

# THE DISTRIBUTION OF REFERENTIAL ADJECTIVES IN PSYCH NOMINALIZATIONS IN ENGLISH AND ROMANIAN

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**Abstract.** Previous accounts of referential adjectives have examined their status in the structure of action nominalizations in correlation with the event vs. result interpretation of nominals. They have been argued to behave like noun phrases (Grimshaw 1990), to introduce new entities into the discourse (Giorgi and Longobardi 1991) or to simply modify deverbal nominals (Oersnes and Markantonatou 2002). This paper attempts a comparative study of referential adjectives in psychological nominalizations in English and Romanian. We argue that the restrictions on the occurrence of referential adjectives in psych nominalizations are imposed by the language specific functional structure of the DP. The paper is organized as follows. In section one we briefly overview the literature on referential adjectives in action nominalizations. In section two we look at the distribution of referential adjectives in psychological nominalizations and in section three we correlate modification by referential adjectives with the process vs. result interpretation of psych nominals.

## 1. Previous approaches to referential adjectives

Linguists have looked at the combination of a referential adjective with a deverbal nominal in various languages. The main problem with these adjectives has been to account for the contrast between their seemingly argumental behaviour and their inability to introduce new referents into the discourse.

The first account is Levi's (1978). Her proposal centers on the derivation of group adjectives (a subgroup of relational adjectives). She analyses the combination of a relational adjective and a nominal as an instance of a complex nominal. Working within a transformational framework she assumes that group adjectives are nouns at deep structure and that they are turned into adjectives by a process of morphological adjectivalization thus accounting for the examples: *pope appeal* / *papal appeal*. However, Levi's account does not explain why the adjective is typically interpreted as an agent in a nominalization based on a transitive verb.

Kayne (1984) considers that a group adjective can express a theta-role, but unlike the essentially synonymous genitive phrases, it can never express an internal one:

- (1) a. the Italian invasion of Albania  
Italy's invasion of Albania
- b. \*the Albanian invasion by Italy  
Albania's invasion by Italy

He argues that only the external theta-role of the nominals can be assigned to this group of adjectives.

Giorgi and Longobardi (1991) assume that group adjectives are referential expressions (hence the term: referential adjectives) introducing new referents into the universe of discourse and that they discharge a thematic-role of the head but never an internal one. In order to prove that the subject is base-generated to the right of the head in Romance, they use group adjectives as their main argument. In Italian, group adjectives can only occur postnominally, while in prenominal position these adjectives acquire a qualitative reading:

- (2) a. l'invasione italiana (It.) group reading 'the Italians invaded'  
the Italian invasion  
b. \*l'italiana invasione (It.) qualitative reading 'typically Italian'

However, their analysis does not explain how an adjective comes to occupy a noun phrase position.

In her seminal work on nominalizations Grimshaw (1990) analyses group adjectives and prenominal genitives in passives and nominalizations as *a*-adjuncts, i.e. adjuncts identifying suppressed argument positions. The notion of an *a*-adjunct motivates the existence of argumental adjectives in the sense that adjectives are adjuncts. She argues that group adjectives behave like noun phrases, mainly in that they seem to establish semantic case relations with a deverbal noun. Furthermore, the inclusion of a group adjective with an agentive interpretation makes the object of the noun obligatory:

- (3) a. the American invasion of Vietnam  
'The Americans invaded Vietnam.'  
b. the American fear of failure  
'The Americans fear failure.'

She shows that group adjectives are ambiguous, in that they behave as modifiers of result nominals and simple event nominals and are licensed by a-structure in complex event nominals. On the other hand, Picallo (1991) and Alexiadou (1999) claim that referential adjectives are only licensed by result nominals.

Oersnes and Markantonatou (2002) consider group adjectives in three languages: English, Danish and Modern Greek and argue that they are modificational adjectives and not noun phrases of a particular sort. They propose an analysis whereby group adjectives form a weakly lexical structure with their head noun and modify the first argument of the argument structure of the head noun while the argument itself remains unexpressed. They also comment on the main characteristics of group adjectives in combination with deverbal nominals, which hold across many languages:

- (4) a. they do not occur predicatively  
\*The invasion is American.  
b. they do not allow modification  
\*the very American invasion  
c. they cannot be coordinated with other adjectives  
\*the sudden and American invasion  
d. they cannot be separated from their head  
\*the American sudden invasion

They note that all referential adjectives are ambiguous between a group reading and a qualitative reading. The group reading entails that some people of the kind described by the adjective are involved in the event related with the nominal. The qualitative reading assigns some quality to the nominal as in example (4a).

