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Author(s): Jeanne van Oosten
Proceedings of the Sixth Annual Meeting of the Berkeley Linguistics Society (1980), pp. 479-494

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The Annual Proceedings of the Berkeley Linguistics Society is published online via [eLanguage](#), the Linguistic Society of America's digital publishing platform.

Subjects, Topics and Agents:
Evidence from Property-factoring

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Introduction

The term "property-factoring" has been used to relate pairs of sentences of two very different types. The first type, which I call PF1, for property-factoring-1, is exemplified in 1 through 3:

- 1a The man's singing exasperated his neighbors.
- b The man exasperated his neighbors with his singing.

- 2a The cat's antics amused me.
- b The cat amused me with her antics.

- 3a The boy's sudden appearance startled his mother.
- b The boy startled his mother with his sudden appearance.

In transformational terms, the (b) sentence of each pair is designated as the one which has undergone the property-factoring transformation. A sentence which is input to the rule has a possessive noun phrase in subject position; in the output the possessor noun has been raised to subject position and the rest of the noun phrase is shunted off to the end of the sentence in a prepositional phrase.

The second type of property-factoring, which I call PF2, for property-factoring-2, is illustrated in 4 to 6:

- 4a The price of rice went up.
- b Rice went up in price.

- 5a Sydney's weight increased.
- b Sydney increased in weight.

- 6a The factory's production improved.
- b The factory improved in production.

Again, in transformational terms, the subject of the input sentence to the rule, the (a) sentence in 4 to 6, is a possessive noun phrase and in the output of the rule the possessive has become the subject and the rest of the original subject emerges in a prepositional phrase at the end of the sentence. However, although the term "property-factoring" was first coined in a transformational framework and it is convenient to characterize the rule in transformational terms, as I have just done, let me say at the outset that in this paper I am not concerned about the formal aspects of property-factoring as a transformation. Rather, I am interested in defining the conditions under which one would use the first member of a pair of related sentences like 1 to 6, as opposed to the second, or vice versa. In what follows, I will call the (b) sentences of 1 to 3 PF1 sentences, and the (a) sentences I will call non-PF1 sentences; the (b) parts of 4 to 6 I will call PF2 sentences and the (a) parts I will call non-PF2 sentences. Further, let the noun (phrase) which occurs in the prepositional phrase at the end of a PF1 or PF2 sentence, and which corresponds to the head of the subject in non-PF1 or non-PF2

sentences be called the factored noun (phrase) and let the raised noun be the noun which occurs as the subject of PF1 and PF2 sentences, the possessor in non-PF1 and non-PF2 sentences.

In this paper I will do the following: first I will compare PF1 and PF2 sentences to discover the relevant properties of each; then I will investigate in what functional context each type of sentence gets used. I go out from the assumption that the choice of a PF1 or a non-PF1 sentence, and the choice of a PF2 or a non-PF2 sentence, depends on what NP a speaker wants to have in subject position, and that therefore the choice depends on factors associated with subjecthood, specifically agentivity or topicality. However, I argue that these notions have to be modified or refined, especially the notion of topichood, in order to accommodate the property-factoring facts.

But first a note on what I will not be talking about. There are numerous other constructions which also evidence a type of property-factoring. Some of these are exemplified in 7 through 12:

- 7a Manfred's credulity was laughable.
 b Manfred was laughable {ⁱⁿ_{on account of}} his credulity.
- 8a Manfred's credulity was criticized.
 b Manfred was criticized {^{for}_{on account of}} his credulity.
- 9a The cat's antics got her into trouble.
 b The cat got (herself) into trouble on account of her antics.
- 10a Jan's acting got better.
 b Jan got better at acting.
- 11a ?The color of the cherries is dark.
 b The cherries are dark in color.
- 12a ?The car's oil is low.
 b The car is low in oil.¹

In each of the pairs 7 to 12, the subject of the (a) sentence contains a possessive NP, the head of which occurs in a prepositional phrase at the end of the (b) sentence while the possessor is raised to subject status. The characteristics of these types of property-factoring sentences, including how many different classes of them there are and what restrictions hold on them, are still mysterious. I will lump all these different types into one category PF3, and concentrate in this paper on PF1 and PF2 sentences, if for no other reason than that these were the types called "property-factoring" in the transformational tradition. I will², however, return briefly to PF3 sentences at the end of this paper².

