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English Possessives, Topicality,
and the Silverstein Hierarchy

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Unlike many languages (e.g., French) English has two distinct Possessive constructions. One takes the form:

- (1) a. his foot
b. John's house
c. the King of England's crown.

It has the following properties: first, the possessor NP precedes the possessed noun; second, the possessor NP is marked. Personal pronouns take special possessive forms (my, our, your, his, her, its, their.) Other NPs have a clitic, written 's, attached to the last word in the phrase. I will term this construction the prenominal possessive. The second possessive takes the form:

- (2) a. a friend of Mary
b. the house of the King

In this construction, the possessor NP follows the possessed noun and the possessor NP is marked by the preposition of. I will term this the postnominal possessive.

Certain differences between the two possessives will not concern us here. For example, the prenominal possessive is inherently definite. Thus each of the following pairs are paraphrases:

- (3) a. the bicycle's handle
b. the handle of the bicycle
(4) a. the city's destruction
b. the destruction of the city
(5) a. the man's anger
b. the anger of the man

Another difference occurs with partitive nouns, which occur almost exclusively in the postnominal possessive, as (6)-(8) illustrate.

- (6) a. the edge of the room
b. ??the room's edge
(7) a. the rest of the journey
b. *the journey's rest
(8) a. the smaller portion of the army
b. ??the army's smaller portion.

Other differences will prove relevant later, but I will leave these aside for the time being. for example: (i) the postnominal possessive is more acceptable with indefinite and generic possessors; (ii) the postnominal possessive is more acceptable

with long or complex NPs; (iii) the postnominal possessive is more acceptable if its meaning is contrastive. (9) illustrates these facts.

- (9) a. That is the footprint of a deer. (vs. 'a deer's footprints')
b. That is the foot of an old man from Paris. (vs. 'an old man from Paris' foot')
c. The cars of this salesman are truly top quality. (vs. 'the salesman')

Now, if these differences have been set aside, the two constructions seem practically interchangeable: so interchangeable that some theories attempt to derive one from the other. However, the two constructions are not totally interchangeable. Often one of the two will be preferable to the other, and sometimes only one will be acceptable. Consider (10) for example.

- (10) a. I met the boy's uncle.
b. I met the uncle of the boy.

Here the prenominal possessive is better: (10a) is much more acceptable than (10b). On the other hand, in (11) it is the postnominal possessor which is more acceptable.

- (11) a. I opened the building's door.
b. I opened the door of the building.

None of this data is new. Jespersen's Modern English Grammar (vol. 7: pp. 206 ff.) details the cases in which one of the two possessive constructions is to be preferred. Many factors seem to be relevant. One of the most important is animacy: animate possessors prefer the prenominal possessive. Inanimate possessors prefer the postnominal possessive. This is the most obvious factor, and one which is noted in many works (cf. Hawkins 1980; Quirk, Greenbaum, Leech and Svartvik 1972.) But there are many other factors also. For instance, personal pronouns show a strong affinity for the prenominal possessive.

- (12) a. my foot
b. *the foot of me

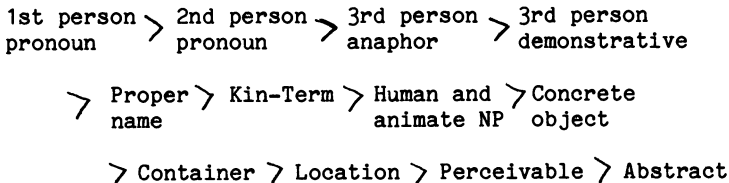
And there are other factors which we will examine in detail shortly.

All of these facts have been noted before, but they have not been explained. It is quite clear that animate and pronominal possessors occur most naturally in the prenominal possessive, and that inanimate possessors occur most naturally in the postnominal construction. But why? An answer to this question lies in the so-called Silverstein Hierarchy.

The Silverstein Hierarchy was originally developed to deal with the problem of split-ergative case marking systems. In a simple ergative language, the subject of an intransitive sentence receives the same case marking as the object of a transitive sentence. The subject of a transitive sentence receives a special case--the ergative case. Ergative languages contrast to accusative languages, in which it is the object of a transitive sentence that receives a special case (the accusative.)

Split-ergative languages are languages in which some NPs are marked according to the ergative pattern, but in which others are marked according to the accusative pattern. There are many languages, for example, in which every NP receives ergative case-marking except first and second person pronouns, which follow the accusative pattern. There is a bewildering variety of split-ergative languages. The Silverstein hierarchy brings order to this variety, making it possible to predict exactly what kinds of split-ergative systems are possible.