Alexiadou and Stavrou (2005) distinguish between ethnic adjectives which occur with event nouns and homophonous descriptive adjectives which modify common nouns and simply denote provenance. They argue that ethnic adjectives have a nominal source, their position in the DP being linked to their morphological derivation, while homophonous adjectives are 'deep' adjectives.

In Romanian referential adjectives are discussed in relation to the two types of nominalizations: the nominal infinitive and the supine nominal.

Cornilescu (2001) examines the NO and NS structures of action nominalizations in Romanian with respect to the contrast between the event and result readings. The behaviour of the infinitive nominalizations fully confirms Grimshaw's theory of event-result nominals, while the supine nominal does so only partly. For both infinitive and supine nominalizations, the NO structure allows the event interpretation. The NS structures with infinitives yield result nominals (the genitive is a modifier), and with the supine nominals the event reading (the genitive is an argument). She puts the differences down to the aspectual features of the suffixes on which they are built. The infinitive affix is [+Telic], it follows that the Object must be projected as an event measure, bounding the predication. The supine affix is [-Telic], it is an activity marker and an activity is sufficiently identified by its Agent, i.e. in a supine nominalization, it is sufficient to lexicalize the Subject.

Cornilescu shows that referential adjectives are unacceptable in nominalizations with the structure [Nominal+Object+(by)+Subject]:

- (5) a. *invadarea Germaniei* NO (nominal infinitive)  
       invasion.the Germany.Gen  
       'the invasion of Germany'
- b. \**invadarea germană* NAdj (nominal infinitive)  
       invasion.the German  
       'the German invasion'

On the other hand, the referential adjective is allowed to appear in combination with a non-derived nominal with the structure [Nominal+Subject]/[Nominal+Object] as in the following example:

- (6) *invazia germană* NAdjO (non-derived nominal)  
       invasion.the German  
       'the German invasion'

In short, most linguists agree that group adjectives are related to the argument structure of the head noun, but what kind of syntactic status these adjectives have is still a matter of debate.

### 3. The distribution of referential adjectives in psych nominalizations

Referential adjectives (also ethnic or group adjectives) are denominal adjectives that allude to a group of people sharing some property such as nationality (*English, Romanian, etc.*), affiliation with a political party or with a religious group (*Liberal, Republican, Christian, Catholic, etc.*), or a profession (*papal, presidential, etc.*). They occur in conjunction with deverbal psych nominals, with which they identify the semantic argument that surfaces as the subject of the verb related to the nominal.

Relying on Alexiadou (1999), we assume that the distribution of referential adjectives is related to the level of representation which is called "argument structure" and that the differences in distribution are related to language dependent structural issues concerning the Determiner Phrase.

In what follows the construction [group adjective + psych noun/nominal] is illustrated with examples gathered by means of an informal search by Google and by accessing The Brigham Young University Corpus of American English.

**3.1.** In English, psych nominals are derived by means of the suffix *-tion*, *-ment*, *-ance* attached to the verbal stem. The following are examples of psych nominals corresponding to the three classes of psych verbs: *abhorrence*, *adoration*, *detestation*, etc. derived from Subject Experiencer verbs, *entertainment*, *intimidation*, *humiliation*, etc. derived from agentive Object Experiencer verbs, and *amazement (at/by)*, *satisfaction (with)*, *frustration (with)*, *irritation (at)*, etc. related to adjectival predicates.

There are two possible linear orderings of the nominal, the subject and the object in psych nominalizations: SN(*of*)O and SNPO.

- (7) a. the kids' enjoyment of the game  
       SN(*of*)O Subject Experiencer verbal source  
 b. the clown's entertainment of the children  
       SN(*of*)O agentive Object Experiencer verbal source  
 c. \*the film's entertainment of the children  
       \*SN(*of*)O non-agentive Object Experiencer verb  
 d. Mary's annoyance with the report  
       SNPO Subject Experiencer adjectival predicate

Thus psych nominals derived from agentive Object Experiencer verbs and transitive Subject Experiencer verbs appear in the nominal configuration SN(*of*)O, typical of action nominalizations. Nominalizations derived from adjectival predicates take an idiosyncratic preposition to introduce the Object in the structure SNPO. There are no nominals corresponding to the non-agentive Object Experiencer verbs, i.e. no nominalizations of causative predicates (cf. Pesetsky 1995: 208).

