Strategic Construal and Visual Representation of English Particle Verbs by Croatian High School Learners

Brečević, Enio

Sveučilište u Zagrebu

Filozofski fakultet

Odsjek za anglistiku

Katedra za metodiku

STRATEGIC CONSTRUAL AND VISUAL REPRESENTATION OF ENGLISH PARTICLE VERBS BY CROATIAN HIGH SCHOOL LEARNERS

Diplomski rad

Student: Enio Brečević

Mentorica: izv. prof. dr. sc. Renata Geld

Zagreb, siječanj 2023.

University of Zagreb

Faculty of Humanities and Social Sciences

Department of English

TEFL Section

STRATEGIC CONSTRUAL AND VISUAL REPRESENTATION OF ENGLISH PARTICLE VERBS BY CROATIAN HIGH SCHOOL LEARNERS

Graduation Thesis

Student: Enio Brečević

Supervisor: Associate professor Renata Geld, PhD.

Zagreb, January 2023

Examining Committee:

Assistant professor Stela Letica Krevelj, PhD

Associate professor Mateusz-Milan Stanojević, PhD

Associate professor Renata Geld, PhD

Table of Contents

Abstract:

This thesis proposes to explore some aspects of strategic construal of English verb-particle constructions, with the focus on factors that are theorized to influence learners' visual representations of particle verbs. In order to determine what features of idiomatic particle verbs influence learners' visual conceptualizations, a study was conducted on 80 Croatian high school students who are learning English. The participants were asked to draw the meaning of 24 verb-particle constructions containing 4 particles (*out*, *in*, *up* and *down*) and verbs that can semantically be described as either light (less specific, schematic) or heavy (more specific, denoting concrete actions). It was determined that the semantic nature of the verb played a role in how the participants visually represented the chosen particle verbs, as they were able to meaningfully decompose particle verbs more consistently when the lexical part of the construction was a heavy verb. Additionally, particle verbs with a heavy lexical element produced more responses that were characterized as lexical determination, while topological determination was prevalent in the case of light verbs. An overwhelming number of analyzed drawings contained concrete symbols and props, suggesting that learners favor this type of self-generated visual representations, and potentially implying that detailed illustrations might be more accessible to high school students, compared to decontextualized schematic diagrams. Another insight gleaned from the study was that Croatian high school learners of English are capable of conceptual integration, since their drawings incorporated the literal meaning of either one or both components of the relevant particle verb and its target figurative meaning in 31.74% of all drawings.

Keywords:

1. Introduction

Particle verbs are notorious for being one of the most daunting aspects of the English language for learners. They compose a productive and robust system of complex forms with meanings that range from transparent (literal or highly predictable from the constituents) to opaque (figurative and more difficult to make sense of by meaningfully decomposing the construction), on top of frequently being polysemous and exhibiting other semantic and syntactic intricacies. Traditionally, teachers of English as a second or foreign language (L2) and English textbooks tended to describe particle verbs as purely idiomatic, advising learners to learn the constructions by heart and perpetuating the view championed by linguists who characterized grammar as a set of arbitrary syntactic rules for forming grammatically acceptable utterances.

However, more recent approaches to language, namely cognitive linguistics, suggest that there is systematicity within this complex system. Moving away from the historical primacy of syntax, cognitive linguists highlight the centrality of meaning, which, from the perspective of language users, appears to be a more organic way to view language. As Langacker, one of the founders of cognitive linguistics, put it: "[when] ordinary people speak and listen, it is not for the sheer pleasure of manipulating syntactic form—their concern is with the meanings expressed" (Langacker 2008b: 9). As opposed to the view that grammatical rules are completely arbitrary, in cognitive linguistics both the grammatical and lexical aspect of language are claimed to be meaningful, and the meaning of particular grammatical structures can often be accounted for by referring to the operations that govern our cognition and processes such as conceptual transfer and metaphoric extension. While many L2 teachers might at some point be tempted to tell their students that some things in language are the way they are simply "because", providing "descriptively adequate, intuitively acceptable, and easily accessible formulations" of grammatical patterns is more conducive to learners' gaining insight into the target language system (Taylor 1993: 220). Cognitive grammar thus seems like a suitable and effective approach

to apply to the field of language teaching, and, more specifically, to teaching particle verbs, as explaining the motivation behind the phonological structure and meaning of particle verbs could enable learners to better understand the system behind these language forms.

Adopting the perspective of cognitive linguistics, this study aims to explore how L2 learners of English visually represent particle verbs when asked to justify their meanings on the basis of the form of each particle verb paired with one of its definitions. Since particle verbs are composite structures that can carry multiple meanings across the literal-metaphorical scale, it is of interest to see how learners regard the literal meanings of the two components of each particle verb while reflecting on the meaning these two elements produce together. The aim of this study is to examine pictorial representations of meaning construal on the part of Croatian high school students learning English by determining what elements of figurative particle verbs they found most informative, and by observing patterns in utilization of conventional images in their drawings. Insights gleaned from learners' visual representations can be a valuable resource, as they can inform language teachers and textbook writers about learners' mental imagery, associations and meaning construal of particle verbs, which in turn may result in new activities and classroom materials that enhance learners' processing and retention of this tricky feature of English.

2. Theoretical framework

2.1. Strategic construal

One of the main postulates of cognitive linguistics posits that language functions in the brain similarly to how other (nonlinguistic, general) cognitive abilities (such as memory, attention and perception) do, as opposed to there being a special and separate module in the mind that language is governed by. Consequently, "our linguistic knowledge – knowledge of meaning and

form – is basically conceptual structure," (Croft & Cruse 2004: 2) since the representation of such knowledge is analogous to the representation of other mental capabilities and is subject to principles that underlie other psychological processes. One of the cognitive processes involved in using language is the construction of meaning. Being a usage-based approach to language, cognitive linguistics places paramount importance on meaning, which is regarded within its framework as dynamic and subjective (Langacker 1987: 138).

When an individual communicates something via language, this prompts the hearer to conceptualize the relevant part of human experience in order to understand what is being said. The process of conceptualization, of conceiving some state of affairs in a certain manner, is also called construal (Croft & Cruse 2004: 8), and it is indicative of the ability of humans to portray a single "objective" situation in any number of different ways (Langacker 2017: 14). In fact, the meaning of any linguistic expression is inextricably linked to the relevant circumstances surrounding it (it is context-dependent), and to the speaker's (or hearer's) "conceptualizing activity" (Langacker 2008b: 29-30), which developed through interacting with other speakers (or, in other words, through the use of language). A classic example of multiple possible conceptualizations related to one situation is the way a person might describe a glass filled up to 50 percent of its capacity – the proverbial optimist might say that it is half full, while the pessimist might opt to construe the situation as involving a glass that is half empty. To summarize, it can be concluded that our interpretations of the linguistic input we are exposed to (as well as our linguistic output) are governed by our conceptualizations, which are in turn grounded in our bodily experience and sociocultural context – the way we might interpret (construe) a particular utterance depends on our knowledge, perception, attitude towards the speaker or the subject, cultural values, etcetera, instead of there being a single "objective" interpretation that all the speakers would share.

Describing how meaning is construed and which operations and structures guide and impose constraints on our conceptualization is central for cognitive linguists inasmuch as it can shed light on the nature of the meaning of linguistic units, which includes grammatical structures. In contrast to what some more traditional approaches to language might suggest, cognitive linguists espouse the view that "there is no meaningful distinction between grammar and lexicon," as the symbolic structures contained therein form a continuum of units of different degrees of schematicity (abstraction), which can only be separated into distinct groups arbitrarily (Langacker 1987: 3). Grammar, like lexicon, is therefore realized by symbolic relationships, which are relationships between a semantic structure and its corresponding phonological structure, and which, in the case of complex constructions, can be reduced to simpler symbolic structures (Langacker 2008b: 18; Langacker 2017: 92). These simpler symbolic structures represent the constituents of a given complex expression and contribute (to varying degrees) to how we conceptualize it. More specifically, this does not mean that the components of a complex grammatical expression solely and completely determine its meaning; however, its meaning can be said to be "prompted" by its components (Langacker 2008a: 42). In light of these considerations, Langacker characterizes language as "exhibiting only partial compositionality" (Langacker 2008a: 42), wherein compositionality is related to how predictable the meaning of a complex expression is based on the meaning of its parts.

From the features of the symbolic view of grammar outlined above, it follows that that every permissible grammatical construct carries meaning (Langacker 2017: 114), and it can also be deduced that conventionalized patterns in language (such as patterns that describe the formation and utilization of particle verbs) are almost always conceptually motivated (Langacker 2008b: 21-22), since they concern the pairing of semantic structures with phonological structures, a process which is conceptual in nature. In cognitive grammar, these conventionalized patterns for forming (either lexical or grammatical) constructions are represented with schemata, which are abstract representations of some commonalities or generalizations that emerge from individual

occurrences of constructions in language use. In the process of acquiring their language, speakers internalize schemata from expressions they encounter, and "[o]nce learned, a schema serves as a template for dealing with novel expressions on the same pattern" (Langacker 2008a: 168).

