking is respected: semantically marked constituents (potentially the PSR) are realized as oblique

---

15 Heine treats possession as an “event schema”, as distinguished from a “simple relational concept” (p.46). As such, possession is a complex concept the realization of which is derived from more concrete and basic concepts. It thus seems that for Heine, there is no “basic” concept of possession, and all possessive predicates must be derived from one of the eight source event schemas he defines. It is orthogonal to the purposes of this discussion whether possessive predicates should be seen as always derived from some other concept. I will only note that such a view is still consistent with the claim that possession is distinct from location. In this paper, I take the more moderate position that possessive predicates may, but need not, be historically derived from other source structures, and couch the following discussion in these terms.
Among the eight schemas listed, the Equation schema (e.g. *The book is mine*) is mainly the source for possessive sentences analogous to *belong*-type sentences (p.65) and thus would correspond to non-Isomorphic possessive sentences. These are expected to show the concomitant information structural restrictions. In all the examples of the Equation schema discussed by Heine, the possessum subject is definite. The correlation between the Equation schema and *belong*-type sentences thus seems compatible with the proposal that non-Isomorphic structures are restricted in terms of information status.

An example of the Source schema given in Heine (1997:64) is repeated in (75) below. The distinctive characteristic of the Source schema is that the possessor is encoded as an ablative (‘from’) phrase.

(75) ts’et’ú nets’e
cigarette you.from
Do you (SG) have cigarettes?

Slave (Athabaskan, Na-Dene; Rice 1989) Heine p.64

Heine states that the Source schema is typically a source for attributive possession, where the possessor is encoded as a modifier to the possessum NP. Example (75) itself suggests that possessive predication can be encoded in a Source structure. The GF-STR of (75) will then depend on whether or not a language such as Slave allows for grammatical subjects in oblique case. For my account, the Source schema is compatible with the PSR realized either as subject or as oblique: Isomorphy would account for the former possibility, Oblique Marking for the latter.

The other event schemas all give rise to possessive predication structures. Among these, the Action and Companion\(^{16}\) source schemas are unproblematic for the current account as they would presumably yield Isomorphic argument realization patterns that correspond to the ranking of PSR > PSM.\(^{17}\)

(76) a. O menino tem fome
the child takes/has hunger
The child is hungry.
Portuguese (Freeze 1992:587)

b. ngayu galga-dhirr ngayu buurray-irr
1.SG.NOM. spear-COM.ABS 1.SG.NOM water-COM.ABS
I have a spear. I have water.
Comitative. Guugu Yimidhirr (Pama-Nungan; Haviland 1979:58)

Without a structural analysis, the status of the Topic schema for my proposal is not immediately clear, but it does not seem to provide any obvious difficulties for my approach either. Since topics typically occur in syntactically prominent positions, the availability of PSRs encoded as topics is entirely compatible with their semantically ranking over the PSM.

The crucial case for the current proposal is the locative schema, since the morphological realization of possessors as locations is the single most important reason for the PAL hypothesis. Under

\(^{16}\)Associated with Comitative case (COM in (76b)).

\(^{17}\)English *have* itself presumably derived from the Action schema (Heine 1997), as did Latin *habeō* (Baldi 2002).
the current proposal, possessors with locative morphological marking are possible because possessors can be conceptualized as locations (thus making a general claim about cognitive structure, but not necessarily about linguistic structure). In addition, the current proposal allows for the argument realization of possessors with locative morphology to be distinct from that of true locations in some languages, but to be identical in others. The distinction is allowed because at SEM-STR, possessors rank above their co-argument, whereas locations rank below their co-argument. The similarity is allowed because the shared morphological marking may determine the mapping to GF-STR.

As discussed in section 5.2.3, both options are realized in natural language. How my approach would account for the availability of both options was also discussed. It further seems plausible that this same account in my approach could be extended to cover instances of the Goal schema, where the major distinction with the Location schema would involve the kind of morphological marking used to encode PSRs.

Finally, the Genitive schema is exemplified in Hindi (77). For these genitive possessor sentences, it has also been argued that the genitive can be interpreted as the subject (Mohanan 1994:181).

(77) a. raam-ke tiin bhaaaii ḫān
   Raam-GEN three brothers be-PR
   Ram has three brothers.
   Hindi, Genitive, (Mohanan 1994: 177 (61c))

Mohanan (1994) shows that possessors in the genitive (and also in the locative: p.176) case exhibit the behaviour of grammatical subjects in not being able to antecede a clausemate pronoun, but obligatorily binding a clausemate reflexive, and controlling into a participial adjunct clause. Moreover, since genitive is typically a case for specifiers, and subjects typically appear in specifier position, the subject status of genitive possessors is perhaps unsurprising.