Properties of PF1 and PF2

Structurally, there are only two things that the two constructions have in common: first, a sentence susceptible to PF1 or PF2 has as subject a possessive noun phrase; second, a sentence exemplifying either construction has the erstwhile possessor as subject while the erstwhile head of the possessive construction occurs at the end of the sentence in a prepositional phrase. But in spite of these similarities between the two sets of sentences, there are great differences between them as well. First of all, different types of verbs occur in PF1 as opposed to PF2 sentences. In PF1 the verb is a psychological verb, like exasperate, amuse, annoy, charm, enchant, infuriate, anger, amaze and others. In PF2 the verb is a change-of-state verb, like go up, increase, improve, go down, decrease, darken, double and others. These two verbal categories are discrete, with no overlap. Second, the prepositional phrase in PF1 differs from that in PF2, in two ways. The preposition used is different, for one thing: in PF1 with is used, which is also used for instrumentals as in 13:

13 John sliced the salami with his knife.

In PF2 in is used, which is also used for prepositional phrases of "respect in which," as in 14:

14 John and I differ in our heights/outlook on life, etc.

The prepositional phrases in PF1 and PF2 sentences also differ in that in PF1 but not in PF2 sentences a resumptive possessive pronoun is used so that, in effect, the entire original subject NP is represented in the prepositional phrase³. This is not possible in PF2, as is shown in 15:

- 15a *Rice went up in its price.
 b *Sydney increased in his weight.
 c *The factory improved in its production.

The third way in which PF1 differs from PF2 is that in PF2 the factored noun designates an attribute, such as, in our examples, price, weight or (level of) production, whereas in PF1 the factored noun can designate either an attribute, as in 16,

- 16a The man's appearance intimidated me.
 b The man intimidated me with his appearance.

or an activity⁴, such as singing, antics or a sudden appearance (on the scene) in 1 through 3. In addition, the factored noun of a PF1 sentence can designate something which is neither an attribute nor an activity, but which stands in a relation of part to whole to the raised noun, as in 17:

- 17a The piano's broken key exasperated me.
 b The piano exasperated me with its broken key.

But there are to my knowledge no PF2 sentences in which the factored noun designates something other than an attribute⁵.

An activity, in the sense in which I am using the term, prototypically has the following properties:

1. An activity causes a change in the external world that is a direct result of the activity and that is perceivable by one of the major senses of sight, hearing or feeling (but especially sight). For example, the direct result of John's walking is his displacement from one point to another, which one can see.

2. An activity is something that is intentional. Thus seeing is not an activity in my sense; looking is.

3. The primary causer of an activity typically is an agent, with properties of intentionality, control and responsibility as discussed below. The primary causer is the primary energy source for the activity.

The fourth way PF1 differs from PF2 is that the subject in PF1 tends to be potentially agentive whereas in PF2 either potentially agentive nouns like Sydney or non-agentive nouns like rice can be subject. By an agentive noun I mean one whose referent can be the agent of the action expressed in the predicate. Agents typically intend to bring the action described in the predicate about, bring the action about voluntarily, have control over the action's coming about, are the primary energy source for the action and are responsible for the action and the resulting change incurred in the world of discourse (G. Lakoff 1977:244). A potentially agentive noun is one whose referent is capable of having these attributes of intentionality, volition, control and responsibility, and of being a primary energy source for an action. Humans are thus the potential agents par excellence, animals are next, and inanimate objects are last (barring anthropomorphism). The more of these properties, like intentionality, volition and control, a noun has in a certain sentence, the more agentive it is. Thus the subjects of the sentences in 18 are arranged in order of decreasing agentivity:

- 18a Mary's mother amused her with her stories.
- b Mary's cat amused her with her antics.
- c That chair annoyed me with its creaking.