While these observations have been made in reference to native speakers of a language, it has been shown that learners of a foreign language (L2) are also able to negotiate the meaning of novel complex constructions by falling back on previously internalized schemata and attending to the compositionality of the complex expression in question. This has been demonstrated, for example, by studies in which learners of English were asked to try to make sense of a number of non-literal meanings of particle verbs and verbally describe and/or draw how they comprehend those meanings (Geld 2009; Geld & Stanojević 2016; Geld & Šarčanin 2019). The results of these studies indicate that L2 speakers exhibit an awareness of the cognitive motivation behind composite structures, as they are able to detect possible semantic contributions of the individual constituents in relation to the meaning of the composite structure, even if these contributions are not transparent (i.e., even if the meaning of the complex expression is figurative). Other research on L2 construal focused, for example, on learners' reconceptualizing motion events in their L2 (Treffers-Daller & Tidball 2015; Schmiedtová 2013), on the acquisition of patterns of use of grammatical aspect in L2 event construal (van Beek et al. 2013), and even on how L2 patterns may influence a leaner's L1 (first or native language) (Brown & Gullberg 2010).

Geld (2009) denominates the notion of meaning construal in L2 as strategic construal (21), suggesting that learners can (and do) strategically think about linguistic meaning, and she attributes to this concept some features that make it distinct from its L1 counterpart. Namely, "strategic meaning construal and second language acquisition inevitably depend on whatever precedes. Being entangled with L1 and experiential knowledge of the world, L2 both relies on and mirrors various cognitive processes that constitute conceptual structure in L1" (Geld 2009: 34). Language learning presupposes the interaction of not only two language systems, but also

two "conceptual systems," one related to the learner's native culture, and the other related to the target culture (Danesi 2008: 243). Before absorbing the conceptual system of the target culture, learners are likely to rely on their native conceptual system, even when using the target language, which consequently influences their construal.

It bears noting that the participants of the present study are all native speakers of Croatian. According to Talmy's typology (2000: 221), languages can be categorized as verb-framed or satellite-framed, depending on how the core schema (the path, motion and change of an event) is conveyed in a verb phrase. Verb-framed languages (such as Romance languages, Japanese, Bantu languages) encode the path of motion in the verb, whereas satellite-framed languages (most Indo-European languages, Chinese, Ojibwe) preferentially encode the path in the satellite, which is a grammatical category that includes English particles (Talmy 2000: 222). Croatian exhibits characteristics of both language types, but its system of verbal prefixation shares certain similarities with English particle verbs (Geld 2009: 15). Hence, it can be hypothesized that Croatian speakers might more readily recognize the compositional nature of the meaning of particle verbs compared to learners whose L1 can more decisively be considered a verb-framed language. This was demonstrated in Geld 2009, where the data on strategic construal of English particle verbs obtained from learners of English whose L1 is Croatian was compared with the data obtained from learners whose L1 is Spanish. The results of the study suggest that there are differences in how learners whose L1s belong to disparate language types deal with explaining the meaning of particle verbs, lending credence to the assertion that a learner's L1 influences his or her strategic construal. Apart from the L1, other language internal and language external factors – such as the frequency of the forms being investigated and the learners' age and language proficiency - have been shown to exert influence over strategic construal (see Geld 2009).

2.2. Particle verbs

Particle verbs have long enjoyed the status as one of the more demanding features of the English language for learners. Since particle verbs seem to toe the traditional line between morphology and syntax, they have attracted the attention of linguists for centuries (Thim 2012: 1). A particle verb can be defined as a construction consisting of a verb (also referred to in this paper as the "lexical part" of the construction) and an adverbial particle (the "topological part") that behaves like a single syntactic and semantic unit. Another frequently used term for multi-word verbs is phrasal verbs, and it seems that there is no uniform and unequivocal way to determine exactly what verbs qualify as members of this group, as "linguists and grammarians struggle with nuances of phrasal verb definitions" (Gardner & Davies 2007: 341). In this work, the term used for multi-word verbs under consideration is particle verbs, in order to avoid associations with non-compositionality of meaning that has customarily been linked to the (more colloquial) term "phrasal verbs," in line with Geld's 2009 study, on which this research is largely based (Geld 2009: 9). For the purposes of this study, when the original publication refers to the relevant construction as a phrasal verb, the two terms are used interchangeably. Another important feature of particle verbs is their polysemy, as a single particle verb can have meanings that range from quite literal to highly idiomatic (Thim 2012: 11). In fact, sometimes idiomaticity is taken as a defining feature of phrasal verbs (see Greenbaum 2000).

Traditionally, verb-particle constructions have been characterized as arbitrary, and more focus has been placed on their syntactic properties (e.g. Fraser 1976, de la Cruz 1972) than on their semantic aspects. The advent of cognitive linguistics and metaphor theory brought about new ways to describe particle verbs, revealing in them "degrees of motivated semantic systematicity" (Morgan 1997: 327). Particle verbs are a composite structure and, as such, they exhibit "varying degrees of analyzability; that is, they vary in how salient the component structures are in relation to the composite conception, and how strongly they contribute to its

emergence" (Langacker 2008b: 61). A cognitive analysis of these constructions, therefore, presupposes that both elements contribute semantically to the meaning of the expression as a whole (compared to, for example, Fraser 1976: 77: "we are assuming here that there is no need to associate any semantic feature with the particle, only phonological and syntactic features"). Furthermore, it has been put forward that the figurative meanings of particle verbs have largely developed in a systematic and cognitively motivated way, starting from the more prototypical and literal spatial meanings toward meanings that are based on conceptual metaphors such as MORE IS UP, SICKNESS AND DEATH ARE DOWN, and SEPARATION IS OFF (Neagu 2007). The term conceptual metaphor was first examined by George Lakoff and Mark Johnson in *Metaphors We Live By* (1980), where it is described as a process of applying inferential patterns to understand one domain of experience (typically abstract) in terms of another domain (typically concrete) (Lakoff & Johnson 1980: 246). In effect, metaphor as a tool for structuring and grasping our reality enables us to comprehend complex and/or abstract concepts in terms of what is more immediate to our perception and bodily experience (such as spatial orientation). The particles used in particle verbs, such as *up*, *down*, *in* and *out*, which prototypically signify spatial configurations of concrete objects, are hence perfect candidates for having their core meanings expanded so that they also express metaphorical situations. In fact, the expansion of meaning is an important facet of English particles, as, owing to it, native speakers are able to produce and understand novel verb-particle constructions (Campoy Cubillo 2002), regardless of how literal or metaphorical they are.

The fact that native speakers can deduce the meaning of an idiomatic particle verb that has never been uttered before is a testament to the analyzability of the entire expression, and it implies the existence of a structured system behind this aspect of English grammar, contradicting the claims that the only way students can learn particle verbs is by treating them as isolated units that need to be memorized. The present study aims to ascertain whether Croatian high school students can decompose (mostly novel) particle verbs into meaningful units, the way native speakers can, and whether they are aware of the range of possible meanings a specific particle can have. In the

following sections, each particle used in the questionnaire is briefly discussed, according to Rudzka-Ostyn's analysis of particles in verb-particle constructions and compound words (2003). In her book, Rudzka-Ostyn advocates a cognitive approach to teaching and learning phrasal verbs, emphasizing the importance of the particle in determining their meaning. The particle verbs she presents are organized around particles, with the particle's literal and metaphorical meanings being discussed and the visual schemata presented to facilitate the acquisition of new expressions containing the given particle. The main idea is that familiarizing learners with conventional conceptual metaphors and meaning extensions of particles that occur in phrasal verbs will bolster their understanding and aid in learning such structures. Additionally, the visual representations provided are meant to increase the memorability of particles and, consequently, particle verbs by associating visual processing with verbal input.

2.3. The particles "out" and "in"

According to Rudzka-Ostyn's analysis, the prototypical (spatial) meaning of *out* has to do with a trajector leaving a container (2003: 14). *Trajector* is a name for any (moving) entity that we focus on and visualize in relation to some *landmark*. *Landmark* is a surface or container against which the trajector is viewed, and it is generally bigger and fixed (Rudzka-Ostyn 2003: 9). Container is defined as something that (literally or figuratively) surrounds an entity, such as a building, a room, water, a group of people, our minds, etc.

Other meanings of *out* conveyed in phrasal verbs present a gradual expansion of the concept of leaving a container towards more metaphorical and abstract meanings. Groups of meanings that Rudzska-Ostyn enumerates are: eating and inviting people to eat away from home, members being removed from sets or groups they were a part of, expressing feelings, thoughts, ideas (so that they leave the container – the person's body or mind), moving out of some state or situation (with the state of existence, the state of being visible, known... functioning as containers),

moving out of the state of non-existence, ignorance or invisibility, and lastly, trajectors increasing to their maximal boundaries (physically or through time) (Rudzska-Ostyn 2003: 14-32).

On the other hand, the prototypical meaning of *in* is "being inside or entering a container" (Rudzska-Ostyn 2003: 48) (which is in many respects the opposite of spatial *out*), whether that container is a box, house, field, vehicle, receptacle, city or country. The extended meanings are grouped around different kinds of situations speakers conceptualize as containers: atmospheric circumstances (such as darkness, rain, snow, cold), time (seasons, years, an interval of time after which something will happen...), groups and sets, situations, activities and circumstances, psychological and physical states (the state of being old, emotional states, the state of being healthy...), language and the flow of speech (Rudzska-Ostyn 2003: 48-59).

Since one of the goals of this study is to examine how informative each of the particles is to the participants of the study, it is appropriate to mention that in Geld's 2009 study on strategic construal of particle verbs with *in* and *out*, it was found that the particle *out* was, on the whole, more informative than *in* to college students of English whose L1 was Croatian or Spanish. This was explained as being "due to the much discussed pervasiveness of the experience of boundedness and containment […], which results in containment being perceived as some kind of 'regular', 'natural' or 'neutral' state of being that is taken for granted" (Geld 2009: 143).

