

M<sup>A</sup> ÁNGELES GÓMEZ CASTEJÓN  
 Universidad de Leuven (Belgium) / UNED

ABSTRACT. *English perception verbs can appear followed by an NP (Noun Phrase) and an –ing form. In the perception literature the –ing form is interpreted as having a participial and gerundial interpretations with physical and cognitive perception verbs respectively. However we claim that these verbs have the same possible readings (concrete / abstract). The distinction between a gerund and participle can be put in the following terms: the more concrete the event, the more participial the –ing structure is and the more abstract, the more gerundial (Verspoor 1996: 417-454).*

*We will especially dwell on the relationship of physical and cognitive perception verbs: cognitive and physical perception verbs belong to the same semantic field and consequently they have some cognitive processes in common, due to their “cognitive resemblance” we expect the same possible readings to hold for both of them. We provide semantic, syntactic and thematic evidence in favour of this hypothesis. Finally, we will discuss the implications of this analysis on the possible readings of the –ing form with perception verbs*

KEYWORDS: *–ing form (gerund-participle); two separate constituents / a single constituent; semantic, syntactic and thematic evidence; physical and cognitive perception verbs; concrete and abstract reading.*

RESUMEN. *Los verbos de percepción ingleses pueden aparecer acompañados por una frase nominal (FN) y una forma en –ing. En la bibliografía específica sobre percepción, se suele interpretar la forma en –ing como participio y gerundio con verbos de percepción física y cognitiva respectivamente. La diferencia entre el gerundio y el participio puede expresarse en los siguientes términos: cuanto más concreto sea el evento, más participial será la estructura, cuanto más abstracto el evento, más gerundiva la estructura (Verspoor 1996: 417-454).*

*Nos detendremos en particular en la relación entre los verbos de percepción física y cognitiva: estos verbos pertenecen al mismo campo semántico y, consecuentemente, comparten algunos procesos cognitivos, dado su “parecido cognitivo”, pensamos que ambos pueden recibir las mismas lecturas. Vamos a proporcionar evidencia semántica, sintáctica y temática a favor de esta hipótesis. En último lugar, analizaremos las implicaciones de nuestro análisis para las lecturas posibles de la forma en –ing con los verbos de percepción.*

PALABRAS CLAVES: *forma en –ing (gerundio-participio); dos constituyentes; un único constituyente; evidencia semántica, sintáctica y temática; verbos de percepción física y cognitiva; lectura abstracta y concreta.*

## 1. INTRODUCTION

It is assumed in the perception literature that the –ing form is interpreted as having a participial and gerundial interpretations with physical and cognitive perception respectively.

In English Perception verbs can appear followed by an NP (Noun Phrase) and an –ing form, as in:

- (1) a. I see my father *diving* into the sea.
- b. I remember my father *diving* into the sea.

In *I see my father diving into the sea* the speaker places the emphasis only on part of the “diving” process. In *I remember my father diving into the sea* the main clause subject conceptualise only the internal configuration of the complement event. (Hamawand 2002: 65-66).

The construction (NP and an *-ing* form) have been mainly interpreted as two constituents in (1a) and implies that the *-ing* form functions as a participle; whereas the interpretation as a single unit in (1b) involves an *-ing* functioning as a gerund.

The distinction between a gerund and participles can be put in the following terms: the more concrete the event, the more participial the *-ing* structure is and the more abstract, the more gerundial (Verspoor 1996: 417-454) as seen in:

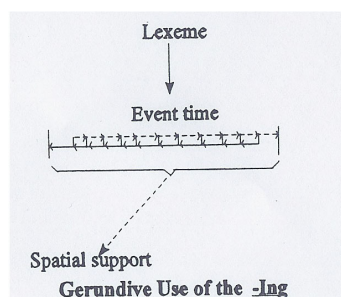


Figure 1. Gerundial Interpretation

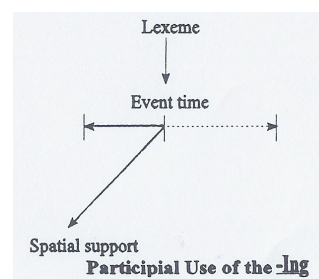


Figure 2. Participial Interpretation

However, whenever the *-ing* complement is the object of a transitive verb, and is preceded by a personal pronoun in the objective or an uninflected noun (as in *I remember / see my father diving into the sea*), the interpretation is unclear (concrete / abstract), there is a certain contextual fluctuation:

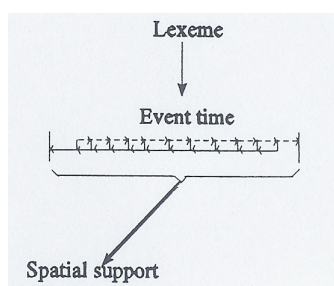


Figure 3. Gerundial / participial interpretation

Both sentences could be interpreted as:

(2) *I see / remember*    my father    diving

(3) *I see / remember*    my father diving

In this study, we intend to provide semantic, syntactic and thematic evidence in favour of the analysis of “NP + *-ing* form” both as two constituents and as a single unit. We will support this hypothesis with an analysis of the relationship between physical and cognitive perception verbs. Finally, we will discuss the implications of these findings on the possible readings of the *-ing* form with perception verbs.

## 2. HYPOTHESIS AND AIM

We claim that cognitive and physical perception verbs belong to the same semantic field and consequently they have some cognitive processes in common, due to their “cognitive resemblance” we expect a similar analysis to hold for both of them.

The aim of this study is to prove that the construction “NP + *-ing* form” with perception verbs allow the same readings (abstract / concrete), we provide the following three parameters: i) the semantics of the “NP + *-ing* form”; ii) its *syntactic* function with respect to the main verb; and iii) finally, the argument structure of perception verbs.

### 3. THE “COGNITIVE RESEMBLANCE” OF COGNITIVE AND PHYSICAL PERCEPTION VERBS

According to Givon’s classification (1993a and 1993b) physical and cognitive perception verbs both belong to the same semantic group: “Perception-cognition-utterance (PCU) verbs.

The term “cognitive perception verb” is restricted to verbs having a mental picture of the event depicted by the complement clause (e.g. “imagine”, “recollect”, “remember”, and “see” in its abstract sense) and implies the conceptualiser’s ability to form pictures in her/ his mind about what something could be like or is like, something which is not actual before the eye, but something which can be part of our experience.

We present briefly the five cognitive processes these verbs share:

1) An episode of physical or cognitive perception has a limited duration that can be thought of as a temporal viewing frame.

2) There is always some kind of temporal overlap between the main verb and the *-ing* form: with perception verbs there is a full coincidence of the main-clause process and the *-ing* complement.

3) In perception, the main subject is an observer or an experiencer (Croft 1993) (represented by a “smiley”) rather than an agent; in fact the observer is not under obligation to carry the complement content, and the main verb profiles a perceptual relationship between its subject and the complement scene.

4) Both in physical and cognitive apprehension, the *-ing* form symbolizes a directly and immediately perceived event: the observer construes an event as seen from a very close perspective (this is represented by the presence “on stage” of the “smiley”) (Verspoor 1996: 439).

5) The main subject is conceptualised as having control over the state of affairs denoted by the verb (Croft 1993: 64).

The following figure illustrates the former observations:

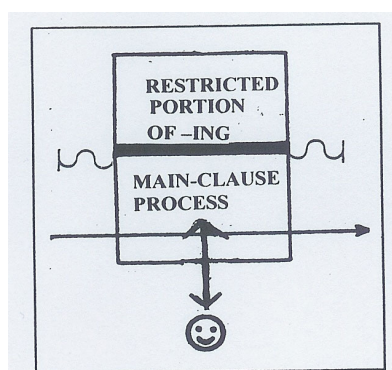


Figure 4. Physical and cognitive perception verbs’ cognitive processes.

In figure (4), a) the inner rectangle stands for the temporal viewing frame; b) a bold straight line represents the portion of the event denoted by the *-ing* clause; c) the main verb is represented by an horizontal arrow and shows some temporal overlap with the *-ing* form; d)

the “smiley” symbolizes the observer; and finally f) the double arrow stands for the “two-way causal relation” and shows the subject’s control over the state of affairs.

#### 4. PARAMETERS

##### 4.1. *The Linguistic evidence of the concrete interpretation (participle)*

###### 4.1.1. The semantic evidence

From a semantic and syntactic point of view it is clear that these constructions can be treated as a unit fulfilling an object position (NP) and an *-ing* form functioning as its complement:

- (4) a. I see my father *diving* into the sea.  
b. I remember my father *diving* into the sea.