Mary's mother is more agentive than Mary's cat because the former presumably intended to amuse Mary whereas the latter did not.

A sentence like 18c shows, however, that a non-potentially agentive noun can be the subject of a PF1 sentence. The activity/attribute distinction interacts with the requirement that PF1 subject be potentially agentive to some degree. If the factored noun is an attribute, the PF1 subject must be potentially more agentive than if the factored noun is an activity. PF1 sentences 19-22b illustrate this. With an attribute appearance as the factored noun, dog can occur only marginally as the raised noun, and mountain is not acceptable at all:

- 19a The man's appearance intimidated me.
- b The man intimidated me with his appearance.
- 20a The dog's appearance intimidated me.
- b ?The dog intimidated me with his appearance.
- 21a The mountain's appearance intimidated me.
- b *The mountain intimidated me with its appearance.

When the factored noun is an activity, however, the PF1 sentences can have dog as the subject, as in 22b:

- 22a The dog's growling intimidated me.
 b The dog intimidated me with his growling.

Of course, potential agents are more likely to engage in activities than non-potential agents, specifically inanimate objects. In general activities and agents go together and so it is not surprising that if PF1 sentences show a preference for activities in the factored noun they also show a preference for potential agents in subject position. We may surmise that subjects in PF1 sentences must show a certain level of agentivity in order to be acceptable, and that this can be done either by the appearance of an activity in the prepositional phrase or by the appearance of a potentially agentive noun in subject position (or both).

Nevertheless, there are exceptions to this. Consider the case of activity-like verbs such as creak, rustle, gleam, sputter and weather verbs like rain, snow, blow. They more typically occur with non-potential agents and have only the first of the three properties of activities discussed above. They do, however, bear a "family resemblance" (cf. Wittgenstein 1958:32^e; Rosch & Mervis 1975) to prototypical activities in that they do have the first property of activities mentioned above and the other two under anthropomorphism. It is therefore doubly interesting that they can occur in PF1 sentences, as in 23: the factored gerund does not designate a prototypical activity, and the raised subject is not a potentially agentive noun.

- 23a The chair's creaking annoyed me.
 b The chair annoyed me with its creaking.

Similarly, there are sentences like the following, from Fillmore 1968: 23, in which a non-potential agent combines with an attribute:

- 24a The brevity of your speech impressed us.
 b Your speech impressed us with its brevity.

By combining the nature of the factored noun and the potential agentivity of the subject, a continuum of (actualized) agentivity emerges in subjects of PF1 sentences, with on it the points mentioned in 25:

- | | | | |
|-----|------------------------|--------|----------------------------------|
| 25a | The (human) | V'd NP | with (activity) |
| b | The (animal) | V'd NP | with (activity) |
| c | The (human) | V'd NP | with (attribute) |
| d | The (animal) | V'd NP | with (attribute) |
| e | The (inanimate object) | V'd NP | with (non-prototypical activity) |
| f | The (inanimate object) | V'd NP | with (attribute) |

The ordering of the points on the continuum seems to be as given from an intuitive point of view, and I will not justify it here, except for the ordering of 25b and 25c. That the ordering of these two points is correct as given can be seen in the following example, in which exasperate can occur in a PF1 sentence of type b but not in one of type c:

- 26a The cat exasperated us with her meowing.
 b *The man exasperated us with his obtuseness.

If we are correct in our conclusion that PF1 sentences are more favorable to agentivity than non-agentivity, then the examples in 26 would lead us to conclude that the subject in a sentence of type 25b is more agentive than the subject in a sentence of type 25c. Every psychological verb seems to have a different cutting-off point on the continuum of agentivity after which PF1 may no longer be applied (Van Oosten 1978b). Thus although you can say both 27a and 27b, using infuriate, 28a is acceptable whereas 28b is not; these sentences are identical to the ones in 27 except that anger is used instead of infuriate:

- 27a The man infuriated me with his singing.
 b The cat infuriated me with her obtuseness.
 28a The man angered me with his singing.
 b *The cat angered me with her obtuseness.

