

Prototype effects in the process of Compositional Cosepcification in the middle construction

Efectos prototípicos en el proceso de Co-especificación Composicional en la construcción media

Macarena Palma Gutiérrez

Universidad de Córdoba

L82pagum@uco.es

Abstract: This paper aims at exploring the process of semantic shift in Compositional Cosepcification with regards to the prototype effects found in the middle construction, understood as a prototype category which allows the subsumption of both central and peripheral members within the middle spectrum. The range covers structures from action-oriented to ergative-like ones, including their metonymic extensions. This paper is conducted through a corpus of contextualised examples (4500+) compiled with the Sketch Engine tool. By examining the lexical-semantic, discourse-pragmatic, and situational features that influence the process of constructional coercion, the family-resemblance analysis provided here reveals that different patterns in Compositional Cosepcification can be found within the middle spectrum. The parameters examined are: (i) the qualia structure of the nominal; (ii) the semantics of the predicate in combination with the nature of the nominal; (iii) the semantic charge of the adjunct; and (iv) other external and contextual factors surrounding the construction.

Keywords: Middle construction, prototype effects, Compositional Cosepcification, semantic shift, qualia structure

Resumen: Este artículo explora el proceso de cambio semántico en la Cosepcificación Composicional en relación a los efectos prototípicos hallados en la construcción media, entendida como una categoría de prototipos que permite la subsunción tanto de miembros centrales como periféricos. Así, se abarcan estructuras orientadas a la acción y de tipo ergativo, incluidas sus extensiones metonímicas. Este proyecto se lleva a cabo a través de un corpus de ejemplos contextualizados (4500+) compilados con Sketch Engine. Tras examinar las características léxico-semánticas, pragmático-discursivas y situacionales que influyen el proceso de coerción construccional, el análisis de semejanza familiar aquí proporcionado revela la existencia de diversos patrones en la Co-especificación Composicional dentro del espectro medio. Los parámetros examinados son: (i) la estructura de qualia del nominal; (ii) la semántica del predicado en combinación con la naturaleza del nominal; (iii) la carga semántica del adjunto, y (iv) otros factores externos y contextuales que envuelven a la construcción.

Palabras clave: Construcción media, efectos prototípicos, Cosepcificación Composicional, cambio semántico, estructura de qualia

1. Previous studies

The main features conventionally related to the middle construction in English include the following characteristics: (i) transitive verbs used as one-argument intransitives (Fagan, 1992); (ii) non-agentive Subject referents fulfilling the role of affected Patients (Fagan, 1992; Levin, 1993); (iii) the need of an adverb/adverbial phrase (Fellbaum, 1986; Fagan, 1992); (iv) non-eventive situations which lack a specific time reference and which profile features of the Subject entity (see Ackema and Schoorlemmer, 1994, p. 71); and (v) certain facilitating and letting properties¹ (Fagan, 1992; Levin, 1993; Kemmer, 1993; Davidse and Heyvaert, 2007). An example of a prototypical middle structure, according to these core features, is illustrated in (1) below:

(1) [about fish] Once you get through the skin, the rest of *the meat cuts easily*. (Sketch Engine)

Therefore, on the projectionist approach advocated by authors such as Levin (1993) and Fagan (1992), it is possible to identify a set of middle-forming verbs just because of their lexical and aspectual properties. However, according to the functional-cognitive perspective followed in this paper (cf. Davidse and Heyvaert, 2007; Taylor, 1995; Langacker, 1987, 2008; Goldberg, 1995, 2006; Yoshimura and Taylor, 2004; Yoshimura, 1998), the middle construction cannot be catalogued as a discrete category, but rather as a prototype category (cf. Taylor, 1995). This implies that adscription to the middle construction does not only depend on the features of the verbal predicate, but it depends on a combination of factors involving the notion of constructional coercion. That is, middlehood is attained when the structure in question follows both the syntactic, semantic, and pragmatic commonalities that are subsumed in the middle prototype category, as detailed below.

Therefore, as proposed in the present paper, the fact that the middle construction is here understood as a prototype category implies that the process of subsumption allows the membership of both central and peripheral structures by virtue of the prototype effects of the construction (cf. Taylor, 1995). Hence, a family-resemblance analysis of the middle construction is provided here, one which accommodates both prototypical and marginal middles. The range of structures dealt with in this paper covers both action-oriented structures (such as '*This car drives smoothly*') and ergative-like structures² (such as '*Glass breaks*

¹ The letting properties of the middle construction indicate how the inherent properties of the Subject referent are subjectively assessed by the speaker as being conducive to the action denoted by the predicate (vid. Davidse and Heyvaert, 2007).

² Sakamoto (2001) distinguishes between action-oriented and unaccusative-based middles. In this paper, the second term has been replaced with 'ergative-like middles' because, even though this classification is semantic rather than syntactic, in the traditional literature, the term

easily'). Besides, both types can accommodate metonymic extensions from the prototypes. Thus, in the family-resemblance analysis presented in this paper, action-oriented middles can be extended to other marginal types, like Locatives (as in '*Karkaroot Park Lake fishes well during May*') and Means (as in '*This music dances well*'). Accordingly, ergative-like middles can also be extended to other marginal cases, like Experiencer middles (as in '*Hamsters are timid in nature and scare easily*') and Agent-Instrument middles (as in '*The saw cuts like a dream*').