2.4. The particles "up" and "down"

According to Rudzska-Ostyn (2003), *up* is the most common English particle, and its basic spatial meaning concerns moving from a lower to a higher place, positioning something at a higher place, positioning something vertically from a horizontal orientation, or being at a higher place (75-76). The frequency of the particle is not surprising, given that the prototypical vantage point in Western cultures is from a vertically erect body, with the head (which includes most of our main sensory organs) at the top. In addition to its basic meanings, when used in particle verbs and

11

other constructions *up* can denote a geographical area to the north of the speaker, motion towards some goal or limit (not necessarily upwards), the trajector reaching the container's limits (including a temporal limit – reaching the end of some action or process), covering an area or reaching the highest limit, higher (increased) degrees and values in the metaphorical sense (higher intensity, quality, speed, price, temperature, social rank, etc.), something positive, big and/or good, something visible, accessible or known, something affecting the whole object. (Rudzska-Ostyn 2003: 75-88).

Conversely, as the other extreme of the schematic vertical line indicating spatial direction and other derived meanings, *down* signifies movement from a higher to a lower place (of the trajector or a part of the trajector), movement to a more horizontal position, occupying a lower or horizontal position, a geographical area to the south of the speaker, a point in time happening later than some other point (time is conceptualized as a surface), lower (decreased) degrees and values in the metaphorical sense (lower intensity, quality, speed, price, temperature, social rank, etc.), something negative, small and/or bad, reaching a goal or the extreme limit down the scale, and, lastly, bringing something to completion (Rudzska-Ostyn 2003: 104-113).

While the basic and extended meanings of *out* and *in* are based around the relation between a container and an entity, the meanings conveyed by *up* and *down* are based in our experience of verticality (Geld & Stanojević 2018). Comparing the strategic construal of particle verbs with *up* and *down* between blind and sighted (L1 Croatian) English learners in their 2016 study, Geld and Stanojević determined that *down* was more informative to all the participants, which was explained thus: "*Down* is more informative because it is at human scale, which limits its metaphorization potential. *Up* is more open-ended, making it more schematic and allowing greater departure from its original topology" (Geld & Stanojević 2016: 1).

2.5. The semantic nature of the verb

Apart from the informativeness of the particle, another aspect of particle verbs that is going to be explored in this paper is how the semantic nature of the lexical verb influences strategic construal. Verbs occurring in verb-particle constructions can be characterized as heavy or light (see Geld 2009), based on how specific their core meanings are. Light verbs can semantically be characterized as more general, schematic, abstract, vague, basic, broader, less specific and highly polysemous, and they "often make up part of the semantic specification of a heavier verb" (Gordon & Dell 2003: 6), whereas heavy verbs can be described as more specific and concrete. *Take*, *do* and *go* are typical light verbs, while, comparatively, *burn* and *fly* are examples of heavy verbs.

Both light and heavy verbs occur in verb-particle constructions and the distinction between them was taken as one of the language-internal factors hypothesized to influence the strategic construal of particle verbs in Geld 2009. Comparing how Croatian and Mexican learners of English construe verb-particle constructions containing heavy and light verbs, it was established that, in general terms, if a particle verb contains a heavy lexical part, learners are more likely to construe the whole construction by focusing principally on this part of the expression. On the other hand, semantically "emptier" verbs more frequently lead learners to focus on the particle (Geld 2009: 93-99). As noted in sections 2.3 and 2.4 of this paper, the particles themselves also vary in how informative they are, i.e., in how much learners notice and concentrate on them when deliberating over the meaning of a particle verb. Consequently, it was concluded that, depending on the particle verb, both the nature of the lexical part of the construction and the kind of particle used can have an effect on how learners will interpret the composite structure – sometimes they rely more on the lexical part (for example, in the case of heavy verbs), other times they primarily find motivation for the meaning of the construction in the particle (especially in the case of light verbs and with *out*, which was determined to be the more informative particle of the two

observed). Furthermore, in many cases learners also attended to both components to "reach" the composite meaning, providing evidence firstly of the existence of compositionality in the strategic construal of particle verbs, and secondly of the fact that meaning is subjective and dynamic (Geld 2009: 95-96). In the present study, *cut*, *pull* and *break* were included as examples of heavy verbs, while *go, put* and *take* represented light verbs.

2.6. Topological vs. lexical determination

As mentioned in section 1, particle verbs consist of a lexical and a topological part. The lexical part is a verb, which can be characterized as either heavy or light (see section 2.5). The topological component is realized by a particle, which denotes some spatial configuration (in a literal or metaphorical sense). Since both components prompt the meaning of the composite structure (section 2.1), which is therefore cognitively motivated, it follows that learners can, on account of their cognitive strategies such as categorization, metaphor and metonymy (Geld 2009: 83), attempt to negotiate the meaning of a particle verb by reflecting on the basic meanings of the components that they are already familiar with. In studies exploring strategic construal, depending on which component the participants of the study rely on more when tackling the task of explaining the meaning of a particle verb, their responses can fall within the category of topological/grammatical determination or lexical determination (Geld 2009: 96). The topological determination category comprises the cases in which the particle overrides the meaning of the lexical part of the construction. On the other hand, when learners find it easier to explain the meaning of a particle verb by attending to the lexical part, it is referred to as lexical determination. Other times, the participants might notice that both components contribute to the meaning of a particle verb; in that case, we are talking about compositionality. These three descriptors, which are also used in the present study to categorize the participants' responses, form a continuum starting from purely lexical determination (for example, when learners focus exclusively on the

14

heavy verb) to purely topological determination (for example, when the particle proves to be much more informative than the light verb), with compositional interpretations encompassing the middle section of the continuum (Geld 2009: 96). The reason why the scale is described as a continuum is to highlight the graduality of the phenomenon, as it depends on the learner's experience and metalinguistic awareness, the degree of analyzability of a specific structure, different synergies between the particle and the verb, etc.

2.7. L2 learning and visual representation

Using visual supplements in a second language classroom or learning materials to enhance acquisition and retention of vocabulary items is a well-researched topic (see Paivio 1986; Stevick 1986, Kost et al. 2008). Most studies conclude that pairing words with imagery seems to be conducive to improved vocabulary retention, even in the case of abstract words (Farley et al. 2012). Since the focus of this research is to study how the participants visualized the meanings of selected particle verbs, it is worth connecting the theoretical considerations outlined so far with the concept of visual representation in the field of cognitive linguistics and L2 acquisition.

In section 2.1, it was explained how, in the context of cognitive linguistics, our conceptualizations constitute what we call the semantic pole of any symbolic structure (such as a word or expression). Our conceptualizing activity is, in turn, heavily based on our bodily experience, often understood through the prism of metaphor and metonymy, as well as the mechanisms of cognition such as scanning, profiling, figure-ground relations and focal adjustment (see Langacker 1987). What these mechanisms have in common is the importance of the visual aspect, which is inherent to the theory of cognitive linguistics. The schemata involved in construing a spatial situation or a metaphorical situation perceived in spatial terms are best represented with visual images (Taylor 1993: 51). That is not to say that the visual aspect is the only dimension of schemata, which in reality are often cross-modal - nonetheless, visual models

"[aid] in the description of particular image schemata. Such diagrams are particularly helpful in identifying the key structural features of the schemata and in illustrating their internal relationships" (Johnson 1987: 23). Since the visual component is inextricable from our conceptualization of spatial and extended metaphorical meanings, it is no wonder that visual representations of schemata can be exploited for pedagogical purposes, as was done in Rudzska-Ostyn (2003) in the context of particle verbs (see sections 2.3 and 2.4). Taking into account the mechanisms that underlie our perception and structure our reality, it stands to reason that visual representations of both concrete and derived abstract meanings would be beneficial to leaners who want to acquire the expansive range of meanings a particle can have. The participants of the present study have not received instruction in schemata that represent basic and extended meanings of particles (such as those provided in Rudzska-Ostyn (2003)), but it is of interest to see whether they can intuitively summon up similar abstract representations and rely on them when faced with a task that asks them to think about and draw figurative meanings of particle verbs, which would show that they have developed this strategy of meaning construal on their own.

Considering the association between our linguistic conceptualizations and visual imagery, it can be stated that, similarly to construal, the visual representations we might produce when thinking about language do not exist *a priori*; rather, they are bound to be influenced by our culture: "[the] character of mental imagery seems to have an obvious connection with the neurological and cultural conditioning that man has been subject to for thousands of years" (Kurtyka 2001: 35), which would imply that visual imagery evoked by linguistic structures is not entirely universal. For example, in Nikolić 2019, which compared the visual representations of particle verbs by Croatian and Omani learners of English, a few differences in the drawings between the participants from Croatia and participants from Oman were ascribed to some dissimilarities between the two cultures.

On the flipside, there are also some non-culturally specific characteristics of learners' L2 conceptual systems. Risager notes that, since the 1970s, there has been a gradual shift in the approach to imparting culture in second language classroom - from a more knowledge-based and nationally restricted L2 culture model to an approach that favors communication competences of the learner with great focus on transnationality and the hybridity and complexity of cultures (Risager 2011: 485). Current L2 textbooks abound in photographs, drawings and other eye-catching visual material which is used to teach both language and culture. Wanting to examine how learners raised in different geo-cultural contexts interpret images used in EFL learning materials, Kiss & Weninger (2017) conducted a study on learners of English from Hungary and Singapore (the latter group included learners from diverse backgrounds, including, for instance, Chinese, Vietnamese, Korean and Indian), analyzing their spontaneous responses when prompted with a photograph used in a Hungarian EFL textbook. The authors divided the participants' responses into three categories of meanings that the image elicited: universal meanings, which are related to signifiers that seemed to be interpreted uniformly across cultures; cultural and sub-cultural meanings, which were shared within particular groups (people living in the same area, people with similar value systems, etcetera); and lastly, individual meanings, which are specific to an individual learner and which, according to the authors, language teachers should encourage (Kiss & Weninger 2017: 8). Individual meanings reflect the learner's "connection to cultural, sub-cultural groups" and, by sharing them in class, learners "have a chance to collaborate, become information providers and facilitators of discussions" as they negotiate their unique and shared understandings of visual, linguistic and cultural symbols and meanings (Kiss & Weninger 2017: 9-10). Learners' conceptual systems thus seem to integrate (motivated) individual associations, culturally specific meanings and imagery, as well as universal symbols.