Semantically, *I see / remember my father diving into the sea* can entail *I see / remember my father*.

###### 4.1.2. The syntactic evidence

Syntactically, *my father* functions as a unit in subject position in passive constructions (“*my father* is seen” and “*my father* is remembered”). This suggests that this *-ing* form functions as an object complement.

###### 4.1.3. The thematic evidence

From a thematic point of view, perception verbs have two roles: an “Experiencer” and a “Percept”; the latter can be assigned to two semantic entities: an individual or an event. The Canonical Structural Realization of individuals is a NP:

- (5) Percept role:  
a. Individual: NP (“my father”)  
b. Event: NP+ *-ing* form (“my father *diving*”)

In “*I see / remember my father diving*”, the NP can be considered as the sole argument (“my father”), and the *-ing* form functions as an adjunct.

##### 4.2. *The Linguistic evidence of the abstract interpretation (gerund)*

###### 4.2.1. The semantics of the “NP + *-ing* form”

From a semantic point of view, the sequence “NP + *-ing* form” with perception verbs evokes an event that is analyzable as the direct object of the main verb. The direct-object function is characterized semantically as being filled by an element that designates that which is “[verb]ed”. The “NP + *-ing* form” can correspond semantically to “that which is / was [verb]ed” (Duffley 1999: 227).

In “I see / remember my father diving into the sea” “that which is seen / remembered” is “my father *diving*”, not just ‘my father’, nor just ‘*diving*, i.e., the “NP + *-ing* form” fulfils semantically in both cases the role of direct object.

#### 4.2.2. The syntactic function of the “NP + *-ing* form”

There are various syntactic criteria which corroborate the analysis of “NP + *-ing* form” as the direct object of the main verb. Firstly, this construction can be reformulated by means of a genitive or a possessive pronoun; secondly, pseudo-cleft sentences are possible and in addition one can refer to the construction by means of the pronoun “it” or “that”:

- (6) a. I see my father *diving* into the sea  
 b. I remember my father *diving* into the sea.
- a'. I see my father's diving / his diving / the diving of my father.  
 b' I remember my father's diving / his diving / the diving of my father
- a'' What I see is my father *diving* into the sea.  
 b'' What I remember is my father *diving* into the sea.
- a''' I saw it / that.  
 b''' I remember it / that

Yet, in the passive the NP and the *-ing* form do not behave as one constituent, as can be seen in (7):

- (7) a'''' \* My father *diving* is seen (by us).  
 b'''' \* My father *diving* is remembered.

There are two possible explanations for the ungrammaticality of the passive. Firstly, as has been observed by Reuland (1983), the gerund case marks its subjects; in addition, the NP is not a thematic argument on its own, because the argument is the event as a whole. (Borgonovo 1996: 8-9).

Secondly, it is likely that the reason for the ungrammaticality of these passives has to do with the semantic conditions on passivization. We do not have an explanation to offer at this point.

So under such conditions, the passivization of “NP + *-ing* form” seems impossible.

#### 4.2.3. The Argument evidence of the “NP + *-ing* form”

We have just seen in 4.1.3. that a “Percept” is be assigned to two semantic entities: an individual or an event. The Canonical Structural Realization of Events is typically the gerund (Borgonovo 1996):

- (8) Percept role:  
 a. Individual: NP (“my father”)  
 b. Event: NP+ *-ing* form (“my father *diving*”)

In “I see / remember my father diving”, the “NP + *-ing* form” functions as a constituent (“my father *diving*”), as an internal argument of the matrix verb (*see / remember*) and, consequently, we can claim that the *-ing* form has an “eventive” reading.

## 5. RESULTS: THE “ABSTRACT/CONCRETE READING” OF PERCEPTION VERBS

Once the “cognitive resemblance” of perception verbs has been proved and linguistic evidence for both readings provided, we present the abstract and concrete readings for both physical and cognitive perception verbs.