With regards to the notion of constructional coercion, scholars such as Yoshimura assume that "the use of verbs is sanctioned only to the extent that they instantiate the semantics of the middle construction" (1998, p. 118). In other words, the semantic schema of the middle construction would foreground certain aspects of verbs which contribute to the specification of determined features of their corresponding nominal entities. This implies that the middle construction forces a specific reading of the verbs according to its own constructional semantics. Such semantic specification above mentioned is what Yoshimura identifies with the notion of 'Cospecification', by which the meaning of the predicate is specified by virtue of the semantics of the nominal (Yoshimura, 1998, p. 114). In addition, the process of Compositional Cospecification is attained when the semantic value of the adjunct is added to the equation, producing a shift in semantic weight from a telic to a constitutive value (cf. Yoshimura, 1998, p. 124). See Section 4 for a further account on this issue.

Thus, the main aim of this paper is to elucidate if the process of Compositional Cospecification operates in the middle construction in the way explained by Yoshimura (1998), or if different patterns in semantic shift can be found by virtue of the prototype effects of the construction.

This paper is organised as follows: Section 2 deals with the methodology used in this paper; Section 3 refers to the notion of *qualia* structure with regards to the middle construction (cf. Pustejovsky, 1991, 1995; Yoshimura, 1998; and Yoshimura and Taylor, 2004); Section 4 explores the notion of semantic shift in Compositional Cospecification, paying special attention to the traditional shift from a telic to a constitutive value in terms of *qualia* structure (Yoshimura, 1998; Yoshimura and Taylor, 2004); Section 5 illustrates a family-resemblance analysis of the middle prototype category and elaborates a correspondence between the different members of the middle spectrum and their corresponding patterns in the process of Compositional Cospecification; and the last section offers final remarks.

2. Methodology

Along the lines of scholars such as Taylor (1995), Goldberg (1995, 2006), Sakamoto (2001), Yoshimura (1998), and Yoshimura and Taylor (2004), this paper

'unaccusative' might evoke a class of intransitive verbal predicates which is not middable, *i.e.*, pure intransitives such as 'arrive', 'go', and the like.

concentrates on those lexical-semantic, discourse-pragmatic, and situational factors that contribute to the family-resemblance analysis of the middle prototype category. Thus, special attention is paid to the semantic specification of predicates by virtue of the semantics of their nominals (*i.e.*, the process of Cospecification), and the semantic relation of both nominals and predicates with regards to the semantic charge of their adjuncts (*i.e.*, the process of Compositional Cospecification). To do so, as further elaborated in the following section, the theory of *qualia* structure is applied in this paper to examine the process of Compositional Cospecification along the members of the middle spectrum analysed here³.

Following the ideas of the Goldbergian Construction Grammar (1995, 2006) and basing this study on a usage-based approach, in this paper, the middle construction is understood as consisting in a colloconstructional or multiword unit which combines a nominal referent (mostly an Inanimate entity) with a V + Adv collocation. Consider this example in this regard: '*The bike handles well*'. In fact, the V + Adv collocational schema of the middle structure is attained not only because of the verbal constraints traditionally accepted (cf. Fagan, 1992; Levin, 1993), but particularly due to the severe adverbial restrictions imposed by the construction itself⁴ (cf. Palma Gutiérrez, 2019). In this regard, as Bosque puts it, "restricted adverbs are collocates" (2016, p. 9).

Therefore, this paper is based on a corpus study of contextualised examples compiled by using the English Web 2013 (enTenTen13) within the Sketch Engine tool. The sample of instances analysed here conforms a total of 4461 examples, last accessed 19/03/2021. The data collection process aims at carrying out a family-resemblance analysis of the middle prototype category (cf. Taylor, 1995), allowing the examination of the different patterns in Compositional Cospecification found in the different members of the middle spectrum (*contra* Yoshimura, 1998). To do so, some of the most productive predicates found in each member of the family-resemblance schema provided here have been selected (cf. Sakamoto, 2001), in combination with some of the most frequent adverbial collocates occurring in the corpus (cf. Davidse and

³ As detailed in section 3, Pustejovsky's (1991, 1995) theory of *qualia* structure refers to the lexical-semantic specification of the role of a nominal entity according to four different modes: telic, constitutive, formal, and agentive. Scholars like Yoshimura (1998) and Yoshimura and Taylor (2004) take this theory to examine the nature of prototypical Subject referents in the middle construction. As shown in section 5, this paper attempts to go a step further since it focuses on a refinement of these ideas by means of a family-resemblance analysis of the middle construction regarding its prototype effects.

⁴ In this respect, scholars like Davidse and Heyvaert (2007) and Heyvaert (2001, 2003) have proposed a semantic typology of middles based on the meaning of the adjuncts and the semantics of the nominal entities.

