The Experiencer Constraint Revisited

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This paper aims to clarify the categorial status of present participles. Based on several empirical tests, it is claimed that not all present participles can be adjectival. It is then suggested that the class of adjectival present participles can be defined aspectually: only participles of stative verbs can be adjectival. This hypothesis contradicts Brekke (1988), who suggested a thematic constraint on the derivation of adjectival present participles: that only participles of object-Experiencer verbs can be adjectival.

1 INTRODUCTION

Present participles exhibit properties of both verbs and adjectives. Consider (1):

(1) (a) John is opening the door.
    (b) This is an interesting book.

In (1a), the participle opening is clearly a verb, assigning accusative Case. In (1b), the participle interesting seems to be an adjective, modifying a noun.

Several scholars, such as Borer (1990), Parsons (1990) and Bresnan (1996) have claimed that all present participles can function as adjectives. What led them to this conclusion was the fact that a great number of present participles can appear prenominally, in what is considered to be a canonical adjectival position, as seen in (2):

(2) the interesting / amusing / jumping / crying / growing boy, a disgusting movie, a flourishing town, a glimmering diamond, a fitting remark, an understanding friend

However, my claim is that while some present participles indeed form true adjectives, other participles are exclusively verbal.

The paper is organized as follows: in section 2, I will present several contexts which discriminate between two types of present participles, suggesting that some of them are truly adjectival, while others are not. In section 3, I will present Brekke’s (1988) hypothesis regarding the definition of the set of adjectival present participles, the Experiencer Constraint, and the problems it raises. In section 4, I will present my own hypothesis regarding this problem, the Stativity Constraint. Section 5 deals with the ability of all participles to appear in the prenominal position.

2 NOT ALL PRESENT PARTICIPLES BEHAVE LIKE ADJECTIVES

In English, there are certain contexts which allow only adjectives, and not verbs. When one tries to insert present participles into these contexts, they behave non-uniformly: some of them can appear in them, while others cannot. The following sub-sections illustrate this phenomenon.
2.1 Complement of \textit{seem} and \textit{become}

Wasow (1977) suggested that certain verbs, such as \textit{seem} and \textit{become}, can take as their complements only APs, and not VPs. If we look at present participles, some of them can appear as complements to such verbs (3), while others cannot (4):

(3)  
(a) This movie seems interesting / amusing / depressing.  
(b) The town became flourishing.  
(c) Your remark seems fitting.  
(d) Your friend has become understanding.

(4)  
*The boy seems / became jumping / crying / eating / growing / writing.

This suggests that some present participles can be adjectives, while others cannot.

2.2 –\textit{ly} suffixation

The suffix –\textit{ly} is a very productive adverb-forming suffix, which attaches only to adjectives, and not to verbs. Again, looking at present participles, -\textit{ly} can attach to some of them (5), but not to others (6):

(5)  
interestingly, surprisingly, excitingly, pleasingly, fittingly, lastingly, compromisingly, forgivingly, shiningly, glimmeringly…

(6)  

2.3 Coordination with adjectives

Since coordination can apply only to items of the same category, it is expected that adjectives will be coordinated only with other adjectives. If we consider present participles, some of them can be coordinated with adjectives (7), while others cannot (8):

(7)  
(a) an interesting and beautiful girl  
(b) a long and revealing story  
(c) a clever and understanding man

(8)  
(a) *a crying and beautiful girl  
(b) *a rude and jumping boy\textsuperscript{1}

2.4 Following \textit{so}

The modifier \textit{so} can be followed, in most registers, only by adjectives, not by verbs. Here as well, present participles behave non-uniformly: some can follow \textit{so} (9), while others cannot (10):

(9)  
(a) This movie is so interesting / annoying.  
(b) This town is so flourishing.  
(c) Her smile is so glimmering.

\textsuperscript{1} It could perhaps be claimed that the sentences in (8) are ungrammatical since they involve coordination of stage-level predicates (\textit{crying, jumping}) with individual-level ones (\textit{beautiful, rude}). However, such coordination is not problematic when both predicates are of the same category (\textit{an interesting and available position, a black and empty bucket}).
(10) *This boy is so jumping / crying / eating / growing.