Apart from symbols that are presumed to be more or less universal for all humans, due to the process of globalization and the gradual shift in the mode of teaching the target culture in classrooms (mentioned above), it is natural that there would be some degree of consolidation of learners' conceptual systems, such that they integrate intercultural features, resulting in the emergence of conventional motifs that guide learners' interpretations of L2 linguistic structures and that are not culturally specific, but rather shared cross-culturally. This sharing of motifs was also noted in Geld & Stanojević (2018). In the chapter of the cited book concerned with strategic construal using images, the authors analyzed drawings of L2 English speakers with differing L1s (Croatian, Arabic, Spanish), concluding that there were some non-topological elements that all groups of English learners frequently resorted to when drawing figurative meanings of particle verbs, irrespective of their cultures (Geld & Stanojević 2018: 115). For example, the learners drew cars when asked to render verbs related to vehicles (*cut in*, *pull in* and *pull up*), and houses for the verb *call in* with the meaning "make a short visit" (Geld & Stanojević 2018: 115), even though nothing in the definition of the verb makes a direct reference to any of those motifs. Other similarities included conceiving the human body as a container and the existence of the conceptual metaphor UP IS GOOD and DOWN IS BAD. In conclusion, owing to the interrelationship between different types of meanings and conceptual systems, teachers and learners could benefit from tapping into both idiosyncratic associations conjured up by individual learners, as well as conventional symbols and shared schemata that transcend cultures and may help explain the motivation behind linguistic constructions.

3. Research

3.1. Aims and hypotheses

This study sought to obtain insight into different aspects of strategic construal by tasking the participants, L2 learners of English whose native tongue is Croatian, with providing visual

representations of a series of particle verb constructions which contained an even amount of heavy and light lexical components, as well as four different particles – *out*, *in*, *up* and *down*. It was of interest to see what the participants found most salient and, therefore, informative – what kind of semantic determination is favored in which case (heavy/light verbs and four different particles). Apart from categorizing the participants' responses on the lexical determination – topological determination scale, whilst taking into account the semantic nature of the verb and the type of particle, another aim was to determine the levels of schematicity/concreteness of symbols in the participants' drawings – on the one hand, the participants could have used highly abstract diagrams to represent image schemata; conversely, they could have employed symbols with more concrete characteristics, denoting specific (or representations of specific kinds of) objects and creatures. It is assumed firstly that schematic drawings might be more frequent in the group of particle verbs with a light lexical part, since both schematic drawings and light verbs can be characterized as more abstract. Additionally, it is assumed that a majority of the drawings will contain concrete images, as it might be easier for high school students to process and understand complex linguistic forms when their meanings are exemplified in concrete situations or with concrete props, rather than represented with vague, abstract images devoid of context.

Previous research on strategic construal (Geld 2009, Geld & Letica Krevelj 2011) determined that proficient English majors more frequently resorted to lexical determination or compositionality (a blend of lexical and topological determination) when verbally explaining particle verbs with a heavy part. It was also found that topological determination was more prevalent with particle verbs that contain a light lexical part, since

> semantically light verbs are delexicalized and schematic, and, thus, they are likely to
> be construed as vague and superfluous. On the other hand, particles, such as *in* and
> *out*, are omnipresent and highly productive, they are the most immediate conceptual
> tool for mental structuring of space, they build paths and temporal contouring of

events, they code change in state of existence, etc. Hence, learners' reliance on particles is not surprising. (Geld 2009: 95)

In the present study, it is hypothesized that similar results would be obtained if the respondent's visual representations of particle verbs were analyzed - particle verbs with a heavy lexical part would yield more instances of visual representations demonstrating lexical determination or compositionality, while particle verbs with a light lexical part would preferentially be construed with the focus on the topological element. It was also discovered that the particle might determine how a particle verb is construed: in Geld 2009, it was found that *out* was more informative than *in*, whereas in Geld & Stanojević 2016 it was determined that *down* was more informative than *up*.

In sum, based on the presented theoretical framework and previous research, it is hypothesized that:

1) Partial integration and complete integration are more frequent with particle verbs with a heavy lexical part.

2) Partial integration and complete integration are more frequent with particle verbs with *out* and *down*.

3) Lexical determination is more frequent with particle verbs with a heavy lexical part.

4) Topological determination is more frequent with particle verbs with a light lexical part.

5) Schematic drawings are more frequent with particle verbs with a light lexical part, compared to the percentage of schematic drawings representing particle verbs with a heavy lexical part.

6) Concrete drawings are more frequent overall.

3.2. Sample, instrument and data collection

The participants of the study (n=80) were Croatian high school students (age range: 17-18; L1 Croatian), attending the same school in Rijeka, who had all been learning English for 7-14 years. The research was carried out during the participants' English class, and they had 45 minutes to complete the questionnaire (see Appendix A). The questionnaire was taken over and adapted from Geld 2009. After being informed that the participation in the study was voluntary, the participants were asked to try to make sense of 24 particle verbs - whose chosen meanings exhibited varying degrees of idiomaticity - by verbally and pictorially explaining why each of those particle verbs has a certain meaning. The target definition of each particle verb was printed next to it, followed by ample lined space which the participants were asked to fill out with their interpretations of how the construction makes sense, i.e., what it is in each construction that produces a given meaning. A separate empty rectangle next to the lines for the text was reserved for the participants' drawings. For the purposes of this paper, only the drawings (the visual representations of the target meanings) were considered.

Given that 80 respondents filled out the questionnaire, with each questionnaire containing 24 particle verbs, there was a maximum of 1920 drawings. However, 543 rectangles were left blank, leaving a total of 1377 usable drawings. The number of particle verbs that were skipped can be explained by the novelty and the complexity of the task, as well as the short time the participants had to provide their answers. The particle verb that had the least number of drawings was "cut in," followed by "go out," "put in" and "take up." The verb "cut in" was positioned second to last in the questionnaire, which could partly explain the number of blank responses, whereas "go out," "put in" and "take up" all contain a light lexical component, suggesting that learners may have found those more difficult to visually represent. This was confirmed in the whole sample, as the meanings of 289 particle verbs with a light lexical element were not illustrated, compared to 254 particle verbs with a heavy lexical element that were not drawn.

3.3. Data analysis

After the filled-out questionnaires were collected and the blank responses discarded, a total number of 1377 drawings were analyzed and classified into six groups according to which components and meanings of particle verbs the participants focused on in their depictions. The six categories, adapted from from Geld & Stanojević (2018: 109-110), are as follows:

CODE	DESCRIPTION	EXAMPLES
LC	LITERAL COMPOSITIONALITY: the drawing depicts the literal meaning of the lexical and topological component, disregarding the figurative meaning of the particle verb	Figures 1, 2, 3
VP	VISUAL PARAPHRASE: the drawing depicts the figurative meaning of the particle verb, but the literal meaning of neither the lexical nor topological component are represented	Figures 4, 5, 6
PIT	PARTIAL INTEGRATION – TOPOLOGICAL DETERMINATION: the drawing depicts the figurative meaning of the particle verb, with the literal meaning of the topological component also being represented	Figures 7, 8, 9
PIL	PARTIAL INTEGRATION – LEXICAL DETERMINATION: the drawing depicts the figurative meaning of the particle verb, with the literal meaning of the lexical component also being represented	Figures 10, 11, 12
CI	COMPLETE INTEGRATION: the drawing depicts the figurative meaning of the particle verb and the literal meaning of both the lexical and topological component	Figures 13, 14, 15, 16
MIS	MISINTERPRETATION: the drawing depicts a meaning that is unrelated to the literal or target metaphorical meaning of the particle verb	Figures 17, 18