Heyvaert, 2007; Levin, 1993), and in conjunction with Inanimate Subject entities (except for Experiencer middles, which contain an +Animate referent)⁵.

The predicates chosen are listed below, distributed according to the family-resemblance analysis carried out in this paper: (i) action-oriented middles with the predicates 'drive' and 'handle'; (ii) ergative-like middles with the predicates 'break' and 'cut'; (iii) metonymic extensions from the action-oriented prototype including Locative middles with the predicate 'fish' and a Locative-Subject referent belonging to the semantic field of the term 'lake', as well as Means-Subject middles with the predicate 'dance' and a Subject referent belonging to the semantic field of the term 'music'; and (iv) metonymic extensions from the ergative-like prototype including Experiencer-Subject middles with +Animate Subject entities and the predicates 'scare' and 'tire', as well as Agent-Instrument middles with Instrumental Subject entities (semantically related to the term 'knife') and the predicate 'cut'.

In addition, these lexical combinations have been examined in conjunction with the following collocational adverbials, basically belonging to the facility and the quality-oriented type (*cf.* Davidse and Heyvaert, 2007; Heyvaert, 2001, 2003): 'easily', 'well', 'smoothly', and 'like a dream'. Consider the following table showing the frequency of appearance of these V + Adv structures:

	Prototypical action-oriented middles		Metonymic extensions of action-oriented middles (Locative & Means)		Prototypical ergative-like middles		Metonymic extensions of ergative-like middles (Experiencer & Agent-instrument)		
	Drive	Handle	Fish	Dance	Break	Cut	Scare	Tire	Cut
<i>easily</i>	51	100	--	--	562	55	319	768	110
<i>well</i>	499	1228	40	56	--	75	--	--	151
<i>smoothly</i>	45	15	--	--	--	12	--	--	12
<i>like a dream</i>	163	169	2	--	--	9	--	--	20
TOTAL	758	1512	42	56	562	151	319	768	293

Table 1: Frequency of appearance of the V + Adv structures

3. Qualia structure of nominals

Based on Pustejovsky's (1991, 1995) theory of *qualia* structure, Yoshimura (1998) and Yoshimura and Taylor (2004) examine the semantic specification of nominals as pertaining to four different *qualia* roles: telic, constitutive, formal, and agentive. These *qualia* modes are distinctive features that "structure our basic knowledge" (Pustejovsky, 1991, p. 427) about an entity in lexical-semantic and cognitive terms. These *qualia* can also appear combined in different ways with

⁵ The compilation of ±Animate Subject entities was not filtered on the searching tool, but it was rather manually retrieved. The only filter applied in the searching tool was the combination of predicates and adjuncts as indicated in this section.

the same nominal, enriching context. The four *qualia* modes of nominals are characterized as follows:

The telic *qualia* mode (Q_T) refers to the function, use or final destiny of an entity and how an agent manipulates it or interacts with it. The constitutive *qualia* mode (Q_C) refers to the internal parts or constitution of the entity (with regards to the material it is made of or how its various parts relate to each other). For its part, the formal *qualia* mode (Q_F) refers to how an entity differentiates from others by considering formal parameters such as shape, size, colour, etc. Finally, the agentive *qualia* mode (Q_A) refers to how the entity was created and which changes it undergoes as times goes by. In this regard, Cortés-Rodríguez and Mairal Usón (2013, p. 234) explain that “when a nominal denotes an entity, it can be done by referring to any of its *qualia* properties”. Consider the following examples in this respect:

- (1) *The car is heavy.*
- (2) *The car is colourful.*
- (3) *The car carries six.*
- (4) *The car is a new design.* (Cortés-Rodríguez and Mairal Usón, 2013, p. 234)

The above examples illustrate how the entity *car* can be specified in terms of its different *qualia*. Thus, example (1) specifies the Q_C mode of the car in question by relying on some inherent features such as weight and material. For its part, example (2) specifies the Q_F mode of the car by referring to one of its formal features, *i.e.*, colour. Then, example (3) specifies the Q_T mode of the car in that it relies on its transportation function. Finally, example (4) specifies the Q_A mode of the car in that it evokes the process of production of the entity (*cf.* Cortés-Rodríguez and Mairal Usón, 2013, p. 234).

As Yoshimura argues, “the various *qualia* are not all of equal status. In characterizing an entity, some *qualia* but not others are regarded as more intrinsic to a definition” (1998, p. 120). In this respect, Yoshimura (1998, pp. 123-124) maintains that, in the case of the middle construction, the two more relevant *qualia* roles are thought to be Q_T and Q_C modes. Regarding the telic mode, as Yoshimura explains, most middle Subjects involve Q_T in cospecification with the semantics of their predicates, since the most productive Subject referents found in the middle construction are Inanimate entities. However, when the semantic charge of the adjunct is added to the equation (*i.e.*, when the process of Compositional Cospecification is attained), a shift in semantic importance is motivated. As Yoshimura (1998, p. 124) explains, this shift of semantic weight occurs from the previously-mentioned telic value to a constitutive one, as illustrated in the schema $[Q_T \rightarrow Q_C]$. In the following section, this idea is further examined.