The subject position in psych nominalizations may be occupied by referential adjectives which occur as theta-bearing adjectives denoting nationality or party membership:

(8)

psych nominalization	structure	clause	source
the Irish abhorrence of violence the Puritan detestation of physical pleasure	AdjN( <i>of</i> )O	The Irish abhor violence. The Puritans detest physical pleasure.	SubjExp verb
the American humiliation of the Arab world the Congressional intimidation of the companies	AdjN( <i>of</i> )O	The Americans humiliated the Arab world. The Congress intimidated the companies.	agentive ObjExp verb
the French stupefaction at the scandal the Republican satisfaction with the decision	AdjN PO	The French are stupefied at the scandal. The Republicans are satisfied with the decision.	adjectival predicate

It is obvious that referential adjectives felicitously occur with psych nominals of the three types available in the language.

Moreover, referential adjectives freely occur with basic, non-derived psych nominals and correspond to the Subjects of the zero-derived verbs:

- (9) a. the Liberal fear of opposition from the right wing party  
 ‘The Liberals fear opposition from the right wing party.’  
 b. the American love of the automobile  
 ‘The Americans love the automobile.’

The available word order patterns in psych nominalizations are crucially dependent on the assumptions concerning the functional structure of the Determiner Phrase in English. Agentive phrases may be realized either as prenominal genitives or as postnominal prepositional phrases. Object-like arguments are generally realized as oblique prepositional phrases with the marker *of*. The referential adjective occupies the prenominal position and identifies the Agent argument with psych nominals of Object Experiencer verbs and the Experiencer argument with nominals related to Subject Experiencer verbs and adjectival predicates.

**3.2.** In Romanian two types of verb-based psych nominals are encountered: the nominal infinitive and the supine nominal. They are stylistically distinct: the infinitive nominal is formal and very productive, while the supine nominal is informal, colloquial and less productive.

**3.2.1.** The psych nominal infinitive is formed by attaching the suffix *-re* to the basic form of a Subject Experiencer verb (*admirare* ‘admiration’, *adorare* ‘adoration’, *detestare* ‘detestation’, *iubire* ‘love’, etc.) or of an Object Experiencer verb (*amuzare* ‘amusement’, *bucurare* ‘gladdening’, *distrare* ‘entertainment’, *impresionare* ‘affecting’, *întristare* ‘saddening’, *încântare* ‘delight’, *înflorare* ‘thrill’, *înfuriere* ‘maddening’, *îngrozire* ‘horrifying’, *înveselire* ‘gladdening’, *iritare* ‘irritating’, *mâhnire* ‘upsetting’, *oripilare* ‘horrifying’, *plictisire* ‘boring’, *stânjenire* ‘embarrassment’, *stupefiere* ‘amazement’, *supărare* ‘upsetting’, *șocare* ‘shock’, etc.).

There are three word order patterns for verb-based psych nominalizations in Romanian: NObyS for nominals related to agentive Object Experiencer verbs and Subject Experiencer verbs, NPO for nominals related to reflexive Subject Experiencer verbs and NSPO for nominals related to adjectival psych predicates:

- (10) a. *distrarea copiilor de către clown* NObyS agentive Object Experiencer verb  
 entertaining.the children.Gen by clown  
 b. *admirarea naturii de către turiști* NObyS Subject Experiencer verb  
 admiring-the nature.Gen by tourists  
 c. *bucurarea de drepturile civile* NPO reflexive Subject Experiencer verb  
 enjoying. of the civil rights.  
 d. *întristarea fiilor pentru părinți* NSPO Subject Experiencer adjectival predicate  
 saddening.the sons.Gen about parents

It is essential to point out at this stage that Romanian nominals, unlike Romance DPs in general, always contain at most one (nominal) Genitive phrase, so that only the argument which is obligatory for some particular interpretation will be lexicalized. Since only one argument may be overtly expressed in transitive nominalizations, either the Object or the Subject will be lexicalized. Since the Romanian Determiner Phrase has only one structural genitive case position, which is occupied by the Object, the Agent can only appear in a *de către*-phrase (i.e. a *by*-phrase):

- (11) a. admirarea naturii de către japonezi NObyS  
 admiring-the nature.Gen by Japanese  
 b. \*admirarea japonezilor naturii \*NSO (infinitive nominal)  
 admiring.the Japanese-the.Gen nature.Gen

In Romanian referential adjectives occur in postnominal position and have the inflectional morphology of ordinary adjectives:

- (12) a. frica americană  
 fear.the American.fem.sg.  
 b. temerile americane  
 fears.the American.fem.pl.  
 c. disprețul american  
 despise.the American.masc.sg.  
 d. fiorii americani  
 shivers.the masc.pl. American. masc.pl.