Table 1. The categories into which all the drawings were classified

As mentioned above, another dimension that was explored was the schematicity/concreteness of individual representations. Drawings that portrayed props such as household objects, buildings, structures (stairs, roads...) or human body parts were classified as concrete, while the category of schematic drawings included those that contained predominantly

skeletal, abstract structures, in which the participants depicted the basic image schemata such as containers, paths and surfaces similarly to how Rudzka-Ostyn (2003) or Johnson (1987) might have done (using arrows, points, boxes, circles, etc.). Each visual representation was subsequently coded according to the categories in Table 1, with the added letter signifying either schematic (-S) or concrete (-C) images. This distinction could tell us more about the nature of learners' visual representation of image schemata. As stated, it is assumed that a majority of the drawings might contain concrete images, and that particle verbs with a light lexical element might produce a higher percentage of schematic drawings. Those verbs are also hypothesized to produce more drawings characterized by topological determination, and topology is situated towards the abstract, schematic end of the grammar-lexicon continuum.
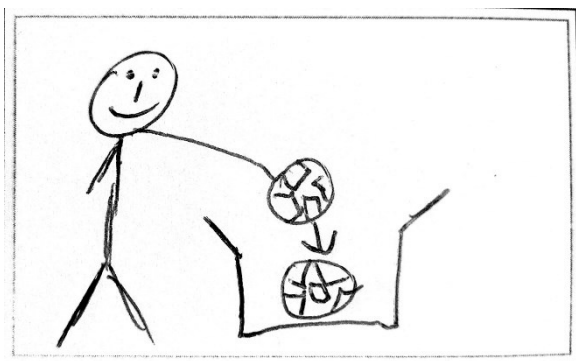
Figure 1. *put in* ('interrrput') - LC-C
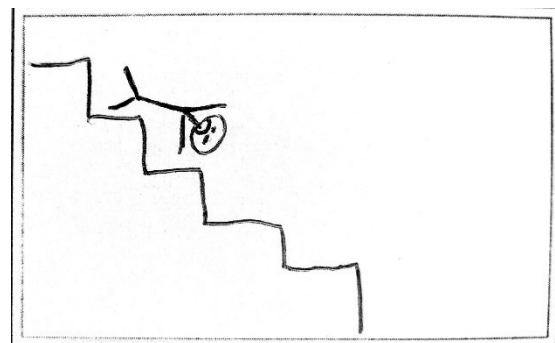
Figure 2. *go down* ('be sent to prison') - LC-C
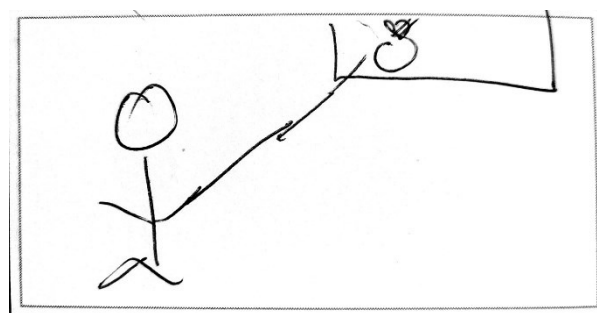
Figure 3. *put up* ('resist strongly or fight hard') - LC-S

Drawing 1 depicts a person placing a ball into a box, which represents the literal meaning of "put in", but there is no reference to the target (figurative) meaning of the particle verb. This drawing was hence categorized as literal compositionality (LC). It is also considered concrete (-

C), as the respondent drew the stick figure's facial expression, and the objects in the box appear to be balls similar to those used in either soccer or handball. The second drawing shows what appears to be a person careening down a flight of stairs, illustrating the literal meaning of the components of the particle verb ("go down" – literally "descent, move to a lower position"), but not accounting for the particle verb's figurative meaning. Figure 3 shows a person putting some object to a higher place, which describes the literal meaning of the particle verb, but not its figurative meaning. Since the elements in the respondent's drawing are generic, with very few defining characteristics, this visual representation is considered schematic (-S).
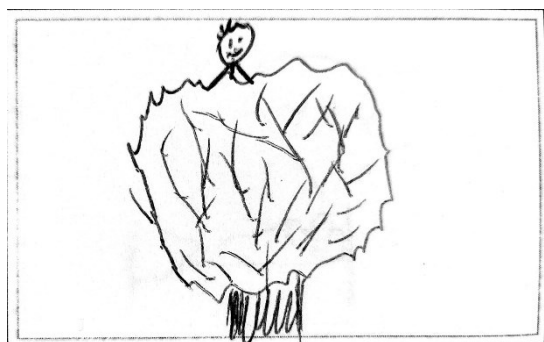
Figure 4. *go in* ('become hidden') - VP-C   Figure 5. *take down* ('write something') - VP-C
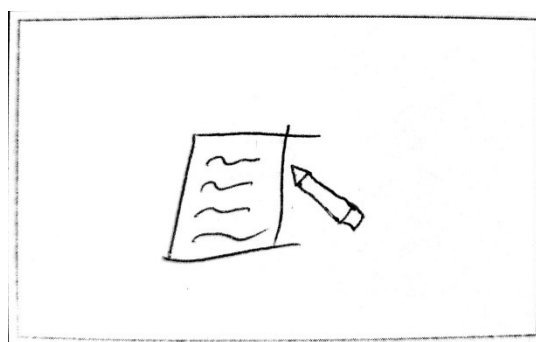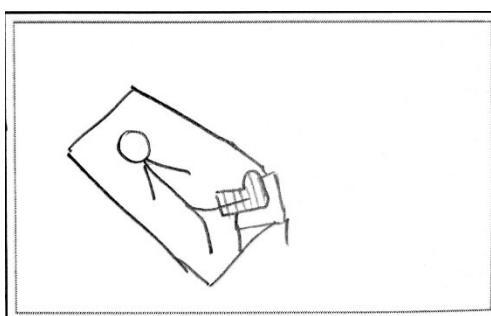
Figure 6. *put out* ('injure your back, shoulder, hip, etc.') - VP-C

Visual paraphrase (exemplified in Figures 4, 5 and 6) was by far the most frequent response. As is visible from the examples, drawings labeled as visual paraphrases portray the figurative meaning of the pertinent particle verbs, but there is no reference to either the lexical or the topological part of the verb. Figure 4 depicts a person hidden behind a tree or a bush, drawing 5

24

shows a writing implement next to what looks like a piece of paper filled with scribbles representing a written text, while drawing 6 shows a person lying supine with one leg in a cast, propped up on some sort of stool.
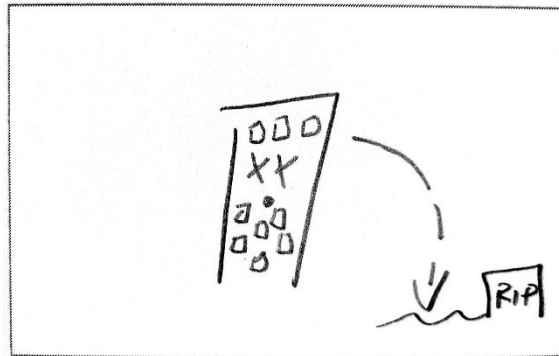
Figure 7. *pull down* ('destroy a building') - PIT-C
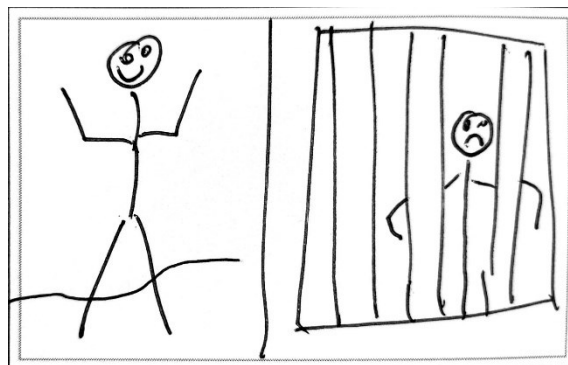
Figure 8. *break out* ('to escape') - PIT-C
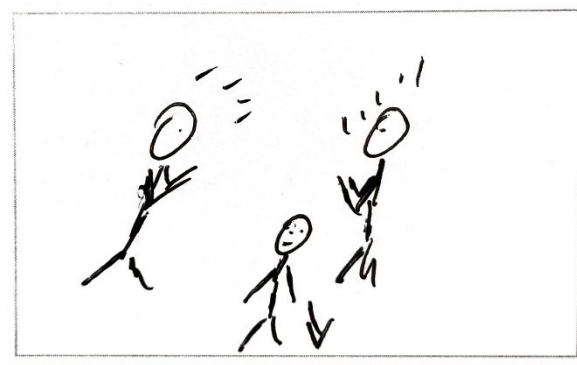
Figure 9. *pull out* ('stop being involved in something') - PIT-S

In the topological determination category, the participants incorporated the literal meaning of the particle into their drawing, while also portraying the figurative meaning of the particle verb.

In Figure 7, the destruction of the building represented in the image is equated to it being buried under the ground, similarly to how humans get buried after death (which is represented with the tombstone with the acronym "RIP" written on it). The two Xs on the building also evoke death, a metaphor for destruction, as this symbol is frequently used to depict deceased humans or animals when positioned where their eyes should be. The arrow pointing *downwards* reinforces the change of the position of the destroyed building from a higher to a lower one. There is, however, nothing in the drawing that points to the literal meaning of *pull*. Drawing 8 portrays an unhappy incarcerated person, and (presumably) the same person at large in a separate frame (to the left). While rendering the meaning of "break out," this respondent focused on the topological part (the particle *out*), depicting the change of situation from the state of the trajector (a person) being in jail (perceived as a container), to the state in which the trajector is *outside* (which is also demonstrated with the line in the background, possibly representing the landscape of an outdoor area). Image 9 shows two stickmen engaged in some situation, and a third stickman who has decided not to be involved in the entanglement and has turned away. While there is no reference to the lexical component (*pull*) the topological component (*out*) is represented with the arrow pointing away from the feuding pair, making it seem like the person is leaving or getting *out* of the situation, which is why this drawing is characterized as topological determination.
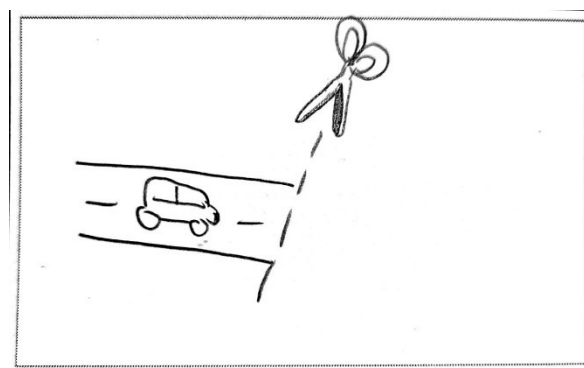
Figure 10. *cut up* ('suddenly drive in front of another vehicle in a dangerous way') - PIL-C
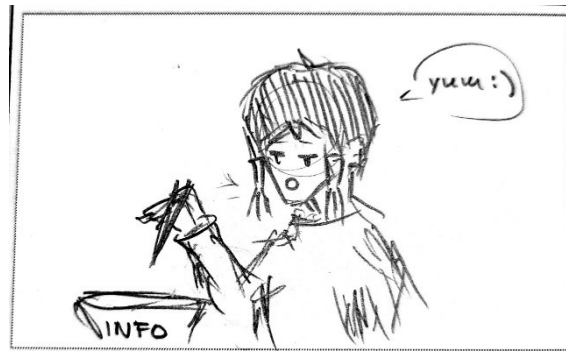
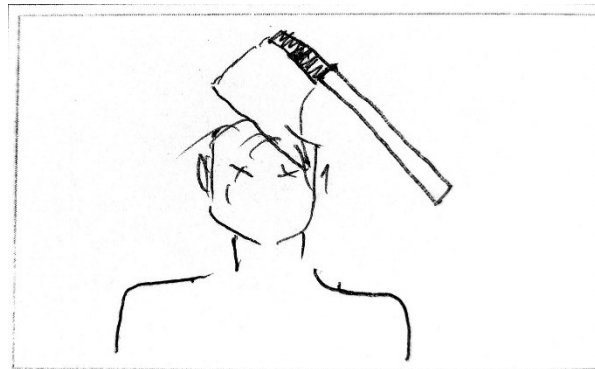Figure 11. *take in* ('understand or absorb something') - PIL-C