The “concrete reading” of physical and cognitive perception verbs is shown in the following figures (5) and (6) respectively:

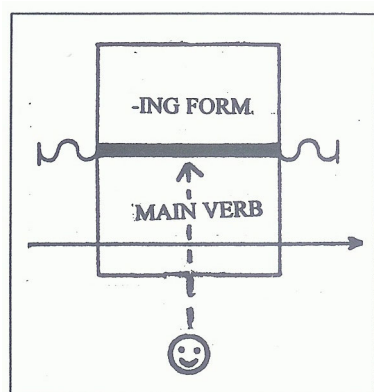


Figure 5. “Concrete reading” of physical verbs

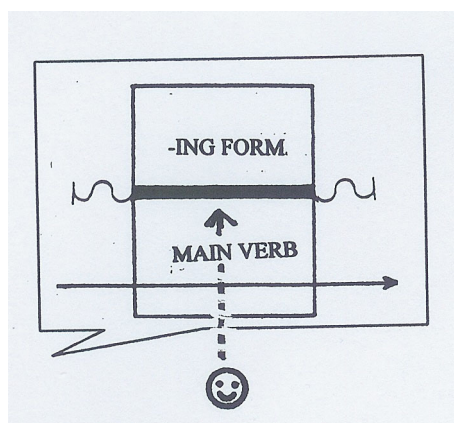


Figure 6. “Concrete reading” of cognitive verbs

In the description of the “concrete reading” both 1) the conceptualisation of the event and 2) the role of the main clause subject play an important role.

1) As far as the conceptualisation of the event is concerned, it is evoked as something incomplete: it entails a partial view as something caught at some point between its beginning and its end (Duffley 1995: 4); consequently, the observer or experiencer views the situation as an ongoing state of affairs.

2) And secondly, the main clause subject is not fully responsible for the content of the complement clause: the complement clause subject can suspend the action or decide to “go out of” the viewing frame (this is symbolized by a vertical dashed arrow).

In sentences such as *I remember my father / diving into the sea* and *I see my father / diving into the sea*, the *-ing* can be interpreted as I recall / see my father as he dived, with emphasis on the performer, hence a participle.

The “abstract reading” of physical and cognitive perception verbs is shown in the following figures (7) and (8) respectively:

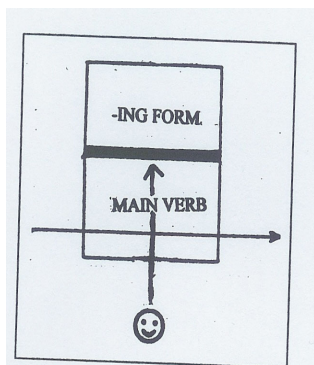


Figure 7. "Abstract reading" of physical verbs

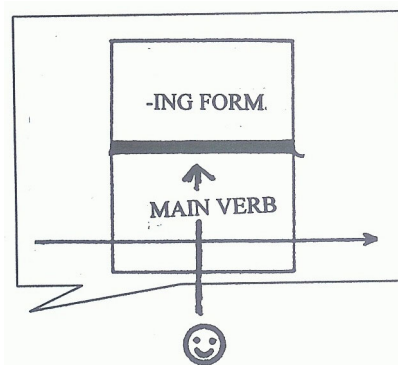


Figure 8. "Abstract reading" of cognitive verbs

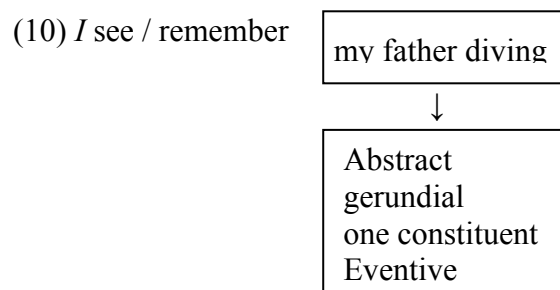
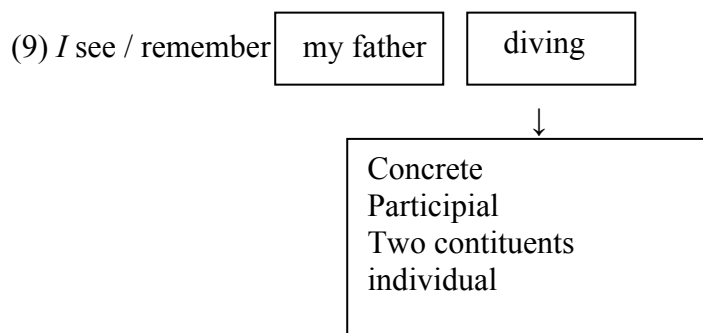
In the description of the "abstract reading", there are two main issues: 1) the conceptualisation of the event; and 2) secondly, the role of the main clause subject.