The position of these cutting-off points does not have anything obvious to do with the meaning of the verbs, since verbs semantically as close as anger and infuriate have quite different cutting-off points. A verb like annoy is allowed with (some) PF1 sentences of type 25e and anything higher on the continuum; it is not allowed with PF1 sentences of type 25f:

- 29a The weight of the rock annoyed me.
 b *The rock annoyed me with its weight.

A verb like impress is allowed with PF1 sentences even of type 25f, as was shown in 24. The verb exasperate, on the other hand, is not:

- 30a The brevity of your speech exasperated me.
 b *Your speech exasperated me with its brevity.

And in general, PF1 can be used only with subjects higher up on the agentivity scale; that is, if PF1 can be used with a subject at a certain point on the agentivity scale, then it can be used with subjects at any higher point on the agentivity scale. This finding corroborates the notion that the use of a PF1 sentence is connected with agentivity, but also points out that the connection with agentivity is not inviolate.

Although PF2 sentences do allow potential agents in subject position, this is incidental. A PF2 sentence like 5b does not impute volition, intentionality, control or even responsibility to the subject for the state of affairs expressed by the predicate. Sydney is not an agent in 5b, even though Sydney is a potential agent, that is, he might be an agent in another sentence like "Sydney hit the ball" or "Sydney amused me with his stories." Since subjects in PF1 sentences tend to be agentive whereas those in PF2 sentences are not, the use of the instrumental preposition with and a resumptive pronoun is more appropriate there than it would be in PF2 sentences, since these two mechanisms underscore the similarity of PF1 sentences with regular agentive sentences containing an instrumental, such as 13 above.

PF1 and PF2 sentences in discourse

Why does a speaker use a sentence exemplifying PF1 or PF2 rather than a sentence not exemplifying but susceptible to one of these? In order to answer this question we have to take a look at the notion of topichood. The notion of topic has been used in quite different ways in the literature, but these uses can all be divided roughly into two types which can be designated as discourse topic on the one hand and sentence topic on the other. The most commonly-used notion is sentence topic. Usually people do not define what they mean by "topic", but on way of telling which type of topic is meant is if a certain noun is designated a topic without a context being considered criterial. When a topic can be designated in a sentence considered in isolation then we are dealing with sentence topic. What Halliday calls "theme" in his "Notes on Transitivity and Theme in English" (1967-68) and elsewhere is also a sentence topic. Usually in English, and in many other languages, the first noun in the sentence is considered the sentence topic (cf. Firbas 1964; Sgall, Hajičová & Benešová 1973, where this notion is nuanced somewhat for English; Halliday 1967-68, Part II, pp. 205, 212). Left-dislocated, clefted and pseudo-clefted elements are therefore considered sentence topics by definition, not to speak of the transformation called "topicalization," exemplified by the sentence "Beans I like" (Gundel 1977; but cf. Prince 1978). If the first noun in the sentence is to be considered to be the sentence topic, then it is obvious that in English subjects are often sentence topics, since typically they come first in the sentence. Sometimes sentence topics are said to be "what the sentence is about" or "what the speaker is talking about" (for example, Halliday, Firbas and Gundel all say or imply this), but I think this is not necessarily the case. My favorite example comes from Chafe (1976), and is reproduced in 31:

- 31 A What happened to the lamp?
 B The dog knocked it over.

"What the speaker is talking about" in 31B to me is without question the lamp--it--and not the dog; the dog is incidental to what the speaker is really concerned with. So sentence topics cannot be defined both as "what the speaker is talking about" and "the first noun in the sentence." The conversation fragment 32, culled from an actual taped and transcribed conversation, gives an example of left dislocation where the left-dislocated element is not a topic:

- 32 H ...your external auditory meatus, (1.8) That's- [the hol
 J Yeah I
 J Yeah. I know that because when m- a friend of mine
 (.hhh) her [son was deaf and I read up on it.
 H]yeah

The left-dislocated element a friend of mine serves not to state "what the speaker is talking about" but to introduce a new and incidental participant into the conversation who has to be identified before the speaker can go on and say what's really on her mind, which is why she knows what the meaning is of "external auditory meatus."