Figure 12. *cut down* ('kill somebody') - PIL-C

The group of examples displayed above illustrates lexical determination, which is characterized by the respondents' focus on the lexical part of a particle verb. In drawing 10, the scissors and the dashed line, used to literally portray the action of *cutting*, represent the interruption of the car's path, which happens when a driver "cuts up" another driver. Since nothing in the drawing points to the particle *up*, this image is an instance of lexical determination. Drawing 11 depicts a person who is apparently grabbing (or about to grab) a morsel of food from a container with the inscription "info." The implication is that one can consume (and thus, absorb) information like one consumes food. The presence of eating utensils (which, in this case, are, interestingly, represented by chopsticks) makes it obvious that the person is *taking* some content from the plate. While it is expected that he or she is going to put the food *in* his or her mouth, this is not explicitly shown in any way. In 12, the Xs substituting the person's eyes signify that the person is dead. The

person evidently died from a blow to the head with an axe, which is a sharp, *cutting* object. There is no reference to *down*, however.
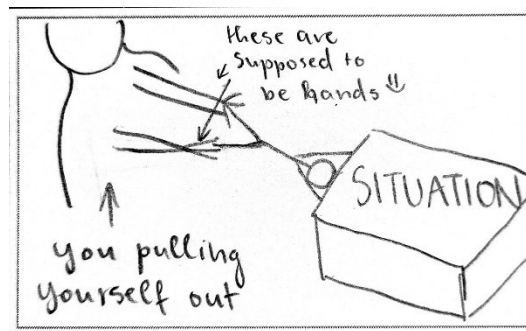
Figure 13. ***pull out*** ('stop being involved in something') - CI-S
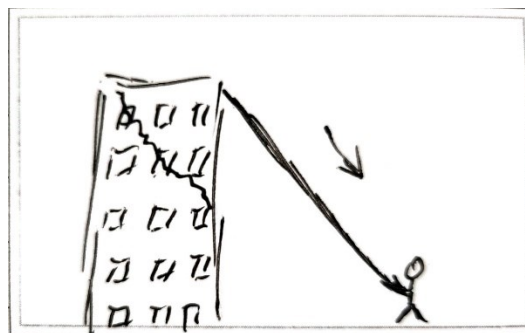
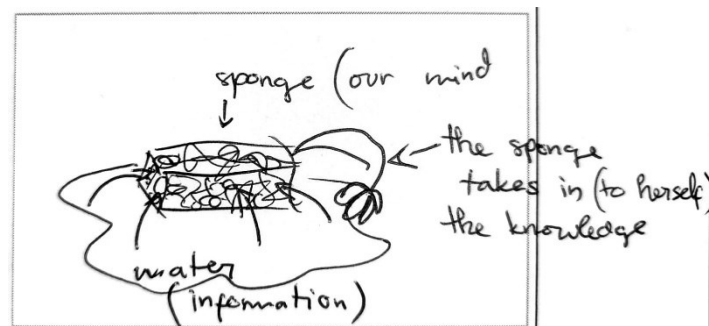Figure 14. ***pull down*** ('destroy a building') - CI-C

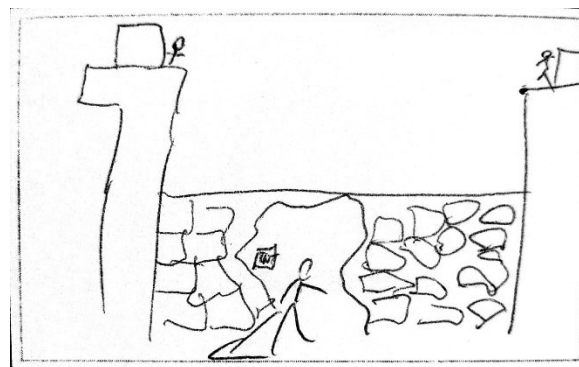Figure 15. ***take in*** ('understand or absorb something') - CI-C

Figure 16. ***break out*** ('to escape') - CI-C

Drawings labeled as complete integration demonstrate both the figurative meaning of a particle verb and the literal meaning of its components. In 13, the person depicted is *pulling* his or herself *out* from a situation, which is perceived as a container. Drawing 14 portrays a person *pulling* on a rope *downwards* (indicated by an arrow), destroying a high-rise (the destruction is symbolized by a crack in the structure). Figure 15 compares the mind to a sponge, able to absorb things. The sponge is *grabbing* water around it and soaking it up, like the mind absorbs information. The respondent supplemented the drawing with written text, which equates the sponge to our mind and the liquid to information. The sponge is using a hand to "[take] in (to herself) the information," and there are arrows marking the path of the water from the surface *into* the sponge. Lastly, illustration 16 represents a person *leaving* (shown by an arrow) a prison guarded by wardens. The wall or the building keeping the trajector inside has an irregular-shaped hole, making it clear that it has been demolished (or, in other words, *broken*).
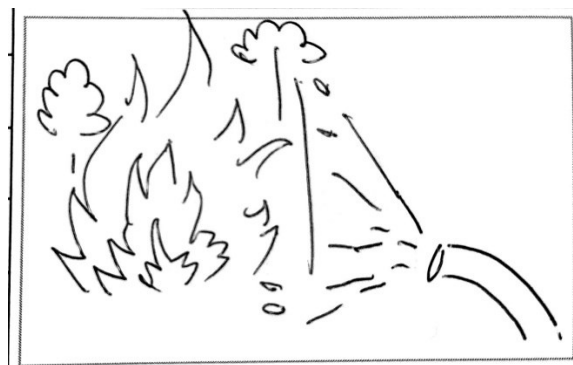

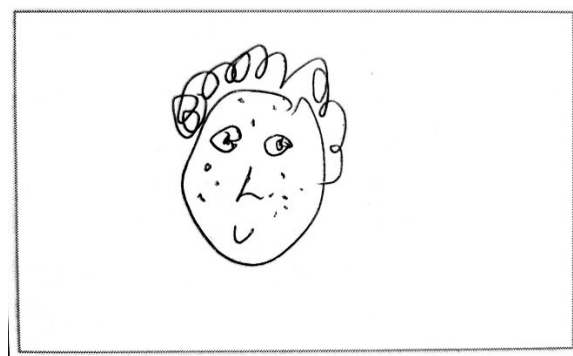Figure 17. ***put out*** ('injure your back, shoulder, hip, etc.') - MIS-C

Figure 18. ***break out*** ('to escape') - MIS-C

Examples 17 and 18 show instances of misinterpretation, as in both cases, the respondents portrayed a meaning of the particle verb that does not correspond to the target meaning, whose definition was provided in the questionnaire. Drawing 17 depicts the meaning "extinguish," which is one of the possible definitions of "put out," but not the one that the participants were asked to explain. In Figure 18, the participant rendered another meaning of "break out": to develop a rash, acne or spots on your skin.