4. Semantic shift in Compositional Cospecification: From Qt to Qc mode

By following Pustejovsky's (1991, 1995) ideas, Yoshimura (1998) claims that there exists a direct relationship between the *qualia* structure of the nominal and the process of cospecification of the predicate in that "the *qualia* structure serves to specify the reading of a verb" (1998, p. 115). In fact, Yoshimura defines the notion of Cospecification as follows: "Cospecification means that semantic information of the complement (of a verb) contributes to the specification of a unique and appropriate meaning of the verb" (1998, p. 114).

Yoshimura argues that "the Middle Construction schema functions to foreground some semantic aspects of verbs that contribute to the specification of certain properties of the Subject referent" (1998, p. 117). In this way, "the use of verbs is sanctioned only to the extent that they instantiate the semantics of the Middle Construction [X (by virtue of some property P) ENABLES ACT]" (1998, p. 117). The 'property P' above mentioned, thus, refers to the *qualia* structure of the nominal. According to the author, a given structure constitutes a grammatically acceptable instance of a middle when "the semantic compositionality between the meaning of the verbs and the *qualia* roles of the nouns is fully compatible with the semantics of the Middle Construction" (1998, p. 117).

According to Yoshimura (1998, p. 123), the typical Subject referents appearing in the middle construction correspond to the class of artifacts (*i.e.*, Inanimate entities), leaving the class of natural kinds in the background. Yoshimura goes on to argue that, if the encyclopedic definitions of both artifacts and natural kinds are considered, the former would involve Q_T , while the last ones would implicate Q_C . This implies, as the author writes, that middles mostly require Subject entities which "are products created with a built-in aim or function, and [which] are understood typically with respect to the activities of (and the benefits for) a human Agent" (1998, p. 123).

Yoshimura assumes that middles occurring with artifacts as Subject referents obligatorily require an adjunct, and this condition is "motivated by the shift of importance from Q_T to Q_C " (1998, p. 124). That is to say, as the author explains, due to the incorporation of the adjunct, the Subject referent enhances its responsibility, which is directly associated with the Q_C of the nominal, and not so much with the Q_T (which would be related to the intervention of the implicit Agent). In this way, according to Yoshimura, the integration of the value of the adjunct into the process of Compositional Cospecification leads to the fact that the Q_C of the nominal is foregrounded and the Q_T is backgrounded. The adjunct, in the majority of cases, promotes the easiness or difficulty with which the action denoted by the predicate is performed because of the inherent properties of the nominal (its Q_C) and not so much because of the skill of any Agent (Yoshimura, 1998, p. 124).

For instance, consider the following example: '*The book reads easily*' (Sketch Engine). In this example, the 'reader', the implicit Agent in this case, involves the

Q_T of the nominal 'book', (*i.e.*, the Agent's ability to read, 'literacy'). On the other hand, there exists a shift of semantic importance from the Q_T to the Q_C mode of the nominal when the value of the adjunct 'easily' is added to the equation, since they refer to the inherent properties of the nominal 'book' itself, such as 'clarity and liveliness of style'. Therefore, the *telic* value that specifies the meaning of the predicate 'read' by virtue of the semantics of the nominal 'book' (*i.e.*, the process of cospecification) is altered because of the incorporation of the semantic charge of the adjunct. As Yoshimura explains (1998, p. 124), the adjunct would basically contribute to attributing responsibility to the inherent properties of the nominal (its Q_C) in the carrying out of the action denoted, backgrounding the ability of any particular Agent (its Q_T). Therefore, as Yoshimura (1998, p. 124) maintains, the logical shift when adding the semantic charge of the adverb to the construction would follow the pattern $[Q_T \rightarrow Q_C]$.

At this point, some related questions arise: To what extent could be affirmed that cospecification in the middle construction works in the way Yoshimura (1998) claims? That is, is it an obligatory requirement for the middle expression to have a shift in semantic importance from Q_T to Q_C mode just because of the incorporation of the value of the adjunct? What happens with middles belonging to other less prototypical classes? These issues are further examined in the next section.

5. Family-resemblance analysis of the middle construction

Goldberg states that, in capturing linking generalizations with constructions, "the inheritance hierarchy allows us to capture the relevant generalizations while at the same time allowing for a limited number of lexicalized exceptions" (1995, p. 117). Accordingly, the middle construction can be thought of as consisting in a family of syntactically, semantically, and pragmatically related structures, thus, involving family-resemblance at a higher level.

Along the lines of Taylor (1995), Langacker (1987, 2008), and Geeraerts (1985), scholars such as Sakamoto (2001), Yoshimura (1998), Yoshimura and Taylor (2004), and Kemmer (1993, p. 238) point at the fact that the middle construction does not conform a clear-cut or well-defined discrete category. Instead, the authors propose that the middle construction is better understood as a prototype category in which some exemplars are more central and others are more peripheral by virtue of its prototype effects. That is, depending on the number of basic or prototypical features instantiated on each occasion and the different deviating-behavioural patterns in each case, a certain middle instance will be considered a more central or a more marginal member. This entails that "membership in a prototype category is a matter of gradience" (Taylor, 1995, p. 54). Hence, "prototype categories permit membership to entities which share only few attributes with the more central members" (Taylor, 1995, p. 54).

