

# Affectedness revisited

A afetação revisitada

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#### **RESUMO**

A afetação gramatical tem sido considerada como um princípio regulador da exteriorização de argumentos em algumas estruturas gramaticais. Este artigo faz uma revisão de trabalhos anteriores sobre este tema e apresenta dados que questionam as propostas existentes.

Palavras-chave: afetação, estrutura argumental, exteriorização, estruturas meias.

30.1 2014

#### **ABSTRACT**

Affectedness has often been invoked as a principle governing the externalization of arguments in certain grammatical structures. This paper reviews the works that have been carried out on this matter and presents some data that challenge the existing proposals.

**Key-words:** affectedness, argument structure, externalization, middle structures.

## 1. Defining affectedness

Semantically, affecting predicates have been defined as predicates that describe an action that concretely affects the direct object "in the sense of changing or moving it" (Egerland 1998:20), so that the affected argument "acquires some characteristic as a result of it" (Anderson 1977:373). Thus, examples like *Helen killed the cockroach* or *Peter kicked the ball* contain affected predicates, whereas a sentence like *Helen observed the stars* does not contain an affected predicate, given that the stars do not undergo a change of state of any kind as a result of Helen's observation.

Alternative, broader characterisations of affectedness are also available. Tenny (1992:8) defines the notion of affected argument in aspectual terms, as the argument that "measures out and delimits the event described by the verb." Expressions like *John ate an apple* or *John performed the play* are "affected" in the sense that the direct objects delimit the event or provide an endpoint after which the action described by the verb does not continue. Roberts (1987:210) defines accomplishments as those verb phrases having internal Themes. An internal Theme, in turn, is defined as an argument that undergoes a change of state, a change of state occurring when "some property of the Theme held before the time with respect to which the proposition is evaluated and fails to hold after that time, or vice-versa." Roberts' notion of internal Theme is highly reminiscent of the idea of affected argument described in the previous paragraph.

2014

However, by characterising affectedness in aspectual terms, not only is the intuitive notion of "affected" understood as physical change of state lost, but also the notion of affectedness (delimitedness) becomes in fact no different from that of accomplishment, as defined by Vendler (1967:100). This squib assumes standard definitions of affectedness in terms of physical change of state, and understands "affected" to mean "changed, moved, altered in status or created" (Anderson 1978:15). It is also this sense of affectedness that underlies the works cited in the next section.

## 2. Affectedness and externalised arguments

The affectedness constraint has been made responsible for the ability of certain predicates to be externalised. Passive nominals, for example, have been described as subject to this constraint. Note the contrast in acceptability in the following examples, from Anderson (1978). The unacceptability of (2) is explained on the grounds that *enjoy the play* is not an affected predicate, whereas *the city* in (1) is clearly affected by the destruction.

(1) The city's destruction.

\*The play's enjoyment.

This squib focuses on the English middle construction (Keyser and Roeper 1984; Fagan 1988, 1992; Levin 1993; Ackema and Schoorlemmer 1994; García de la Maza 2008, 2011), which has also been claimed to be subject to the affectedness constraint. It is often claimed (Roberts 1987; Hale and Keyser 1987; Doron and Rappaport-Hovav 1991; Hoekstra and Roberts 1993; Levin 1993:26) that middles can only be formed from verbs whose objects are affected by the action expressed by the verb.

Syntactic motives are usually reported to lie behind the impossibility of an unaffected argument being externalised. Doron and Rappaport-Hovav (1991) define affected predicates as a subclass of causative predicates, characterised by an e(vent)-structure that can be divided in different subeventualities (Grimshaw 1990), with the external argument missing from one of them. They give as an example

30.1 2014

> the transitive verb gallop, (as in I galloped the horse), which has two arguments, an external and an internal one, and whose e-structure is Cause (Do (x), gallop (y)). The object of gallop, they argue, is an affected object because the e-structure of the verb contains an event. gallop (y), in which the object, y, but not the subject, x, is present. They call this the "separation property". Externalisation of an internal argument requires that the original external argument no longer be an argument of the verb, since, assuming a hierarchical organisation of a(rgument)-structure (Grimshaw 1990), as they do, it would no longer be the most prominent argument. Assuming further that a-structure is a projection of e-structure (Grimshaw 1990), if the external argument is no longer part of a-structure, it must also be absent from e-structure. It follows that externalisation of an internal argument is only possible for verbs that exhibit the separation property, that is, for verbs with affected objects. Jaeggli (1986:607) also defines the affectedness constraint as the impossibility to eliminate the external theta-role of a verb whose complement is unaffected. The argument goes that in predicates having affected objects, like John hit the ball (his example, p.608), the thematic relation between hit and ball is quite independent from the thematic relation between the external argument and the predicate. The thematic interpretation of an unaffected object, like the one in *The senators* acknowledged great irregularities (his example, p.608), on the other hand, is dependant on the thematic interpretation of the subject. In other words, the theta-role associated with the internal argument is a function of the external theta-role. If the external theta-role is not present, it becomes impossible to compute the internal theta-role. Thus it is only possible to eliminate the external theta-role of a predicate having an affected object. Hoekstra and Roberts (1993:203), on the other hand, claim that the affectedness constraint correlates with a case-assigning property of verbs. They claim that non-affecting verbs assign their own lexically-given Accusative case to their objects (this would be a special type of inherent accusative case, assigned at S-structure and not at D-structure). Affected objects lack this type of Accusative case. They further assume that this type of lexical Accusative case blocks the assignment of structural Accusative case. It is thus only in the case of affecting predicates, which do not assign case to their objects, that NP-movement (externalisation) can take place.