Essentially, the Silverstein hierarchy ranks NPs according to their inherent lexical content. At the top of the hierarchy are highly context-dependent forms: first, second, and third person pronouns, proper names, and other indexical elements (including kin-terms or social indexicals.) Next comes NPs denoting relatively salient referents: humans, nonhuman animates, and concrete inanimate objects. At the bottom of the hierarchy lie those NPs which denote relatively undelimited or abstract entities. It may be summarized as follows (with some simplifications):



Split-ergative systems can be predicted by interpreting this array as an implicational hierarchy. If a given NP type receives accusative case marking, then so must every NP type above it in the hierarchy. Conversely, if a NP type receives ergative case marking, so must every NP type beneath it in the hierarchy.

But what does this have to do with English possessives? Everything. For the Silverstein hierarchy can also be used to predict the acceptability of prenominal and postnominal possessives in English. We may make the following generalization: the higher the possessor NP is on the Silverstein hierarchy, the more acceptable it will be in the prenominal possessive, and the less acceptable in the postnominal possessive. Conversely, the lower a NP is on the Silverstein Hierarchy, the more acceptable it will be in the postnominal possessive, and the less acceptable in the prenominal possessive. The following chart illustrates how

possessives are more acceptable toward the top of the hierarchy if they are prenominal possessives, and how postnominal possessives display the opposite pattern.

<u>Possessor is</u>	<u>Prenominal Poss.</u>	<u>Postnominal Poss.</u>
1st or 2nd person pronoun	my foot	the foot of me
3rd person animate pronoun	his foot	the foot of him
3rd person inanimate pronoun	its foot	the foot of it
proper name	Bill's foot	the foot of Bill
kin term	my uncle's foot	the foot of my uncle
human lexical NP	the man's foot	the foot of the man
nonhuman animate	the dog's foot	the foot of the dog
inanimate discrete	the bicycle's handle	the handle of the bicycle
place or location	the house's roof	the roof of the house
•		
•		
•		
Abstract (properties, essences, etc.)	the century's beginning his honor's nature Israel's nation	the beginning of the the nature of his honor the nation of Israel

Of course, there are many different types of possessives. We must distinguish semantically distinct types of possessive, each of which will display slightly different behavior. Despite this, the Silverstein hierarchy yields useful predictions.

Consider the following data, for example.

- (13)
- a. I hadn't seen my Jimmy in ages.
 - b. I haven't seen your Jimmy in ages.
 - c. She hadn't seen her Jimmy in ages.
 - d. It turned out the man wasn't Mary's Jimmy at all.
 - e. ? Have you seen my daughter's Jimmy recently?
 - f. ?? Have you seen my friend's Jimmy recently?
 - g. * Have you seen the carpenter's Jimmy recently?

This version of the possessive construction identifies an individual with a certain name by identifying a related individual. Now, as (13) illustrates, the prenominal version of the construction is most acceptable if the possessor is from the

topmost part of the Silverstein hierarchy. After that acceptability deteriorates quite rapidly. If the possessor is an animate lexical NP, the meaning is clear but the construction is unacceptable. Further down, this interpretation is not even possible, and a postnominal possessive must be used instead. Thus, (14a) does not function to identify which Napoleons are being discussed. If that is the intended meaning, (14b) is far more natural.

- (14) a. This country's Napoleons were all dictators.
 b. The Napoleons of this country were all dictators.

But the postnominal construction cannot be employed higher in the hierarchy. The sentences in (15) are therefore unacceptable.

- (15) a. * I hadn't seen the Jimmy of me in ages.
 b. * You haven't seen the Jimmy of you in ages.
 c. * She hadn't seen the Jimmy of her in ages.
 d. * Have you seen the Jimmy of my daughter recently?
 e. * Have you seen the Jimmy of my friend recently?
 f. * Have you seen the Jimmy of the carpenter recently?

All of this can be summarized very simply. We start with the generalization that prenominal possessives go with the top of the hierarchy, and postnominal possessives go with the bottom. Then we give a cut-off point for each construction. In this case, the cut-off points are: (i) Relation terms for the prenominal possessive; (ii) Inanimate lexical NPs for the postnominal possessive.

Other constructions may have different cut-off points, but the correlation with the Silverstein hierarchy will remain the same.