### 2.5 Appearing without a complement

The last piece of evidence that there are two different types of present participles has to do with participles of transitive verbs only. Consider the following sentences:

(11) *The boy annoys / interests / understands.

(12) *The boy folds / locks / tames.

The sentences in (11)-(12) are obviously ungrammatical because they contain obligatorily transitive verbs without complements. But although both the verbs in (11) and in (12) require complements, their corresponding present participles behave differently: the participles of the verbs of (11) can appear without complements, like other adjectives (as in 13), while those of (12) cannot (as seen in (14)):

(13) the annoying / interesting / understanding boy

(14) *the folding / locking / taming boy

To conclude this section, the contrasts presented above suggest that the class of present participles is not homogenous: some of them behave like true adjectives, while others do not.

An obvious question at this point is: how can we define the set of adjectival present participles? In the following section I present Brekke’s (1988) answer to this question.

### 3 Brekke’s Experiencer Constraint

#### 3.1 The analysis

Brekke (1988) noticed the fact that only certain present participles are adjectival, and attempted to define the set of adjectival present participles. He thus suggested the Experiencer Constraint, which states that only verbs that have an internal Experiencer \( \theta \)-role – verbs such as surprise, amuse, amaze, etc. - have adjectival present participles.

Brekke’s generalization can account for a substantial part of the data presented in section 2 above, since it draws a clear distinction between participles of object-Experiencer verbs (15), which were shown consistently to pass tests for adjectivalhood, and participles of verbs denoting activities or processes not involving mental states (16), which consistently fail these tests:

(15) amazing, amusing, interesting, boring, exciting, fascinating, intriguing...

(16) jumping, crying, growing, laughing, writing, walking, drawing...

The generalization, therefore, seems quite promising.

#### 3.2 The problems

However, the Experiencer Constraint raises both a theoretical and an empirical problem.
The theoretical problem is that the analysis does not provide an explanation as to why it should be the case that only participles of object-Experiencer verbs can be adjectival. The Experiencer Constraint can be attributed neither to some property of object-Experiencer verbs, nor to some property of adjectives, and seems almost coincidental.

The empirical problem is even more disturbing. As Brekke himself notes, and as is evident from the data in section 2, there are adjectival present participles which are not derived from object-Experiencer verbs, in contrast to the predictions of the Experiencer Constraint. Brekke classifies these additional participles under three categories. The following characterizations and examples of these classes are his:

(17) (a) Present participles of “disposition” verbs – verbs that describe the psychological character of a human being: compromising, condescending, cunning, daring, forgiving, knowing, loving, understanding, etc.
(b) Present participles of “impact” verbs: blazing, dashing, glimmering, glistening, sparkling, shining, etc.
(c) Present participles of “manner” verbs – verbs that describe the manner in which some event proceeds, or evaluate some psychological or social phenomenon: enduring, fitting, flourishing, lasting, telling, revealing, etc.

The participles in these classes do not correspond to object-Experiencer verbs, yet they do function as adjectives. The four verb classes: object-Experiencer, “disposition”, “impact” and “manner”, when looked at thematically, do not form a natural class. As Brekke notes “There is obviously a generalization waiting to be captured here...”.

4 THE STATIVITY CONSTRAINT

Brekke’s constraint on the formation of adjectival present participles was thematic. I suggest that we try to pursue a different path: looking at the aspectual properties of the relevant verbs. Since the main difference between verbs and adjectives lies in their aspectual features, this seems like a natural domain in which to look for the definition of the set of adjectival present participles.

According to the traditional “Aristotelian” classification (Vendler 1957, Dowty 1979 among many others), verbs can denote four types of eventualities: accomplishments, achievements, activities/processes, and states. Stative verbs refer to static, unchanging eventualities, which do not result in the creation, change of state or change of location of any of their participants. Know, own and love are some prototypical stative verbs.

I suggest the following constraint on the formation of adjectival present participles:

(18) The Stativity Constraint
Only stative verbs have corresponding adjectival present participles.2

Let us see how the current hypothesis deals with the problems mentioned above with regard to the Experiencer Constraint.