1) In the "abstract reading", the *-ing* complement clause evokes its event as a whole, it is seen in its entirety; the observer or experiencer conceptualises the internal configuration of the complement event: he / she conceptualises the event as a 'thing in itself'. (Duffley 1995: 5)

2) And secondly, the main clause subject is fully responsible for the content of the complement clause: he / she can take the initiative in suspending the event complement by stopping the remembrance, the image or the physical perception of it.

We could end up stating that in sentences such as *I remember my father diving into the sea*, or *I see my father diving into the sea*, the *-ing* has the following meaning: I recall / see the diving performed by my father, with emphasis on the event, hence gerund.

We could summarize all previous observations in the following way:



When the interpretation is concrete, it is always linked to the syntactic function of participle; the participle and the NP are interpreted as two constituents and have an individual interpretation as in (9), henceforth "concrete reading". In contrast an abstract interpretation,

the *-ing* form syntactically functions as a gerund; in addition, NP and a gerund constitute a single unit and have an “eventive interpretation” as in (10), henceforth “abstract reading”.

## 6. CONCLUSIONS

On the whole, our results suggest that that in English perception verbs allow the same readings: an “abstract reading” and a “concrete reading”. We think that it is precisely a question of “first” or “second” logical percept; thematically, the first logical percept of physical perception verbs is an “individual” and secondly an “event”; whereas for cognitive perception verbs it is the other way around: an “event” and an “individual” as its first and second logical percept respectively. The literature seems to provide the most logical and immediate reading for each kind of verb but one should bear in mind the complete picture to understand the mechanism of gerundial and participial property sharing.

Although our results are preliminary, we claim that *-ing* form with perception verbs (preceded by an NP and having as main verb a physical perception verb) has two possible readings: a “concrete reading”, hence participle, and an “abstract reading”, hence gerund (not a “prototypical” one, as a more detailed study on the ungrammaticality of the passive is needed).

## NOTES

1. (Kortmann 1995; Quirk 1985; Dirven 1989 and Langacker 1991 and others)
2. The percept role of this construction is an individual (NP), and the participle functions as its complement; note the term “individual” refers to all perceptible objects either human entities or things (i.e. *I see / remember the sea moving*).

## REFERENCES

- Borgonovo, C. 1996. “Gerunds and perception verbs”. *Langues et Linguistique* 22: 1-19.
- Croft, W. 1993. “Case marking and the semantics of mental verbs”. *Semantics and the Lexicon*. Eds. J. Pustejovsky. Netherlands: Kluwer Academic Publishers. 55-72.
- Dirven, R. 1989. “A Cognitive Perspective on Complementation”. *Sentential Complementation and the Lexicon*. Eds. D. Jaspers, W. Klooster, Y. Putseys & P. Seuren. Dordrecht: Foris. 113-139.
- Duffley P. J. 1995. “Defining the Potential Meaning of the English *-ing* Form in a Psychomechanical Approach”. *Langues et Linguistique* 21: 1-11.
- Duffley P. J. 1999. “The use of the Infinitive and the *-ing* after Verbs Denoting the Beginning, Middle and End of an Event”. *Folia Linguistica* XXXIII/3-4. Berlin: Mouton de Gruyter.
- Givón, T. 1993a. *English Grammar. A function-based introduction 1*. Amsterdam and Philadelphia: John Benjamins.
- Givón, T. 1993b. *English Grammar. A function-based introduction 2*. Amsterdam and Philadelphia: John Benjamins.
- Hamawand, Z. 2002. *Atemporal Complement Clauses in English: A cognitive Grammar Analysis*. Muenchen: Lincom Europa.
- Kortmann, B. 1995. “Adverbial participial clauses in English”. *Converbs in Cross-linguistic perspective. Structure and meaning of adverbial verb forms - adverbial participles, gerunds*. Eds. M. Haspelmath and E. König. Berlin: Mouton de Gruyter.



- Langacker, R. 1991. *Foundations of Cognitive Grammar 2: Descriptive Applications*. Stanford, CA: Stanford University Press.
- Quirk, R., Greenbaum S., and Leech G. & Svartvik J. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Reuland, E. 1983. "Governing -ing". *Linguistic Inquiry* 14: 101-136.
- Verspoor, M. 1996. "The story of -ing: A subjective perspective". *The construal of Space in Language and Thought*. Eds. M. Pütz & R. Dirven. 417-454.