Consider, for example, the behavior of possessive constructions headed by abstract nouns like loyalty. Such nouns allow a wide range of prenominal possessives:

- (16) a. My loyalty must not be questioned.
 b. Your loyalty must not be questioned.
 c. His loyalty must not be questioned.
 d. John's loyalty must not be questioned.
 e. His uncle's loyalty must not be questioned.
 f. His friend's loyalty must not be questioned.
 g. The carpenter's loyalty must not be questioned.
 h. The city's loyalty to its founder was beyond doubt.
 i. ?? I would often meditate on love's loyalty.

Postnominal possessives are almost as broadly distributed.

- (17) a. * Just consider the loyalty of me to stand there so long.
 b. * Just consider the loyalty of you to stand there so long.
 c. ? Just consider the loyalty of him to stand there so long.
 d. ? Just consider the loyalty of John to stand there so long.
 e. Just consider the loyalty of his uncle to stand there so long.
 f. Just consider the loyalty of his friend to stand there so long.
 g. Just consider the loyalty of the carpenter to stand there so long.
 h. Just consider the loyalty of the city.
 i. Just consider the loyalty of love.

Here, there is no cut-off point for the prenominal possessive, though the very bottom does sound quite unnatural. In the postnominal possessive, third person pronouns form the cut-off point.

The last two cases represent extremes: cases in which the cut-off point is set unusually high or unusually low. Most possessives follow yet a third pattern--that demonstrated below.

- (18) a. My cars are always top quality.
 b. Your cars are always top quality.
 c. His cars are always top quality.
 d. John's cars are always top quality.
 e. His uncle's cars are always top quality.
 f. His friend's cars are always top quality.
 g. The salesman's cars are always top quality.
 h. ? The factory's cars are always top quality.
 i. * The used car lot's cars are always top quality.
 j. * Japanese craftsmanship's cars are always top quality.
- (19) a. * The cars of me are always top quality.
 b. * The cars of you are always top quality.
 c. * The cars of him are always top quality.
 d. * The cars of John are always top quality.
 e. * The cars of his uncle are always top quality.
 f. * The cars of his friend are always top quality.
 g. ? The cars of the salesman are always top quality.
 (cf. the cars of this salesman ...)
 h. ? The cars of the factory are always top quality.
 i. ? The cars of the used car lot are always top quality.
 j. The cars of Japanese craftsmanship are always top quality.

In this case, the cut-off points are nearer the middle of the hierarchy. Concrete inanimate NPs form the cut-off point for the prenominal possessive, and animate lexical NPs form the cut-off point for the postnominal possessive. This is the most common pattern, one displayed by words for humans, animals, and physically discrete objects.

Before we proceed, it is necessary to note an important fact about the acceptability judgements given above. There appears to be significant variation from speaker to speaker. However, the variation is orderly: individual speakers may set the cut-off points slightly higher or lower than I have indicated. For example, many speakers find sentences like (18h) or (19g) unacceptable. This kind of variation actually strengthens my thesis, since it confirms the role that the Silverstein hierarchy plays.

The data we have just examined are quite orderly--and unexpected. After all, why should the Silverstein hierarchy be connected to English possessive constructions? Why should the prenominal possessive correlate with the top of the hierarchy, and the postnominal possessive correlate with the bottom? And why should different types of possession set different cut-off points? Such facts demand explanation.

To answer these questions, we must momentarily divert our attention to the discourse function of the English possessive constructions: to be specific, the notions of topic and focus. Let me define what I mean by these terms, since they are often subject to some confusion and various similar or equivalent terms have been employed (theme/rheme; topic/comment; etc.) A NP is topical to the extent that is central but backgrounded in discourse. The topic tends to be what the discourse is about; it most often occurs in subject position in a sentence; chains of anaphors often form in which each anaphor refers to the topic; and the topic often expresses old information. The focus represents information about the topic. It typically occurs later in the sentence, and seldom in subject position, and it is foregrounded, often because it represents new (or noteworthy) information about the topic.

My analysis depends upon one crucial claim: that the prenominal and postnominal possessive differ in their assignment of discourse function. The following chart summarizes this difference between the two possessive constructions.

	Possessor	Possessed Noun
Prenominal Possessive	Relatively topical	Relatively in focus
Postnominal Possessive	Relatively in focus	Relatively topical

This assignment of discourse function is compatible with the general properties of topic and focus, since in both constructions the first element functions as topic, or theme, and the second as focus, or rheme (cf. Firbas 1964).