2 Note that the Stativity Constraint provides only a necessary, and not a sufficient, condition for verbs to have an adjectival present participle counterpart. There are numerous stative verbs which do not have corresponding adjectival participles. Among these are sit, stand, have, own, equal, resemble, reflect, mean, indicate, see, hear, taste, believe, desire. Therefore, two possible solutions exist. One option is to show that these verbs are, for some reason, not truly stative. This can be claimed, for example, regarding sit and stand, which can appear in the progressive (and see Dowty 1979, p. 173-180). The second option is to state an additional constraint on the formation of adjectival present participles. At this point in time, I do not have an answer to this problem.
4.1 The empirical coverage of the Stativity Constraint

It was noted that four types of verbs consistently have corresponding adjectival present participles: object-Experiencer, “disposition”, “manner” and “impact” verbs (in Brekke’s terms). I claim that what is common to these verbs is that they are all stative. Let us look at each group separately.

4.1.1 Object-Experiencer verbs

It has been repeatedly suggested in the literature (Dowty 1979, Arad 1998) that object-Experiencer verbs like interest, annoy, excite etc., have both an eventive and a stative interpretation. In the eventive interpretation, the object undergoes a change of mental state, as in (19a). In contrast, the stative interpretation merely asserts that the object is in a specific mental state (19b) (examples from Arad 1998):

(19a) Nina frightened Laura to make her go away.
(19b) John’s haircut annoys Nina.

So, object-Experiencer verbs can have a stative reading. In order to establish the stativity of these verbs, we can use a test suggested in the literature. It is often noted that stative verbs are incompatible with the progressive in English (Dowty 1979, among many others). As expected, many object-Experiencer verbs cannot appear in the progressive:

(20) *The book was depressing / boring / worrying the children.

4.1.2 “Disposition” verbs

This class consists of verbs like compromise, love, understand, know, dare, etc. These are in fact subject-Experiencer verbs, which are traditionally classified as stative (Dowty 1979). These verbs denote the mental state of their subject, without entailing any change of state in either the subject or the object. As predicted, these verbs cannot appear in the progressive (but see footnote 3):

(21) (a) *Max is knowing the answer.
(b) *John is daring to do it. (meaning: John dares to do it)

4.1.3 “Manner” verbs

This class includes verbs such as fit, flourish, last and reveal. These verbs obviously denote a property of their subject, and do not entail any change of state. In fact, it is hard to find a common property of the verbs in this group, other than their stativity. These verbs, too, are incompatible with the progressive, as seen in (22):

(22) (a) *The shirt is fitting her.
(b) *The war was lasting 3 years.

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3 This test should be used carefully. First, it is generally noted that achievement verbs are also incompatible with the progressive, so incompatibility with the progressive does not entail stativity. Second, the test should not be taken as conclusive since even the most prototypical stative verbs can appear in the progressive under certain conditions (I’m loving it). For a discussion of the (in)compatibility of object-Experiencer verbs with the progressive, see Pesetsky (1987).
4.1.4 “Impact” verbs

This class consists of verbs such as *shine, glimmer, shimmer, sparkle* etc. (verbs of light emission, in the terminology of Levin and Rappaport Hovav 1995). As noted by Spencer and Zaretskaya (2003), these verbs could be thought of as states or as processes. I suggest that these verbs are stative, since they attribute some steady property to their subject. In order to reinforce this intuition, we can use a test suggested by Kenny (1963). Kenny notes that in the present tense, sentences with dynamic verbs have a frequentative interpretation – they are understood as involving more than one event (23a). On the other hand, sentences with stative verbs do not have this interpretation (23b).

(23)  
(a) John runs.  
(b) John knows the answer.

Let us now look at “impact” verbs:

(24)  
(a) The diamond shines.  
(b) The water sparkles.

The interpretation of the sentences in (24) does not seem to be habitual, or involve more than one event. This fact lends support to the suggestion that Brekke’s “impact” verbs are stative as well.

It seems, then, that the common feature of object-Experience, “disposition”, “manner” and “impact” verbs is that they are all stative. These verbs therefore form an aspectual natural class.

4.2 The theoretical rationale of the Stativity Constraint

As mentioned above, the theoretical problem with Brekke’s *Experiencer Constraint* is that it does not provide an explanation as to why it should be that only object-Experiencer verbs have corresponding adjectival present participles. The stativity constraint can, in my opinion, provide such an explanation.