Many people have written papers showing how the notion of topic, meaning what I am here calling sentence topics, is necessary in order to explain some aspect of the syntax of a varied array of languages (cf., for example, Hawkinson & Hyman 1974 for Shona, Lambrecht 1980 for French, and Nichols, Rappaport and Timberlake 1980 for Russian). The notion of discourse topic, on the other hand, is much less common. The term was coined, as far as I know, by Keenan and Schieffelin in their paper "Topic as a discourse notion" (1976). They define discourse topic as "a proposition (or set of propositions) expressing a concern (or set of concerns) which a speaker is addressing" (1976:343), and give 33 to illustrate discourse topic (their 3),

- 33 Allison III, 20.3½ months
 a Mother: (trying to put too large diaper on doll, holding diaper on) Well we can't hold it on like that.
 What do we need? Hmm? What do we need for the diaper?
 b Allison: pin/

stating that the discourse topic for Allison's utterance is the proposition 'we need something for the diaper.' Keenan and Schieffelin use the notion primarily to understand the dynamics and organization of discourse, but I have found a very similar notion to be useful in understanding when the sentences under consideration in this paper get used in their property-factoring form and when they get used in the form in which the property is still in subject position. Keenan and Schieffelin insist at several points in their paper that their discourse topic is a proposition or a set of propositions rather than a simple NP. I think they do this in reaction to the usual conception of sentence topics as an NP which occurs somewhere in the sentence or discourse fragment under consideration (cf. Gundel 1977, Nichols, Rappaport & Timberlake 1980, Lambrecht 1980). I agree that the discourse topic does not need to occur somewhere in the sentence, as in 34B:

- 34 A Why isn't Hilary going to the party?
 B She's sick.

But in the framework of this paper the discourse topic is "why Hilary isn't going to the party" rather than "Hilary isn't going to the party for some reason," as it would be in the framework of Keenan and Schieffelin's paper. That is, my definition of discourse topic differs from Keenan and Schieffelin's in that it omits the words 'a proposition (or set of propositions) expressing...' This may sound like splitting hairs but it will become important in the further development of this paper. In order to distinguish my notion of topic from Keenan and Schieffelin's I will call mine "nominal discourse topic." In this way, it seems to me, the notion of nominal discourse topic will remain as close to the non-technical meaning of topic, "what the speaker is talking about," as possible. In what follows, I will talk of "topics" tout court for ease of exposition, but will mean by this term "nominal discourse topics."

Now to get back to the question when speakers use PF1 and PF2 and when they do not. First a note of warning. Very few of the examples in this section of the paper will offer cut-and-dried proof

for my claims. I think this is because even if a speaker does not answer a question directly, their interlocutor will assume they are being relevant and will cast about for some way of adjusting their understanding of the speaker's utterance so that it becomes relevant (Grice 1975). The indirect response is acceptable as long as its relevance can be deciphered.

When does a speaker use PF2 and when is a non-PF2 sentence more appropriate? In 35 and 36 are some examples in which there is a difference in acceptability between PF2 and non-PF2 sentences:

- 35 How come John, the farmer from Illinois, is looking so glum?
 a The price of soybeans has gone way down.
 b ?Soybeans have gone way down in price.
- 36 What's a good thing to invest in in the commodities market?
 a ?The price of rice has gone up.
 b Rice has gone up in price.

In 35, the non-PF2 sentence is more acceptable as a response than the PF2 sentence. The topic is: "Why John is looking so glum." Neither "soybeans" nor "the price of soybeans" is the topic. In 36, on the other hand, the PF2 sentence sounds preferable to the non-PF2 sentence. The topic of the response is "good things to invest in in the commodities market." The price of rice is not the topic, but rice, the subject in 36b, is one good thing (in the opinion of the speaker) to invest in. Rice is then a possible referent for the topic and is acceptable as subject. Less elliptically, the utterer of the response in 36 might have uttered 37b but not 37a:

- 37 Rice is a good thing to invest in since
 a *its price has gone up.
 b it has gone up in price.