In this regard, this paper proposes that the idea of the prototype effects of the middle construction allows for the accommodation of extensions from the prototype, provided that constructional coercion is attained by virtue of certain syntactic, semantic, and pragmatic commonalities found among the members of the spectrum, as detailed below. The middle spectrum, thus, would cover structures ranging from the unergative to the unaccusative space (cf. Sakamoto, 2001), thus, accommodating both action-oriented and ergative-like middles, respectively.

The Unergative – Middle – Unaccusative continuum shown in Figure 1 below implies that there exist fuzzy boundaries in (at least) syntactic and semantic terms among these three types of structures. The spectrum ranges from a maximal degree of agentivity (at the unergative side of the continuum) to a maximal degree of affectiveness (at the unaccusative side of the continuum) in terms of semantic analysis.

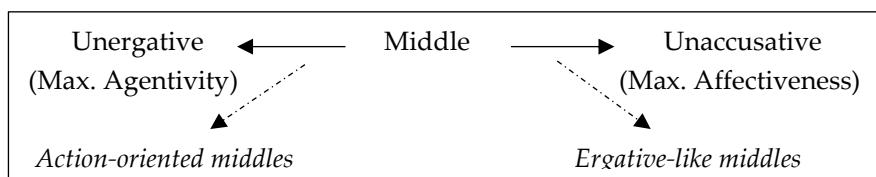


Fig. 1: The spectrum of the middle construction: From action-oriented to ergative-like middles

According to Figure 1 above, this gradience in terms of agentivity and affectiveness contribute to the prototype effects of the middle construction by allowing the subsumption of both action-oriented and ergative-like middles. Consider the action-oriented middle instantiated in (5) and the ergative-like middle exemplified in (6) in this regard:

- (5) *The Sebring is a very capable cruiser and drives smoothly.*
- (6) *Glass breaks easily.* (Sketch Engine)

Concerning the aspectual properties of these structures, action-oriented middles are formed from unergative verbs, *i.e.*, those *specifying the manner of action*, such as 'read', 'translate', 'play', 'drive', and 'handle'. On the other hand, ergative-like middles are formed from verbs specifying *how the change of state proceeds*, such as 'open', 'close', 'cut', and 'break' (cf. Sakamoto, 2001, p. 101).

Therefore, action-oriented middles as (5) above do profile the role of the implicit Agent with regards to the action denoted by the predicate at a higher level than ergative-like middles as (6) do, since the latter tend to foreground the affectedness of their patientive referents instead. Thus, the lack of affectedness in the nominal referents in action-oriented middles leads to the conclusion that they do not belong to the prototypical class of middle Subjects (*i.e.*, Patients). In fact, pragmatically, they would involve a type of entity that could be identified with

an Enabler more than with a Patient⁶. Nevertheless, by virtue of the prototype effects of the construction, both Patient and Enabler-Subjects are permitted.

Remarkably, the process of Compositional Cospecification does not operate in the same way in the examples instantiated in (5) and (6) above. The action-oriented middle exemplified in (5) does follow the traditionally accepted pattern $[Q_T \rightarrow Q_C]$ (cf. Yoshimura, 1998). This is so because the cospecification of the nominal 'car' with regards to the semantics of the predicate 'drive' relies on a telic value (*i.e.*, a car is made to be driven). In addition, the incorporation of the semantic charge of the adjunct 'well' produces a shift towards the constitutive value of the car in question. Thus, the fact that 'the car drives *well*' is due to the internal components or parts of the car (*i.e.*, the engine, the braking system, etc.), independently from the abilities of any implicit Agent. Hence, the Q_C mode is foregrounded over the Q_T in compositional analysis.

However, another pattern is found in the ergative-like instance exemplified in (6) above. In this occasion, no shift in semantic importance is produced, even though the Subject referent is an Inanimate entity. Rather, the Q_C mode is maintained throughout the process of Compositional Cospecification. Thus, there is no telic connection between the nominal 'glass' and the predicate 'break'. Indeed, the fact that 'glass breaks' at all is a generalization upon the nature of this material by virtue of its internal composition (its Q_C). Besides, the value of the adjunct intensifies this condition, since the fact that 'glass breaks *easily*' is a consequence of its natural disposition. Therefore, ergative-like middles background the role of the implicit agentive participant who eventually carries out the action denoted (the breaking event in this case) and profile the internal or inherent properties of the patientive Subject entity (its breakability in this case). Hence, the pattern found in Compositional Cospecification in ergative-like middles such as (6) is reflected in the schema $[Q_C \rightarrow Q_C]$ (contra Yoshimura, 1998).