As noted at the beginning of this section, verbs denote different types of eventualities; adjectives, on the other hand, invariably denote states (see, for example, Parsons 1990). The *Stativity Constraint* suggests that –ing is the “simplest” adjectival morpheme - it only marks the categorial change from verb to adjective, and is incapable of any aspectual manipulation of the input. Therefore, it can only take as its input stative verbs, since they are the only verbs which denote states to begin with, and can therefore derive adjectives without any aspectual change.

The *Stativity Constraint* is therefore very intuitive: adjectives denote states; stative verbs denote states as well; therefore, stative verbs are the natural input for an operation which derives adjectives.

5 The prenominal position

According to the *Stativity Constraint*, not all present participles are adjectives. Participles such as *jumping, crying* etc., which are related to dynamic verbs, are argued by the hypothesis not to be adjectival. If this is the case, however, how can these participles appear prenominally, in an adjectival position, as in (25)?

(25)  
a jumping / crying / growing / eating / writing / walking boy
I suggest that in (25), what is appearing in prenominal position is reduced relative clauses. Reduced relatives in English contain neither overt complementizers nor auxiliaries. Therefore, the reduced relatives in (25) consist solely of a participle.

The idea that reduced relative clauses are base-generated to the left of the head they modify is not inconceivable: this is the base position for modifying adjectives, and could therefore be a base position for other modifying elements as well.

In addition, the assumption that reduced relatives are generated prenominally solves another puzzle: it is a well-known phenomenon that post-nominal reduced relatives must contain some material in addition to the participle, as exemplified in (26):

(26)  (a) ??The boy jumping is my cousin.
      (b) The boy jumping in the yard is my cousin.

Currently, the theory suggests no obvious account for these facts. Possibly, one would have to postulate an ad-hoc rule which filters out one-word reduced relatives, or moves them to the left of the head they modify. Such a rule is not needed anywhere else in the grammar.

Let us examine, however, the consequences of assuming that reduced relatives are base-generated prenominally. The original structures of the sentences in (26) will be those in (27):

(27)  (a) The [jumping] boy is my cousin.
      (b) *The [jumping in the yard] boy is my cousin.

(27a) is grammatical, and nothing more needs to be said about it. (27b), however, violates a very well-known constraint: the adjacency requirement between a modified head and the head of the phrase modifying it (see Grosu and Horvath 2006, and references cited therein). This requirement, though not fully understood, is robust, and can be seen in different constructions, not involving participles (28a). When the head-adjacency requirement in such constructions is violated, the structure can be “salvaged” by extraposition of the AP (28b):

(28)  (a) *a [taller than the boy] girl
      (b) a girl [taller than the boy]

Turning back to the reduced relative in (27b), repeated in (29a), it too violates the head-adjacency requirement, and is predicted to undergo extraposition. This operation will result in the grammatical (29b):

(29)  (a) *the [jumping in the yard] boy
      (b) the boy [jumping in the yard]

Hence, the assumption that jumping, crying etc. in (25) above are reduced relative clauses, and not adjectives, has two advantages: first, it accounts for the fact that these participles cannot appear in any adjectival context other than the prenominal one. Second, it accounts, together with the established adjacency constraint, for the distribution of pre- and post-nominal reduced relative clauses, without stipulating another rule which bans one-word post-nominal relatives.

6 Conclusion

This paper has aimed to clarify the categorial status of present participles. I began by showing that although many present participles appear in the prenominal position, and were therefore considered to be adjectives, other adjectival contexts discriminate between different present
participle: some can appear in them, while others cannot. I presented Brekke’s (1988) attempt to define the set of adjectival present participles, the Experiencer Constraint, and showed that this generalization is inadequate both empirically and theoretically. I then suggested the Stativity Constraint, which states that only stative verbs have corresponding adjectival present participles. This constraint has two advantages over Brekke’s: first, it accounts for more empirical data – it explains the adjectival status of more participles. Second, it is more explanatory, since it relies on the common semantic properties of stative verbs and adjectives. Finally, I showed that the ability of all present participles to appear prenominally is not counter-evidence to my analysis, since these participles are best analyzed as reduced relative clauses.

REFERENCES


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