Another set of examples is found in 38 and 39. These are monologue sequences rather than dialogue sequences as in 35 and 36:

- 38 Researchers must have been working hard on instant coffee lately.
 a Its flavor has improved immensely.
 b ?It has improved immensely in flavor.
- 39 Some convenience foods have become quite palatable.
 a ?The flavor of instant coffee has improved immensely over the past few years.
 b Instant coffee has improved immensely in flavor over the past few years.

The second sentence of the monologue in 38 gives evidence for why the speaker thinks the first sentence is true. The topic of the second sentence is thus "How I know researchers have been working on instant coffee." Instant coffee is not the topic and to make it the subject would be only marginally acceptable. If anything, "the flavor of instant coffee" is a possible referent for the topic. In the example in 39, the second sentence of the monologue corroborates

the first by giving an example. The topic of the second sentence is thus "examples of convenience foods that have become palatable." Instant coffee is an example of this and is thus a possible referent for the topic and can therefore be made the subject.

PF2 sentences can thus be used rather than their non-PF2 counterparts when the raised noun is the topic or at least a possible referent of the topic. It now becomes evident that not only is the definition of topic that I have proposed more in keeping with the non-technical meaning of the word "topic" (compared with Keenan and Schieffelin's), but it is also more useful than the view of topics as propositions for explaining the distribution of PF2 sentences in discourse. The notion of referent of a topic is necessary but it is hard to consider propositions as having referents in the required sense.

In 40 is a dialogue sequence incorporating a PF1 sentence:

- 40 How did your three-year-old keep amused while he was sick?
- a The kitten's antics amused him.
- b *The kitten amused him with her antics.
- c My mother's stories amused him.
- d My mother amused him with her stories.

The topic of the response in the dialogue is "what amused the three-year-old" and what amused him was the mother's stories and the kitten's antics. It is thus to be expected that 40a and 40c are acceptable as responses. What about 40d? I suggest that my mother is acceptable as a subject because she is the agent of the sentence even though she is not the topic. The kitten is somewhat agentive in 40b, since it causes the three-year-old's amusement and bears in some sense the responsibility for his being amused, but its agentivity is not strong enough to allow it to become subject without being topic; it does not have intentionality, volition and control vis-à-vis the state of affairs expressed in the predicate. Examples in a monologue sequence are found in 41 and 42:

- 41 Take a look at these kittens.
- a Their antics will amuse you.
- b *They will amuse you with their antics.

The kittens are neither topic nor (prototypical) agent so they cannot be subject.

- 42 If you're depressed, go see the Harlem Globetrotters.
- a Their hi-jinks will amuse you.
- b They will amuse you with their hi-jinks.

The Harlem Globetrotters are not topic but they are agentive and so can be the subject.

On the basis of the foregoing we might predict that non-prototypically agentive PF1 sentences can occur only when the raised noun is topic or a possible referent for the topic. This seems to be the case, as shown by the following examples:

- 43 Why did you like John's speech?
 a Its brevity impressed me.
 b ?It impressed me with its brevity.
- 44 Which speech did you like best?
 a ?Well, the brevity of John's speech impressed me.
 b Well, John's speech impressed me with its brevity.

The topic of the response in 43 is "Why I liked John's speech" rather than "John's speech." The topic of the response in 44, on the other hand, is "which speech I liked best," of which "John's speech" is a possible referent.

- 45 Don't buy that chair.
 a Its creaking would annoy me terribly.
 b ?It would annoy me terribly with its creaking.
- 46 All the furniture in this room has something wrong with it. The upholstery on the couch is ripped, the coffee table wobbles, and
 a ?the creaking of that chair annoys me terribly.
 b that chair annoys me terribly with its creaking.

I leave it to the reader to decipher this last set of subject - topic relations .