There is considerable evidence for this analysis. Riddle (1984) reports that in a corpus which contained 1182 possessives, virtually every case fits. Prenominal possessives occur in constructions where the possessor was topical; postnominal possessives, in constructions where the possessed noun was topical. Riddle presents several minimal pairs in which the contrast in topicality is very clear. Consider the following example of Riddle's:

- (20) a. (Public Poster): A meeting of Overeaters Anonymous will take place at the home of Agnes Levy, 184 Elm St., on . . .
- b. (Public Poster): ??A meeting of Overeaters Anonymous will take place at Agnes Levy's home, 184 Elm St., on . . .

On a public poster, only (20a) makes sense. The reason is quite simple. Readers of a public poster cannot be expected to know who Agnes Levy is: it represents new information, and is clearly in focus. (20a) is therefore the natural choice. (20b) is inappropriate on a public poster because it treats the possessor as topical information, and hence presupposes that the audience will know who Agnes Levy is. Not surprisingly, if we reverse the situation, the acceptability of the two constructions is also reversed. Riddle cites the following example:

- (21) What: A Birthday Party
Who: For Amy Lindsey
When: 2:00 on Saturday afternoon
Where: Amy's house
(from an actual invitation)

Here, the 'Amy' is topical, backgrounded information by the end of the invitation; the prenominal possessive is therefore natural. The postnominal construction would be entirely out of the question, due to contradictory topic assignments. Another of Riddle's examples illustrates the topical nature of the prenominal possessive. Consider (22):

- (22) Susan: How are you doing with your rental properties?
Jane: Oh, pretty good. I've got the shop all fixed up now, but several of the house's windows still need to be replaced.

Here, of course, house is topical since it instantiates the general topic of discussion (rental properties). To employ the postnominal possessive would change the meaning. In (23), for

example, there must be some special reason that we should have to emphasize the house; perhaps it should have been in good shape. And this, of course, follows from the fact that the postnominal construction foregrounds the house rather than the windows.

- (23) Susan: How are you doing with your rental properties?
 Jane: Oh, pretty good. I've got the shop all fixed up now, but several of the windows of the house still need to be replaced.

I submit that this difference between the two possessive constructions is the primary difference between them. The other differences are direct consequences of this fact. The Silverstein hierarchy plays a role because it is actually a hierarchy of markedness as topic.¹ The top of the hierarchy contains those NPs that are intrinsically topical and which therefore appear naturally as prenominal possessors. The bottom of the hierarchy contains those NPs that are marked as topic, and which therefore occur most naturally as postnominal possessors.

Let us begin at the top of the hierarchy. It consists exclusively of indexical elements--pronouns, anaphors, and demonstratives. These are elements whose reference is automatically determined within the situation of speaking. This automatically renders them topical, and backgrounded, since the speaker can take for granted that his addressee can determine their reference. Furthermore, the hierarchy is organized according to the salience of the referent within the context of speaking. The speaker and his addressee are obviously most salient: next come anaphoric elements, which are salient without the speaker having to point them out: then come demonstratives, which are salient once the speaker singles them out: and then come potentially indexical NPs such as kin terms. Below the indexicals we find a similar arrangement. Animates are inherently probable topics, simply because people's attention is naturally drawn to them; movable concrete objects are next most likely to be attended to, and so forth. The bottom of the hierarchy consists of those things that are too abstract to be particularly salient, and which therefore are most unlikely to be taken as topic. The more salient the referent is likely to be within the situation of speaking, and the more tightly the NP's reference is determined by the situation of speaking, the higher it will be on the Silverstein hierarchy, and the likelier that it will be construed as topical in the absence of indications to the contrary.

If we interpret the Silverstein hierarchy as a hierarchy of markedness as topic, everything falls into place. Consider phrases like the following:

- (24) a. my foot
 b. * the foot of me

In (24a), the pronoun is a prenominal possessor. It ought

therefore to be topical. It is also at the top of the Silverstein hierarchy, which indicates, again, that it ought to be topical. Since the two indications of topicality agree, (24a) is entirely natural. On the other hand, in (24b), the situation is altogether different. Position indicates that the pronoun is in focus: but it is inherently topical. This contradiction renders the phrase unacceptable. Similarly with phrases like the following:

- (25) a. * victory's monument
b. the monument of victory

The possessor NP, victory is at the very bottom of the Silverstein hierarchy, which means that it is inherently nontopical, or in focus. This is incompatible with the topical status that the prenominal possessive assigns it in (25a), but fits easily with the focal status assigned it by the postnominal possessive in (25b). Finally, with possessors from the middle of the hierarchy, either construction is possible, depending on the topic-focus structure of discourse.