3.4. Results

The most frequent label was visual paraphrase (VP), comprising 592 drawings in total, followed by partial integration – topological determination (PIL). While complete integration accounts for only 4.2% of all analyzed responses, the 58 drawings that were coded as CI nevertheless demonstrate that learners were at times able to detect the contributions of both components of particle verbs when making sense of the composite whole's figurative meaning. Figure 19 shows the distribution of all six categories in the sample (disregarding the blank responses).
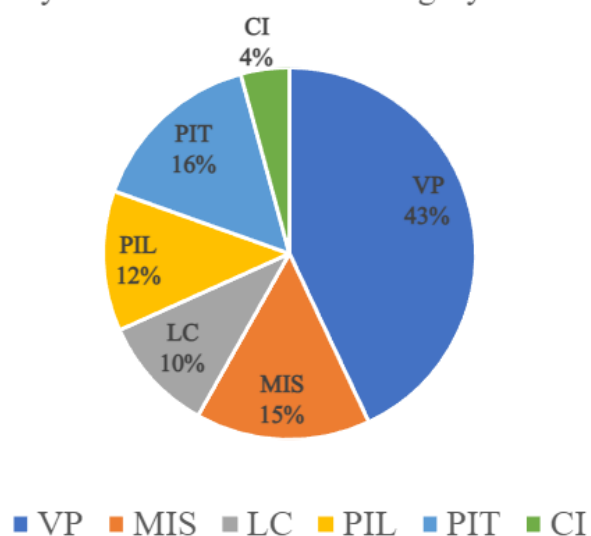

Figure 19. Frequency distribution of the 6 categories in the sample

Hypothesis 1 was confirmed, as partial and complete integration proved to be more frequent with particle verbs containing a heavy lexical part. Integration accounts for 41.5% of all usable drawings representing particle verbs with a heavy lexical element, whereas only 21.46% of all analyzed drawings representing particle verbs with a light lexical component demonstrate (complete or partial) integration (see Figure 20 and Figure 21). As a result, it seems that L1 Croatian high school learners of English have an easier time understanding the conceptual basis of metaphorical/extended meanings of particle verbs with a heavy lexical part than of particle verbs with a light lexical part.
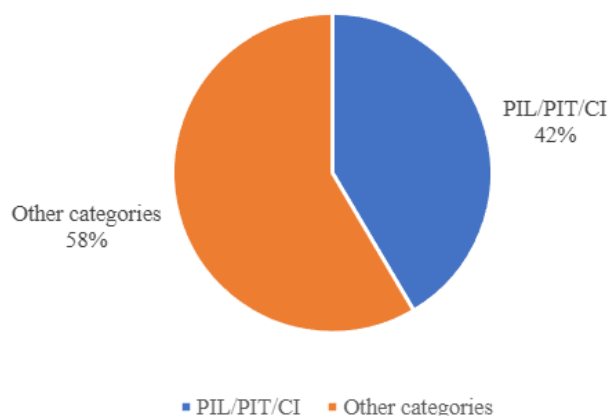

Figure 20. Frequency distribution of drawings of particle verbs with a heavy lexical part showing integration
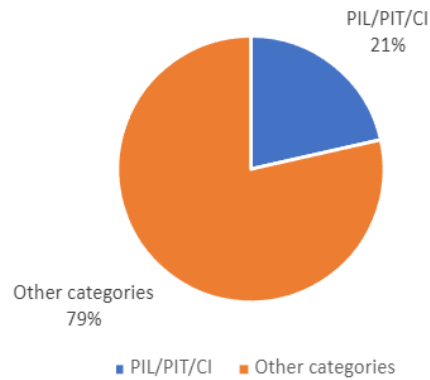
Figure 21. Frequency distribution of drawings of particle verbs with a light lexical part showing integration

The second hypothesis, however, was not confirmed. While it was hypothesized that *out* and *down* would be more informative to the participants (which would have been confirmed had those two particles produced more drawings characterized as either complete integration or topological determination), it was determined that the particle *in* produced the highest number drawings labeled as PIT or CI, followed by *out*, with *up* being the least informative particle. The percentage of responses labeled as PIT or CI that each of the four particles produced is represented in Figure 22.
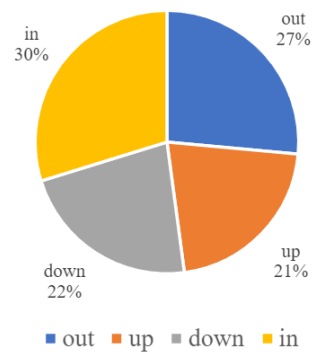

Figure 22. Frequency distribution of drawings labeled as PIT or CI in the analyzed sample according to each particle

Further, lexical determination was registered more frequently compared to topological determination with particle verbs containing a heavy lexical part (see Figure 23). Conversely, based on the analyzed drawings, the participants were more inclined to attend to the topological part of particle verbs with a light lexical part. As a consequence, the percentage of drawings classified as PIT was higher than those labeled as PIL in the group of verbs with a light lexical element (see Figure 24). Hence, hypotheses 3 and 4 were confirmed, suggesting, much like the first hypothesis, that different particle verbs represent different degrees of analyzability for learners, resulting in responses that can be placed on different points on the lexical determination – topological determination continuum.
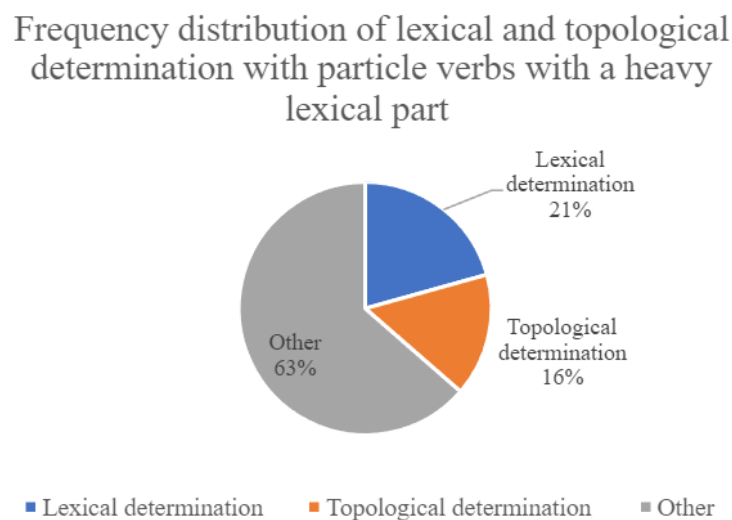

Figure 23. Frequency distribution of lexical and topological determination with particle verbs with a heavy lexical part
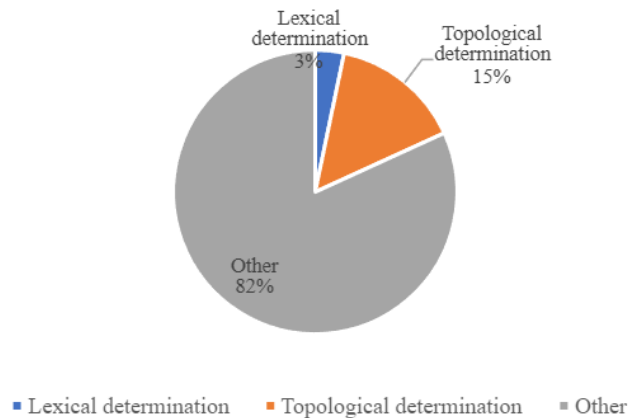
Figure 24. Frequency distribution of lexical and topological determination with particle verbs with a light lexical part

The two final hypotheses were concerned with the nature of the visual representations with regards to the specificity of the elements depicted. Abstract and/or vague shapes were counted as schematic (basic stickmen, speech bubbles filled with scribbles or lines, the text "bla(h) bla(h)" to represent speech, arrows, boxes, lines...). On the other hand, if a drawing depicted objects such as cars, houses, axes, anatomical details or handcuffs, it was considered concrete. Firstly, concrete drawings overwhelmingly preponderate over schematic drawings, which is a proposition that was put forward as hypothesis 4. Moreover, as was conjectured, there was a higher percentage of schematic drawings in the group of particle verbs with a light lexical component, when compared to the percentage of schematic representations in the group of particle verbs with a heavy lexical component (see Figure 25 and Figure 26). That being so, hypotheses 4 and 5 were confirmed.

Frequency distribution of concrete and schematic
drawings representing particle verbs with a heavy
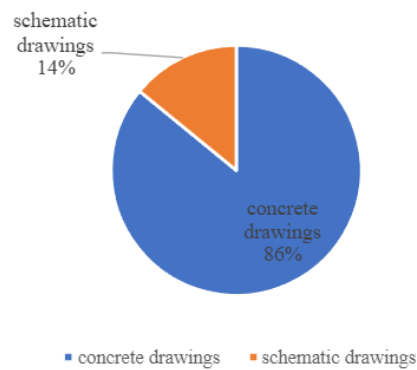lexical element

Figure 25. Frequency distribution of concrete and schematic drawings representing particle verbs with a heavy lexical element

Frequency distribution of concrete and schematic
drawings representing particle verbs with a light
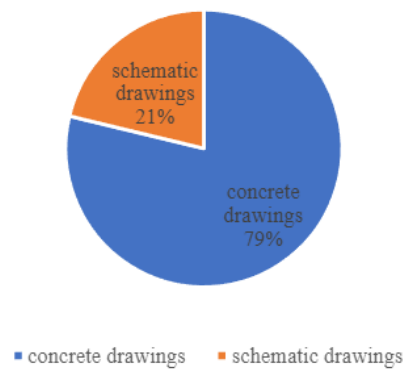lexical element

Figure 26. Frequency distribution of concrete and schematic drawings representing particle verbs with a light lexical element

3.5. Discussion

Since the first two hypotheses were corroborated, it can be said that the semantic nature of the verb is one of the language internal factors that can predict how easily learners might meaningfully decompose complex verbal expressions. The schematicity of the verb influences which element the respondent might find more salient and easier to "reach" when trying to make sense of a particle verb. Heavy verbs seem to evoke robust associations, whereas light verbs

appear to frequently yield to the particle because of their vagueness, making the particle the more informative part of the composite whole. These conclusions were also reached in previous studies that used similar research questions and methods as a basis (Geld 2009; Geld & Letica Krevelj 2011).