In PF2 there is no question of agentivity because intransitive change-of-state verbs do not have agents, but, as we have seen in 35 through 39, PF2 can be used best if the raised noun is topic or a possible referent for the topic. In PF1 sentences there may be a prototypical agent, and if there is then either it or the topic can be subject as in 40 through 42. Topic can override agent, in 40c, or agent can override topic, as in 40d. These data are best formulated by saying that subjects in this subset of English code the topic or its referent if it is expressed in the sentence, or, optionally, a prototypical agent if there is one, even if it is not the topic. If there is neither an agent nor an expressed topic, as in 34, 35, 38, 41, 43 and 45, I suspect that a hierarchy of semantic case roles will determine the subject, but I have not finished my research on that aspect of the problem. This analysis implies that non-PF1 and non-PF2 sentences are more basic, in some sense, than their property-factoring counterparts, since in the former the subject does not have to be topic (although it can be). If anything, the non-property-factored sentences are sensitive to the absence of an overt topic in the sentence. This is not to say that these sentences do not have topics, but just that the topic of the sentence is not expressed overtly in it.

The notion of topic--nominal discourse topic--has syntactic relevance in helping to determine the distribution of other types of English sentences as well. One example is Psych-Movement, exemplified in 47a and b:

- 47 What made you laugh just now?
 a I was amused at the cat's antics.
 b The cat's antics amused me.

In the response there is more than one concern: the speaker himself, and the cat's antics: the cat's antics, because that is the answer to the question and therefore the nominal discourse topic, and the speaker, because that is automatically a concern if it occurs at all. Compare 48:

- 48 What made Marsha laugh just now?
 a ??She was amused at the cat's antics.
 b The cat's antics amused her.

There are other things that help determine the distribution of Psych-Movement sentences, but nominal discourse topic is one of them.

The distribution of some existential sentences can also be explained using this notion of nominal discourse topic, as in 49 and 50 (cf. Van Oosten 1978a):

- 49 What happened to the rabbit?
 a A dog tried to attack him and he died of fright.
 b ??There was a dog that tried to attack him and he died of fright.
- 50 Why are you crying over that silly Lassie episode?
 a There's a dog that's going to drown if Lassie doesn't rescue her, and her master will be heartbroken.
 b ?*A dog is going to drown if Lassie doesn't rescue her, and her master will be heartbroken.

This type of existential sentence (with a relative clause after the demoted NP) can be used only if the subject both is not in the hearer's knowledge structure (or rather, is not in the speaker's model of the hearer's knowledge structure) and is the nominal discourse topic of the sentence, what the sentence is about. In 49 the topic of the response is the rabbit, not a dog, and so a dog cannot be given special prominence by existential there. In 50 a dog is the topic of the response, and so it can be given such prominence.

PF3 sentences also seem to follow this pattern, though certainly much more study should be devoted to them. Thus for example one can devise contexts for 8 as follows:

- 51 What did people find wrong with Manfred?
 a His credulity was criticized.
 b ?He was criticized for his credulity.
- 52 That group found something wrong with everybody. John was too tall, Mary laughed too much, and
 a ?Manfred's credulity was criticized.
 b Manfred was criticized for his credulity.

In conclusion, I hope I have shown three things: first, that property-factoring is an interesting phenomenon and deserving of more work; second, that in order to understand its distribution both the notion of nominal discourse topic and the notion of agentivity must be used; and third, that the notion of nominal discourse topic is relevant at the syntactic level as well as at the level of discourse.

Notes

1. The syntactic reasons why 11 and 12 are not PF2 sentences will become clear later, when the properties of PF1 and PF2 sentences are discussed in greater detail.
2. A class of sentences closely related to PF1 sentences but differing from the latter in intonation is exemplified by (i):

- (i)a That chair annoyed me, with its ripped upholstery and its springs sticking out.
 b John bothered me, with his constant talk about an imminent holocaust.

Such sentences, as well as PF1 sentences, are closely related to sentences like those in (ii):

- (ii)a That chair annoyed me.
 b John bothered me.