We have now answered two of the three questions we raised above. We know why the Silverstein hierarchy is connected with the English possessive constructions and we know why the two constructions are aligned with opposite ends of the Silverstein hierarchy. One question remains unanswered: why different types of possession have different cut-off points. The Silverstein Hierarchy provides an answer to this question also.

Consider (14)-(15) once again. If the possessed noun is a proper name, the cut-off points are set unusually high for prenominal possessives, and unusually low for postnominal possessives. On the other hand, if the possessed noun is an abstract noun, the cut-off point is set unusually low for prenominal, and unusually high for postnominal, possessives. Most nouns fall in between these two extremes. If we examine the Silverstein hierarchy, we find that the Silverstein hierarchy is once more at work, for proper names are high on the hierarchy, abstract nouns are low on the hierarchy, and most nouns fall somewhere in between. And our explanation will be the same as before: an interaction of the Silverstein hierarchy with the topic-focus assignments of the two possessive constructions. The prenominal possessive requires that the possessor be more topical than the possessed noun. If the possessor is higher on the Silverstein hierarchy than the possessed noun, no conflict will arise: but if it is significantly lower, the topic-focus assignment will be contradictory. In the postnominal possessive, the possessor must be less topical than the possessed noun. It follows that the possessor ought to be lower on hierarchy than the possessed noun.

Let us consider the consequences that this has. If a noun is high on the Silverstein hierarchy, most other nouns will be significantly lower than it. This will raise the cut-off point for the prenominal possessive, and lower it for the postnominal

possessive. On the other hand, if a noun is low on the hierarchy, most nouns will be significantly higher on it. This will lower the cut-off point for the prenominal possessive, and raise it for the postnominal possessive. In fact, we can define the cut-off point as that point at which the possessor and the possessed noun are so far apart on the Silverstein hierarchy as to violate the topic-focus properties of the construction.

A number of interesting consequences emerge from this analysis. The first has to do with the two English possessive constructions. I have pointed out that the two constructions differ in many ways other than I have discussed so far. Most of those can be attributed to their topic-focus properties. The postnominal possessive is more acceptable with indefinite and generic possessors--and these are inherently less topical than definite, specific possessors. The postnominal possessive is better with long, complex possessors: and long, complex phrases are likely to be 'comments', presenting new information or placing old information in focus. The postnominal possessive is better if the possessor is contrastive: and this, once again, is a matter of focus. Thus, many properties of English possessives derive from their behavior with respect to topicality.

The second consequence has to do with the Silverstein hierarchy. I have argued that it is a hierarchy of markedness as topic. If so, other applications of the hierarchy ought to be explicable in discourse-functional terms. In particular, we may ask why split ergative languages behave the way they do. Why do NPs at the top of the hierarchy seem to prefer nominative/accusative case marking? And why do NPs at the bottom of the hierarchy go better with absolutive/ergative case marking? Dryer (1987) has suggested a hypothesis which we can exploit.

Dryer points out that if a language has nominative/accusative case marking, it treats two NP types in the same way: the subjects of intransitive sentences and the subjects (usually agents and experiencers) of transitive sentences. And these are normally the most topical NPs in the clause. Hence, nominative-accusative case marking especially marks inherently topical NPs. On the other hand, absolutive/ergative case marking groups the subjects of intransitive sentences with the objects of transitive sentences. These NPs typically have the thematic role of theme, and not agent or experiencer. Some intransitive sentences do assign their subjects the role agent, but they also assign them the role theme. Thus, the ergative case specially marks the role of theme. This is Dryer's hypothesis. Let us consider its consequences. If nominative-accusative case marking specially marks the most topical NP, we may expect NPs high on the hierarchy to follow the nominative/accusative pattern: they are inherently topical, and hence must be marked for topicality if any nouns are so marked. If absolutive/ergative case marking specially marks the role of theme, similar consequences follow for the bottom of the hierarchy. The bottom of the hierarchy consists of abstract

words and words for places, times, locations, and the like. Such words typically take the role of theme (or source and goal, which are also associated with 'absolutive' argument positions). They do not normally take on agent or experiencer roles, which would take on ergative case. Hence, if any NPs are marked for the role of theme, it should be NPs from the bottom of the hierarchy, which are inherently associated with that type of role.

To sum up: the Silverstein hierarchy is a hierarchy of NP markedness as topic. For that reason, it has implications for phenomena that interact with topicality, including such diverse phenomena as split case marking and the behavior of the English Possessive constructions.

FOOTNOTES

1. Silverstein (1981) makes essentially this point, though in different terms.

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