In this section, an inheritance hierarchy of metonymically-motivated extensions of both action-oriented and ergative-like middles is presented. Therefore, by virtue of the prototype effects of the middle construction, other non-patientive nominal entities can also occur as Subjects, *i.e.*, Oblique entities⁷ (cf. Davidse and Heyvaert, 2007, p. 45; and Heyvaert, 2001, p. 289, 2003, p. 129), thus, allowing the subsumption of nominal referents otherwise catalogued as non-middable. These middles containing Oblique entities are understood as metonymic extensions from the prototypes. In fact, examples at each side of the

⁶ Therefore, as it is proposed in this paper, in terms of semantic and pragmatic analysis, Subject entities occurring in action-oriented middles will be considered Enablers due to their lack of affectiveness and their agent-like nature. On the other hand, Subject referents in ergative-like middles will be considered Patients because they involve entities affected by the action denoted by the predicate, thus, experimenting a change of state (*e.g.*, the breaking of the glass).

⁷ Heyvaert describes oblique entities as those "participants which are clausally realized in the form of a prepositional phrase", thus "designating the single participant of an ergative unaccusative verb" (2003: 115).

middle spectrum can be found. In this regard, action-oriented middles can motivate further extensions of less prototypical middles containing Oblique Subject entities belonging to either the class of Locatives or Means, as illustrated in (7) and (8) below, respectively. Accordingly, ergative-like middles can also motivate further extensions of marginal middles containing Oblique referents belonging to either the class of Experiencers or Agent-Instruments⁸, as exemplified in (9) and (10) below, respectively:

- (7) *Karkarook Park Lake fishes well during May.*
- (8) *From synthetic grandiosity to cerebral reflection, this music dances well.*
- (9) *Hamsters are timid in nature and scare easily.*
- (10) *The saw has been sharpened and cuts like a dream.* (Sketch Engine)

Locative and Means-Subject middles such as (7) and (8) above do involve the lack of affectedness characterising prototypical action-oriented middles. Similarly, Experiencer-middles such as (9) do include affected entities as it occurs in prototypical ergative-like middles, and they contain an +Animate entity as Subject referent⁹. However, the pattern is not straightforwardly encountered in Agent-Instrument middles, as illustrated in (10) above. In fact, this type of structure follows a more complex metonymically-motivated pattern: the 'saw' in (10) is not an affected entity but rather an instrument which is used by the implicit Agent to affect an implicit patientive entity by cutting it. Thus, another portion of the action chain is projected in Agent-Instruments middles which differs from the prototypical one.

This significant distinction is also reflected in the analysis of the Compositional Cospecification occurring here. Whereas Locative and Means-Subject middles do follow the pattern $[Q_T \rightarrow Q_C]$ (as in prototypical action-oriented middles), and Experiencer-Subject middles do follow the pattern $[Q_C \rightarrow Q_C]$ (as in prototypical ergative-like middles), on the other hand, Agent-Instrument middles do not assume the common pattern for ergative-like middles. Rather, they instantiate the pattern found in action-oriented middles, thus, profiling the role of the implicit Agent in the carrying out of the action denoted by the predicate, and implying another entity being affected. These issues are further elaborated in the following paragraphs.

⁸ Remarkably, certain predicates can occur with both prototypical action-oriented middles and the metonymically-motivated extension called here Agent-Instrument middles. Consider the case of 'cut' in '*This material cuts well*' and '*This knife cuts well*'. The difference between these two examples is the degree of affectedness of their Subject entities: in the former example, an affected entity is found, whereas in the second instance, the nominal refers to an instrument which is used to affect another entity.

⁹ Experiencer-Subject middles deviate from prototypical ergative-like middles in this respect: they incorporate an +Animate Subject entity (the Experiencer of the adverb) which is construed as necessarily the same entity as the implied Agent.

Therefore, in order to incorporate these metonymically-motivated extensions within the high-level inheritance hierarchy provided here, a family-resemblance constructional schema (based on the idea of the prototype effects of the construction) is proposed, as shown in Figure 2 below. The inheritance hierarchy provided in Figure 2 confirms that the lowest levels occur as metonymically-motivated extensions of superior or higher levels:

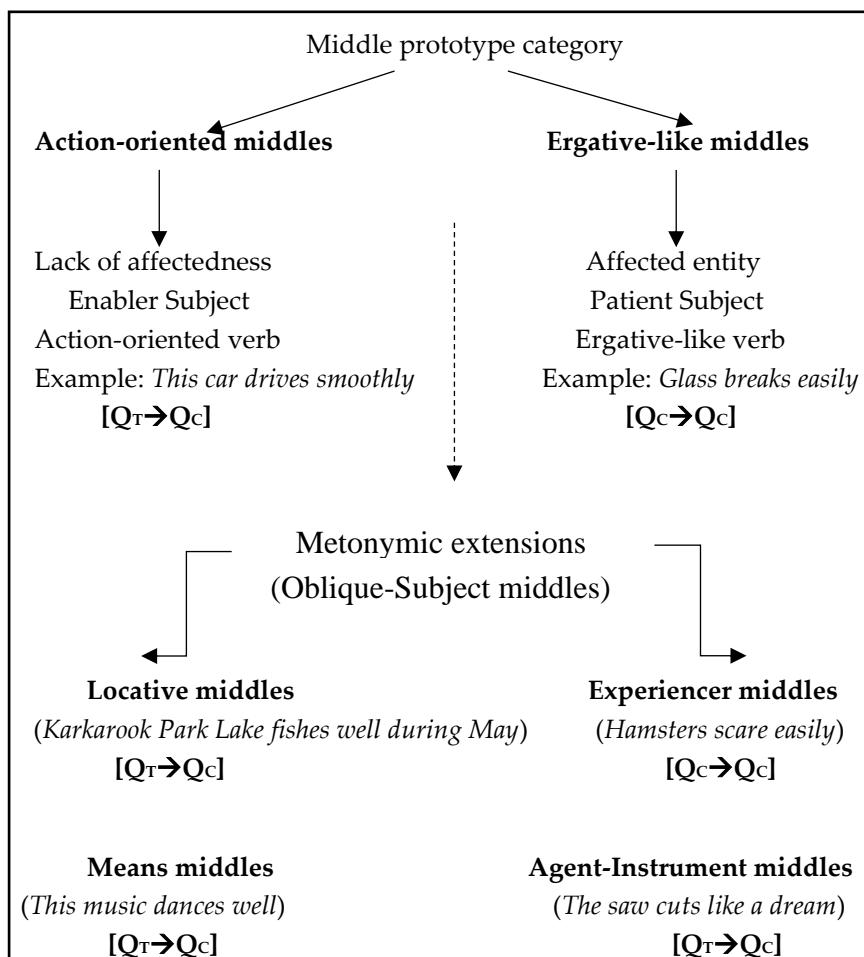


Fig. 2: Family-resemblance analysis of the middle construction as a prototype category

Using Goldberg's (1995: 78) terminology, such metonymic extensions are considered 'subpart inheritance links'. The author explains that "[a] subpart link is posited when one construction is a proper subpart of another construction and exists independently. (...) The syntactic and semantic specifications of [the extension] are a subpart of the syntactic and semantic specifications of the [prototypical construction]" (1995, p. 78).

In Oblique middles, as well as in non-Oblique middles, certain properties of the Subject entities are subjectively assessed by the speaker as being conducive to the action as specified by the adjunct. Therefore, the contextually invoked properties of the 'lake' in (7) above (such as its clear-water state during May, *i.e.*, its Q_C) are seen as enabling one to carry out the fishing activity 'well'. That is, the

cospecification of the nominal 'lake' with regards to the semantics of the predicate 'fish' relies on a telic value. However, the incorporation of the semantic charge of the adjunct 'well' produces a shift towards the constitutive value of the lake in question. Thus, the fact that 'the lake fishes *well*' is due to the inherent properties of the lake itself, independently from the abilities of any implicit Agent. Hence, the Q_C mode is foregrounded over the Q_T in compositional analysis. A similar conclusion can be drawn with regards to (8), since the inherent properties of the 'music' in question (like its swing and beat compared to the swing and beat of other types of music, *i.e.*, its Q_C) are evaluated by the speaker as letting one carry out the dancing activity 'well', independently from the skills of any implicit Agent.

For its part, in example (9) above, an inherent property of 'hamsters' (namely, a feature of their natural character by which their mental attitude presents a certain predisposition to feel scared, *i.e.*, their Q_C) is felt by the speaker as being conducive to the scaring event over them with ease. In addition, this natural condition is intensified by the value of the adjunct 'easily' without producing any shift in semantic importance in compositional analysis (*cf.* Palma Gutiérrez, 2020, *in press*). This pattern occurs in Experiencer-Subject middles due to the presence of +Animate entities as nominal referents.

Finally, the contextually invoked properties of the 'saw' in (10) above (like having a sharp edge, *i.e.*, its Q_C) are seen as letting the implied Agent to carry out the cutting activity in the way specified by the adjunct, *i.e.*, 'like a dream'. However, Agent-Instrument middles differ from prototypical ergative-like middles in that the cospecification of the nominal ('saw') according to the semantics of the predicate ('cut') relies on a telic value (Q_T). Then, the incorporation of the semantic charge of the adjunct ('like a dream') produces a shift towards the constitutive value of the Subject referent. Thus, the fact that 'the saw cuts *like a dream*' is due to the inherent properties of the saw itself, independently from the abilities of any implicit Agent. Hence, the Q_C mode is foregrounded over the Q_T in compositional analysis. In addition, contrary to prototypical ergative-like middles, the Subject referent is not an affected entity. Instead, it is pragmatically implied that the saw in question is used by the Agent to affect another patientive entity by cutting it. Thus, another portion of the action chain is depicted here.

6. Final remarks

As discussed throughout Section 4, Yoshimura (1998) does advocate for the idea that the middle construction basically takes the pattern $[Q_T \rightarrow Q_C]$ in the process of Compositional Cospecification when the Subject referent is what he calls an 'artifact'. However, in Section 5 it has been demonstrated that, by virtue of the prototype effects of the middle construction, other patterns in Compositional Cospecification can also occur (*contra* Yoshimura, 1998).