Now, since middle formation involves the externalisation of the internal argument, middles cannot be formed from verbs whose objects are unaffected. The affectedness constraint is thus seen as responsible for the contrast in acceptability exhibited by the following middles (from Hoekstra and Roberts (1993:201), their examples) in which neither *the mountains* nor *anniversaries* can be seen as affected or undergoing any change of state in any way:

- (3) \*The mountains see better after the rain.
- (4) \*Anniversaries forget easily.

Claims in the opposite direction, however, also exist. Fagan (1992:65), on the basis of examples like those in (5) and (6) (her examples), in which the verbs *read* and *photograph* form acceptable middles, despite not having affected arguments, concludes that affectedness is *not* a relevant factor in middle formation.

- (5) This book reads easily.
- (6) She photographs well.

It seems, therefore that the issue is far from settled. Part of the problem may be due to the traditional – informal – acceptability judgement collection methods used to formulate these proposals. Such methods usually base their conclusions on a very limited range of ad-hoc examples rather than on real data, and typically rely almost exclusively on the linguist's own intuitions to obtain judgements. Whilst these methods are not necessarily unreliable – Sprouse and Almeida (submitted) and Sprouse, Schütze and Almeida (2013) have shown extensively that traditional methods are in fact a well-powered methodology for syntax and have found that there is no evidence of a reliability problem for acceptability judgements in syntactic data – in this case, the contradictory accounts available call for a formally designed experiment to measure acceptability. Using Sprouse and Almeida (submitted) and Sprouse, Schütze and Almeida's (2013) terminology, either's Hoekstra and Robert's (1993) proposal that middles cannot be formed from unaffected objects is a false positive, or Fagan's (1992) claim that middles can be formed from unaffected predicates is a false negative. Next section tries to elucidate the matter.



### 3. Some fresh data

This section presents the result of a data collection survey aimed at measuring native speakers' acceptability of middles formed from both affected and unaffected predicates. A questionnaire was used contained 4 middles formed from affected predicates and 4 middles formed from unaffected predicates. It also contained other types of middles, not relevant for present purposes, and 68 filler sentences. It was presented to a sample of 20 native speakers of English, who were asked to rate the acceptability of the sentences on a scale of 1 to 5, where 1 was the worst possible rating, and 5 the best. Speakers were specifically instructed to judge the sentences as they were presented to them and to assume no further context. In total, 160 tokens of affected/unaffected middles were analysed.

Middles formed from affected predicates (i.e. *This cheese grates easily*) received an average score of 3.9, slightly higher than the score obtained by those middles which were not formed from affected predicates (i.e. *She photographs well; she could be a model*), which received a score of 3.5. The difference is however statistically insignificant (for 158 d.f. and t = 1.76, p > 0.05) and enables us to claim that affectedness does not play a significant role in middle acceptability. This comes to contradict many existing proposals in the literature, reviewed above, that link middle formation with the notion of affectedness or change of state. The data presented here show that, in fact, whether a middle sentence is formed from a predicate that involves a change of state or not, does not have a significant bearing on its degree of acceptability.

### 4. Conclusion

Our experiment has replicated the phenomenon defended by Fagan (1992), and has shown Hoesktra and Roberts' (1993) proposal to be a false positive. In other words, there is no difference between middles formed from affected/unaffected predicates, but their proposal falsely indicates that there is (Sprouse, Schütze and Almeida, 2013). To the extent that affectedness has not been shown to be a relevant factor in middle acceptability, the validity of the affectedness constrain as a principle governing externalisation, therefore, needs to be called

2014

DELTA

into question. A further question arises then: what are the factors regulating middle formation or passive nominalisations? As noted by Kunu (2004), the key to linguistic puzzles like this one might lie not in syntax-internal factors, but in factors external to the grammatical structure of predicates and sentences. Clearly, more research is needed in this area, but see García de la Maza (2013), who has argued in favour of the "pragmatic value" of English middles, following Green's (2004) postulates about the grammaticalisation of pragmatic conditions in syntactic structures.

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DELTA

2014

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