To sum up, the locative metaphor is only one among various conceptual metaphors that may encode possessive predication. Among these various schemas, the locative schema is also the most likely to present a mismatch between lexical semantic and syntactic representation. Thus, despite the frequent use of locative morphology to encode possession, we cannot conclude that locative-marked possessors are always represented as locations.

8 Conclusion and discussion

The possessor-as-location hypothesis is not a unitary concept. It can be interpreted at either a conceptual or a linguistic level of representation. Certain questionable aspects of the PAL hypothesis, such as the treatment of verbs like have as manifesting inverted lexical structures, are a result of a failure to distinguish between these two facets of the approach. This paper has argued that the PAL hypothesis is best understood as a claim about conceptual structure rather than grammatical representation.

The three different options discussed here for interpreting the PAL hypothesis are listed again below. I have shown that option III best accounts for the morphological overlap between PSRs and LOCS while accommodating the syntactic and information structural distinctions between locative and possessive sentences.

Mohanan refers to these elements as logical subjects, referring to the highest argument in argument structure, making an assumption compatible to the point argued in this paper.
I. Linguistic PAL

\[
\text{PSM} = \text{TH} \\
\text{PSR} = \text{LOC} \\
\text{TH} > \text{LOC}
\]

II. Partial PAL

\[
\begin{align*}
P_{\text{HAVE}}: & \quad \text{PSR} > \text{PSM} \\
P_{\text{LOC}}: & \quad \text{TH} > \text{LOC}
\end{align*}
\]

Sometimes PSR = LOC, PSM = TH, i.e. \( P_{\text{LOC}} \)

III. Conceptual PAL hypothesis

\[
\text{PSR} > \text{PSM}
\]

PSRs may be conceptualized as LOCs

My proposal crucially distinguishes semantic representation from syntactic realization. This allows us to maintain a unified semantics for possessive predication while capturing syntactic realization patterns across languages that may show a mismatch with the semantics. Specifically, I have argued for a semantic ranking of \( \text{PSR} > \text{PSM} \) for possession, as opposed to a \( \text{TH} > \text{LOC} \) ranking for locative predicates. I have also argued that semantic class plays an important role in morphological realization. By positing a preference for PSRs to show oblique marking, we can capture the use of both locative and non-locative morphological marking on PSRs. By exploiting the correlation between oblique marking and oblique grammatical functional status, we allow for Irish-type languages where PSRs do seem to be realized analogously to LOCs. But by further allowing an interaction with Isomorphy, we additionally predict the availability of PSRs with locative morphology that are grammatical subjects, e.g. in Finnish.

I have also argued that, as a claim about linguistic representation, the PAL hypothesis is inadequate, or at best uninteresting. If the PAL hypothesis is stated as saying that all possessors are represented as locations, it cannot account for those cases where no locative morphology or syntax is present. If interpreted as a statement that some possessors are represented as locations, it ends up simply as a restatement of the facts.

The current proposal brings a new perspective to the status of inanimate PSRs, an issue that has hitherto remained under-discussed. Since, under the PAL hypothesis, PSRs are supposed to be animate LOCs, there seems to be no place for inanimate PSRs in the theory. Freeze (1992:583) argued that when the PSR is inanimate, the PSM NP is either a relational NP (78a), or describes some entity “characteristically associated” with the PSR (78b), thus reducing PSR status to animate (or for Freeze, human) locations.

(78) \[\begin{align*}
\text{a.} & \quad \text{The tree has branches.} \\
& \quad \text{Freeze (1992:(62a))} \\
\text{b.} & \quad \text{The flour has weevils.} \\
& \quad \text{Freeze (1992:(62b))}
\end{align*}\]
But it is not clear how the relational nature of the PSM NP would disqualify inanimates from being interpreted as possessors, since animate possessors clearly also take relational possessa (79).

(79) Mowgli has black hair.

Moreover, although certain languages do distinguish possessive encoding based on the animacy of the PSR, in other languages the same encoding is used. Therefore the existence of inanimate PSRs must be acknowledged, and the generalization that PSRs are animate LOCs applies only in a subset of cases in a subset of languages.

To sum up, possessors are sometimes realized by locative marking because possessors are metaphorically construable as locations, and not because they are grammatically derived from location arguments. This allows for the existence of locative structures and morphology in encoding possession. On the other hand, it leaves open the actual shape of possessive encoding, thus allowing for the existence of pure possessive morphological items, and for the existence of other metaphorical possessors. Finally, it is still possible to maintain a single semantic representation for possession by separating the effects of semantic rank from semantic class, and yet take both into account, capturing a wide range of possessive encoding possibilities.

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