Consequently, by means of the family-resemblance analysis provided here, it is argued that the middle construction can be analysed as a family of structures comprising two main sub-constructions which instantiate related but not identical meanings: the action-oriented and the ergative-like patterns, with values involving lack of necessary affectedness and total affectedness, respectively. Further extensions (*i.e.*, Oblique-Subject middles) also show other sub-types of constructions metonymically motivated within this family. Particularly, Agent-Instrument and Experiencer-Subject middles are considered metonymically-motivated extensions of the ergative-like middle, whereas Locative and Means-Subject middles are considered metonymically-motivated extensions of the action-oriented middle.

Therefore, the middle construction needs to be understood as a high-level conceptual configuration capable of accommodating or subsuming low-level structures of the kind provided by the nominal referents, lexical predicates, and adjuncts which are coerced into the construction. Hence, the middle construction needs to be understood as a high-level schema which comprises the syntactic, semantic, and pragmatic commonalities found in the middle prototype category.

Bibliography

ACKEMA, P. and SCHOORLEMMER, M. (1994). The middle construction and the syntax semantics interface. *Lingua*, 93, 59-90.

BOSQUE, I. (2016). On the conceptual bases of collocations: restricted adverbs and lexical selection. In S. Torner Castells and E. Bernal (Eds.), *Collocations and other lexical combinations in Spanish: Theoretical, lexicographical and applied perspectives* (vol. 1) (pp. 9-20). Routledge.

CORTÉS RODRÍGUEZ, F. and MAIRAL USÓN, R. (2013). Constraints on English middle structures: A Lexical-Constructional analysis. *Onomázein*, 27, 220-240.

DAVIDSE, K. and HEYVAERT, L. (2007). On the middle voice: An interpersonal analysis of the English middle. *Linguistics*, 45(1), 37-83.

FAGAN, S. (1992). *The syntax and semantics of middle constructions: A study with special reference to German*. Cambridge, Cambridge University Press.

FELLBAUM, C. (1986). *On the middle constructions in English*. Bloomington, Indiana University Linguistics Club.

GEERAERTS, D. (1985). Cognitive restrictions of the structure of semantic change. In J. Fisiak (Ed.), *Historical Semantics* (pp. 127-153). Berlin, Mouton de Gruyter.

GOLDBERG, A. (1995). *Constructions: A construction grammar approach to argument structure*. Chicago, University of Chicago Press.

GOLDBERG, A. (2006). *Constructions at work: The nature of Generalization in Language*. Oxford, Oxford University Press.

HEYVAERT, L. (2001). Nominalization as an interpersonally-driven system. *Functions of Language*, 8(2), 283-324.

HEYVAERT, L. (2003). *A Cognitive-Functional approach to Nominalization in English*. Berlin, Mouton de Gruyter.

KEMMER, S. (1993). *The Middle Voice*. Amsterdam, John Benjamins.

LANGACKER, R.W. (1987). *Foundations of Cognitive Grammar* (Vol. 1), *Theoretical prerequisites*. Stanford, Stanford University Press.

LANGACKER, R.W. (2008). *Cognitive Grammar. A basic introduction*. Oxford/New York, Oxford University Press.

LEVIN, B. (1993). *English verb classes and alternations. A preliminary investigation*. Chicago, The University of Chicago Press.

PALMA GUTIÉRREZ, M. (2019). Semantic prosody in middle construction predicates: Exploring Adverb + Verb collocation in middles. In G. Corpas Pastor and R. Mitkov (Eds.), *Computational and Corpus-Based Phraseology* (pp. 345-359). Gwerbestrasse, Springer.

PALMA GUTIÉRREZ, M. (in press). Un enfoque contrastivo del Sujeto +Animado en la construcción media inglesa y española. In G. Corpas Pastor, M.R. Bautista Zambrana and C.M. Hidalgo-Ternero (Eds.), *Sistemas fraseológicos en contraste: enfoques computacionales y de corpus*. Granada: Comares.

PUSTEJOVSKY, J. (1991). The generative lexicon. *Computational Linguistics*, 17(4), 409-441.

PUSTEJOVSKY, J. (1995). *The Generative lexicon*. Cambridge, MIT Press.

SAKAMOTO, M. (2001). The middle and related constructions in English: A Cognitive network analysis. *English Linguistics*, 18(1): 86-110.

SKETCH ENGINE (2021): Corpus of English Web 2013 (enTenTen13). Last accessed 19/03/2021, from <https://www.sketchengine.eu/>.

TAYLOR, J. (1995). *Linguistic Categorization. Prototypes in Linguistic Theory*. Oxford, Clarendon Press.

YOSHIMURA, K. (1998). Encyclopedic structure of nominals and middle expressions in English. *Kobe paper in Linguistics*, 1, 112-140.

YOSHIMURA, K. and TAYLOR, J. (2004). What makes a good middle? The role of qualia in the interpretation and acceptability of middle expressions in English. *English Language and Linguistics*, 8(2), 293-321.