The table below illustrates modification by referential adjectives in psych nominalizations in correlation with the verbal source of the nominals:

(13)

psych infinitive nominalization	clause	structure	source
*admirarea japoneză a naturii. admiring.the Japanese.adj of nature	Japonezii admiră natura. 'The Japanese admire the nature.'	*NAdjO	Subject Exp. verb
*intimidarea liberală a democraților intimidation.the Liberal of Democrats 'the Liberal intimidation of the Democrats'	Liberalii îi intimidează pe democrați. 'The Liberals intimidate the Democrats.'	*NAdjO	agentive Object Exp. verb
supărarea americană pe aliații lor upsetting.the American PE allies.the their 'the American upsetting with their allies'	Americanii se supără pe aliații lor. 'The Americans get angry at their allies.'	NAdjPO	reflexive Subject Exp. verb
iritarea românească față de rezultatele alegerilor irritation.the Romanian at results.the elections.the.Gen 'the Romanian irritation at the results of the elections'	Românii sunt iritați de rezultatele alegerilor. 'The Romanians are irritated at the election results.'	NAdjPO	Subject Exp adjectival predicate

We notice that in the NO structures the referential adjective cannot co-occur with psych nominal infinitives of Subject Experiencer verbs and agentive Object Experiencer verbs. However referential adjectives are allowed to modify the nominal infinitives of reflexive Subject Experiencer verbs and of adjectival predicates: the Object occurs in a prepositional phrase thus leaving the postnominal genitive position available for the referential adjective.

On the other hand referential adjectives accompany infinitive nominals apparently related to Subject Experiencer verbs which take a prepositional phrase. This prepositional phrase cannot be analyzed as an argument inherited from the verb, as indicated by the non-existence of the verbal counterparts:



(17)

psych nominalization	structure	source
* <i>admiratul japonez al naturii.</i> admiring.the Japanese.adj of nature	*NAdjO	Subject Experiencer verb
* <i>intimidatul liberal a democrațiilor</i> intimidation.the Liberal of Democrats 'the Liberal intimidation of the Democrats'	*NAdjO	agentive Object Experiencer verb
<i>supăratul american pe aliații lor</i> upsetting.the American PE allies.the their 'the American upsetting with their allies'	NAdjPO	reflexive Subject Experiencer verb
<i>iritatul românesc față de rezultatele</i> irritation.the Romanian at results.the alegerilor elections.the.Gen 'the Romanian irritation at the results of the elections'	NAdjPO	Subject Experiencer adjectival predicate

As with the infinitive nominalizations, the NO structures block the occurrence of the referential adjective with supine nominals derived from agentive Object Experiencer verbs and transitive Subject Experiencer verbs. Referential adjectives may modify only supine nominals related to Subject Experiencer verbs and adjectival predicates, which allow the NAdjPO structure due to the idiosyncratic preposition.

However, referential adjectives freely co-occur with deverbal nouns (*agitație* 'agitation', *bucurie* 'joy', *umilință* 'humility', etc.), as in (18a, b), with basic, non-derived nouns (*dispreț* 'disdain', *teroare* 'terror', etc.), as in (18c, d), or with deadjectival nominals (*tristețe* 'sadness', *timiditate* 'shyness', etc. ), as in (18e, f), in a NPO structure:

- (18) a. *agitația liberală pentru ocuparea posturilor cheie*      NAdj PO  
agitation.the Liberal for getting the positions key  
'the Liberal agitation to get the key positions'
- b. *admirația japoneză pentru natură*      NAdjPO  
admiration.the Japanese for nature  
'the Japanese admiration for nature'
- c. *disprețul românesc pentru cultură*      NAdjPO  
disdain.the Romanian for culture  
'the Romanian disdain for culture'
- d. *teroarea nazistă împotriva evreilor*      NAdjPO  
terror Nazi against Jews.the  
'the Nazi terror against the Jews'
- e. *timiditatea liberală față de guvern*      NAdjPO  
shyness.the Liberal towards government  
'the Liberal shyness towards the government'
- f. *tristețea românească*      NAdj  
sadness.the Romanian  
'the Romanian sadness'

The data discussed in this section clearly points to the fact that unlike English, Romanian restricts the occurrence of referential adjectives with deverbal psych nominals.