I will not be dealing with these types of sentences in this paper. Not all the conclusions made about PF1 sentences are transportable to the types of sentences illustrated in (i) and (ii). In particular, although a PF1 sentence forces a more agentive reading if the subject is a potential agent, as we will see later in the paper, this is not true of the classes illustrated in (i) and (ii). That is, the subject John in (i)a, though a potential agent, may be a case-grammar object (Cook 1979:64) rather than an agent. This is shown by the ability of such sentences to appear with the simple present tense (associated with stativity), as in the dialogue in (iii):

- (iii) A Why don't you like John?
 B He bothers me, with his constant talk about an imminent holocaust.

Their inability to appear with a continuous tense (associated with non-stativity), as in (iv), shows that the subject cannot have an agentive reading (under this intonation):

- (iv) A What is John doing?
 B *He is bothering Mary, with his (constant) talk about an imminent holocaust.

Without the parenthetical with phrase, as in (ii)b, a sentence of this form with a potential agent in subject position is ambiguous but can be disambiguated by context and the choice of tense:

- (v) A Why don't you like John?
 B He bothers me.
 (vi) A What is John doing?
 B He is bothering Mary.

3. In PF1 sentences, unlike non-PF1 sentences, however, the possessive must be a pronoun; a sentence like (i) is marginal and a sentence like (ii) is totally out:

- (i) ??John₁ exasperated me with John₁'s singing.
 (ii) *Mary exasperated me with John's singing.

4. The term "activity" is used here in a different sense than it was used by Zeno Vendler (1967). Vendler uses the term in a fourfold classification of verbs into activities, accomplishments, achievements and states. He illustrates the four types of verbs as follows:

For activities: A was running at time t means that time instant t is on a time stretch throughout which A was running.

For accomplishments: A was drawing a circle at t means that t is on the time stretch in which A drew the circle.

For achievements: A won a race between t₁ and t₂ means that the time instant at which A won that race is between t₁ and t₂.

For states: A loved somebody from t₁ to t₂ means that at any instant between t₁ and t₂ A loved that person. (1967:108)

The notion of activity as it is used in the current paper, however, can include verbs in three of Vendler's categories: those of (Vendler's) activities, accomplishments, and achievements, but does not include all verbs in those categories.

5. There are pairs of sentences like 10 (of type PF3), repeated here for convenience,

- (i)a Jan's acting got better.
b Jan got better at acting.

which are obviously closely related to PF2 sentences in general, especially in the fact that the verb is a change-of-state verb, and the subject in the (a) sentence is a possessive NP, of which the possessor is the subject in the (b) sentence and the head noun is factored out into a prepositional phrase. The use of the preposition at seems to be related to the presence of an activity rather than an attribute; when a sentence like (i)a, with get better, contains an attribute its transform will contain in:

- (ii)a Jan's acting ability got better.
b Jan got better in acting ability.

This at is probably also related to the at discussed in Ross (1969), found in such sentences as (iii):

- (iii) John was polishing shoes when I left, and he was still at it when I got back.

6. I mean, of course, the referent of the noun. I will on occasion take a somewhat lax attitude to the distinction between NPs and their referents, where a stricter approach would make a sentence too cumbersome.
7. An explanation of the transcribing conventions used may be found in Sacks, Schegloff and Jefferson 1974, or Schenkein, ed. 1978. Differences between these two sets of conventions are minor and transparent.
8. There are possible counterexamples to this analysis, as for example in (i):

- (i) Why are you so upset?
a That shutter is annoying me with its flapping.
b ?The flapping of that shutter is annoying me.

The topic of the response is "Why I am so upset," not "the shutter," and so one would predict that the (b) sentence should be more acceptable than the (a) sentence, rather than vice versa. The key, I think, is to be found in the tense of the verb: a continuous tense, which seems to imply an (anthropomorphized) agentive reading for the subject. Dialogue (i)a is then analogous to dialogue 39d, and acceptable for the same reason. Dialogue (i)b should be analogous to 39a and 39c, but the problem seems to lie with the tense: it is the continuous tense and not the non-PF1 form that is inappropriate in this context. Note that when the same dialogue contains the simple present tense, the acceptability ratings are as predicted in this paper:

- (ii) Why are you so upset?
 a The flapping of that shutter annoys me.
 b ?That shutter annoys me with its flapping.

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