Differences encountered in the nominal configurations lie in the language specific structure of the Determiner Phrase. Since English has two genitive positions in the Determiner Phrase,

a prenominal and postnominal one, referential adjectives are allowed to occur as prenominal modifiers. In contrast, the Determiner Phrase in Romanian has only one genitive position and when this position is occupied by an Object-argument, the referential adjective is blocked.

Finally, the juxtaposition of the infinitive and the supine nominalizations in Romanian reveals that modification by means of referential adjectives in the two nominal structures is parallel. In both nominal configurations the referential adjective identifies the Experiencer with nominals of reflexive Subject Experiencer verbs and of adjectival predicates.

#### 4. Referential adjectives and the event vs. result psych nominals

Referential adjectives relate to the event vs. result distinction in the interpretation of psych nominals. It is generally accepted that event nominals have an argument structure and obligatorily take arguments, much like their verbal counterparts. On the other hand, result nouns only optionally take a predicate-argument structure.

The same analysis applied to psych nominals indicates that only nominals derived from agentive Object Experiencer verbs qualify for an event interpretation, where the event is understood as an internal, emotional one (cf. Rozwadowska 1997 for Polish psych nominals).

Furthermore it has been argued that a certain group of nominals, namely those related to agentive Object Experiencer verbs such as *entertainment*, *intimidation* in English and *intimidare*, *distrare* in Romanian allow: agent-oriented modifiers, aspectual modifiers and can take infinitival purpose clauses (cf. Bejan 2006), which is evidence for the presence of an AgrP and vP inside process psych nominalizations. Thus this group of psych nominals can have a process reading and they qualify for a syntactic representation in terms of Alexiadou (1999), i.e. a process psych nominal is a root that appears below Aspect and takes an Experiencer complement.

Referential adjectives in conjunction with psych nominals are ambiguous between a modifier and an argument-adjunct interpretation. They can be analysed as subject-like with process psych nominals. Thus the use of the adjective *constant* in English forces the process reading of *intimidation*, derived from an agentive Object Experiencer verb. In contrast, the equivalent construction in Romanian can only be accepted on a descriptive reading of the same referential adjective:

- (19) a. the constant Palestinian intimidation of journalists  
 b. intimidarea palestiniană constantă a jurnaliștilor

The inclusion of a referential adjective makes the presence of a complement to the noun obligatory. The absence of the Object yields ungrammatical results:

- (20) a. \*the constant Palestinian intimidation  
 b. \*intimidarea palestiniană constantă

On the other hand, there is evidence that these adjectives do not behave like syntactic subjects, receiving a thematic role from the head noun. For instance, implicit argument control is possible in the presence of a NP subject, but not with a group adjective. The following examples are modeled on Oersnes and Markantonatou (2002):

- (21) a. Hitler's humiliation of France during the war in order to gain power in Europe  
 b. \*the German humiliation of France during the war in order to gain power in Europe  
 c. \*umilirea germană a Franței în timpul războiului pentru a câștiga puterea în Europa.

When referential adjectives are used in the passive nominalizations, as illustrated in (22b, d), they can be related to a linked theta-role, i.e. that of an internal argument. However, the nominal is unambiguously a result nominal, given that it can pluralize:

- (22) a. Germany humiliated France.  
 France was humiliated by Germany.  
 b. the French humiliation(s)  
 c. Germania a umilit Franța.  
 Franța a fost umilită de Germania.  
 d. \*umilirea franceză/\*umilirile franceze

Grimshaw (1990: 131) argues that in their passive use, group adjectives are modifiers of result nominals and predicts that nominals modified by the passive use of referential adjectives should not be able to co-occur with a *by*-phrase licensed by the argument structure:

- (23) a. \*the French humiliation by Germany  
 b. \*umilirea franceză de către Germania

The English and Romanian facts point to the conclusion that referential adjectives participate in the disambiguation of psych nominals with an event/process vs. result reading.

**5. Conclusion.** The examination of the distribution of referential adjectives in psych nominalizations in English and Romanian has enabled us to identify the grammatical combinations. Unlike English, Romanian imposes restrictions on the occurrence of the referential adjectives in verb-based psych nominalizations. These can be accounted for in terms of the language specific structure of the DP and of the lack of homogeneity among the verbal sources of psych nominals. We have shown that referential adjectives in psych nominalizations are related to the subject argument of the corresponding verbal configurations. They identify the Experiencer in psych nominalizations and they play a part in the distinction between the event vs. result interpretation of psych nominals.

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