Furthermore, the results show that learners are capable of conceptual integration, as the three pertinent categories (PIL, PIT and CI) make up almost one third of all analyzed visual representations. Learners can, apparently, perceive the cognitively motivated link between form and (figurative, non-transparent) meaning, even without previous instruction. This aspect of strategic construal can, therefore, be taken into consideration upon structuring and designing activities and lessons concerned with particle verbs and similar constructions (such as idioms) in L2 classrooms, in order to enhance learners' understanding of such expressions by focusing on the interplay of form and meaning. The results also necessarily imply that the participants found the topological part of the construction informative, as they relied on the particle (PIL) or both the particle and the verb (CI) in 19.53% of all usable drawings. These findings contradict the traditional view that particles in particle verb constructions do not have a semantically significant role. Previous studies on strategic construal, conducted on proficient English majors, also determined that learners of English found both lexicon and grammar meaningful, since they recognized that the topological and lexical component of a particle verb can contribute to its meaning (Geld 2009; Geld & Šarčanin 2019; Geld & Letica Krevelj 2011).

As stated, visual paraphrase is the category with the highest number of drawings, which can potentially be explained by the fact that the chosen figurative definitions were accessible to the participants, so they, while trying to make sense of the particle verbs, visualized a particular situation that the provided definition could describe, failing to take into account the literal meaning of the components. The prevalence of visual paraphrase was also observed in Geld & Šarčanin (2019), which analyzed textual and pictorial representations of particle verbs rendered

by proficient English majors whose L1 was either Croatian or Spanish (p. 437). The authors provided another plausible justification for the frequency of visual paraphrases:

> Even though we can only speculate about the reasons for their tendency towards visual paraphrases as the main meaning construal strategy, we believe that one of the key reasons may be the fact that they are simply not used to drawing meaning. In Croatia, drawing is rarely encouraged after primary education and the language teaching material, as already mentioned, favours decorational and representational illustrations that facilitate understanding but do not encourage deeper processing of linguistic meaning (Geld & Šarčanin 2019).

While Geld 2009 determined that learners found *out* more informative than *in*, and Geld & Stanojević 2016 showed that *down* was more informative than *up*, in this study, *in* was the most informative particle. Notably, the verbs "pull in" (move to the side of the road to stop) and "take in" (understand or absorb something) are responsible for a considerable share (54.43%) of all PIL/CI responses in the group containing the six verbs with the particle *in*. With regards to "pull in," the respondents seemed to find it easier to conceive the meaning of the verb by visualizing a vehicle (mostly a car) going *into* the side of the road, which was frequently represented with an arrow pointing to an area adjacent to a road (see Figure 27). Even though *pull* is a heavy verb, it was apparently more difficult for the respondents to reconcile its basic literal meaning with the meaning of a driver moving to the side of the road. On the other hand, it is possible that the respondents focused on the particle when contemplating the meaning of the verb "take in" because, in Croatian, the meaning of absorbing information or knowledge can be expressed with the verb "upiti" (literal meaning: absorb, soak up). A common image that the participants used to pictorially explain "take in" was precisely a sponge soaking up a liquid (see Figure 15 for an example). The basic meaning of the Croatian suffix *u-*, which is present in "upiti," has semantic similarities to the English particle *in*. The participants' construal of "take in" with the focus on

the particle, therefore, could have been facilitated by the semantic and formal correspondence between the participants' L1 and the target language ("take *in*" - "*u*piti"). In other words, it is possible that the participants, after reading the provided definition, relied on the similarities between their L1 conceptual system and the L2 conceptual system, since the metaphor of mind being a container into which information can go is commonplace in both systems. All things considered, *in* had only 3% more PIT/CI responses than *out*, and there was not a big disparity in the number of PIT/CI representations between all four particles, so it seems that in this study the semantic contrast between the particles did not play that big of a role in how the respondents construed the chosen particle verbs.
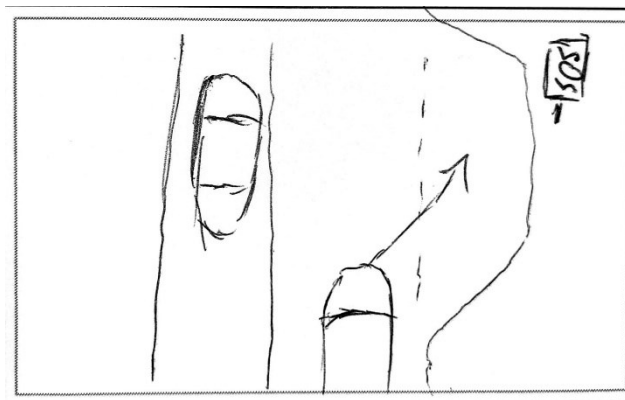

Figure 27. **pull in** ('move to the side of the road to stop') - PIT-C

When it comes to the frequency of schematic drawings of particle verbs with a heavy lexical part compared to the frequency of schematic drawings representing particle verbs with a light lexical part, the results were expected: since light verbs are more abstract by nature, they produced a higher number of abstract drawings, in relative terms. As demonstrated above, when the lexical part of a particle verb is a light verb, it often clears the way for the learner to exploit the topological part in order to "reach" the meaning of the composite whole. Particles themselves are positioned more towards the schematic end of the syntax-lexicon continuum (they are usually said to belong to "grammar," as opposed to "lexicon"), so it is to be expected that more drawings would be less detailed in the same category of verbs that produced more responses that can be

characterized as topological determination (Figure 28). The overall prevalence of concrete images could suggest that, when it comes to high school learners of English, having a somewhat detailed image that demonstrates the meaning of a particular particle verb might be more conducive to the acquisition of the particle verb, compared to a schematic, widely applicable diagram, since the concrete mode of representation seems to be vastly preferred by the respondents of the present study (and could, thus, be considered more accessible). These results, however, cannot on their own serve as an incontrovertible basis of such a claim, and further research about the acquisition of particle verbs with the help of visual aid should be conducted to ascertain whether concrete images would be more helpful in learning and teaching particle verbs (as opposed to schematic diagrams that are more vague, but can, for example, be applied to a greater number of particle verbs that share a particle).
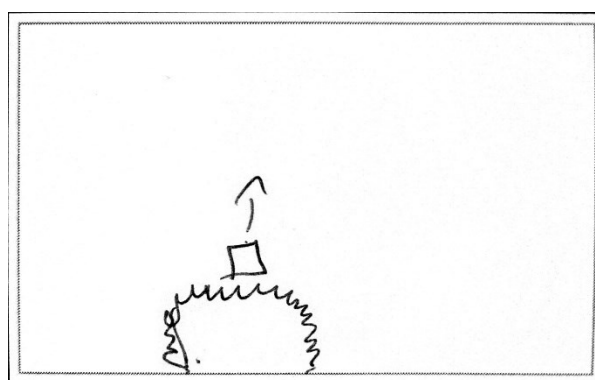

Figure 28. *go up* ('be destroyed by fire or explosion') - PIT-S

It should also be noted that the respondents, in some of their concrete drawings, represented some idiosyncratic associations between the figurative meaning of a particle verb and the literal meanings of its components. While these associations might not explain the factual basis of the extension of meaning that took place as the target figurative meaning of a given particle verb was forming, they might aid other pupils in learning this particle verb. One such example is explaining the meaning of "pull up" ('stop while driving, especially for a short period of time') with the image of a handbrake of a vehicle being literally pulled up (Figure 29). We

know that the action of pulling the handbrake keeps the car in place – by drawing a driver with his or her hand on the handbrake, the natural conclusion is that the participants wanted to depict the driver pulling the handbrake to stop the car. As suggested by Kiss & Weninger 2017, eliciting and discussing individual associations in a learning environment could benefit all learners, who might also adopt the new association and acquire the target meaning faster (see section 2.7). There were also some practically universal symbols that represented certain figurative meanings – particularly the symbol of a torn heart that stands for a relationship between people that ended (Figure 30), indicating some firmly entrenched symbols that pupils associated with particular particle verbs or their components.

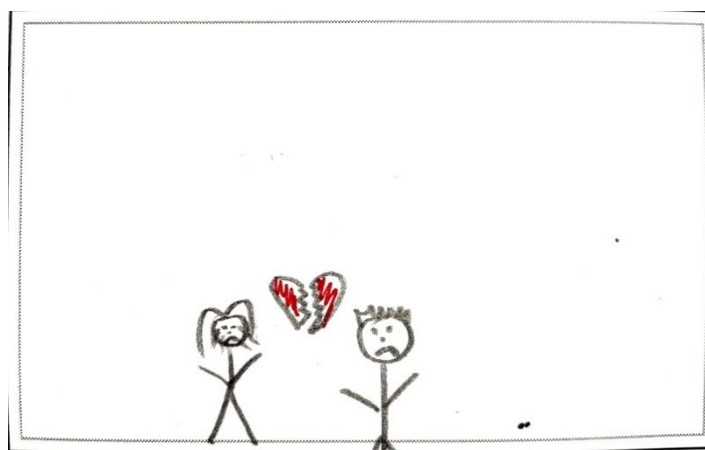Figure 29. *pull up* ('stop while driving, especially for a short period of time') - PIL-C

Figure 30. *break up* ('end a relationship') - PIL-C

4. Conclusion

Starting from the assumption that meaning is dynamic and subjective, and that figurative meanings of particle verbs are to a certain degree motivated by the literal meanings of the two components of particle verbs, this study sought to explore some principles of strategic construal on the sample of 80 high school learners of English whose L1 is Croatian by analyzing drawings in which the learners attempted to explain figurative meanings of various particle verbs. It was determined that high school learners of English can meaningfully decompose figurative particle verbs, breaking them down and attending to the literal meaning of either one or both of their components, which was observed in 31.74% of all analyzed drawings. This claim also implies the fact that the topological part of particle verbs (the particle itself) is not devoid of meaning, as it also has a role in prompting the meaning of the whole expression.

Seeing as 31.74% of all drawings demonstrate that learners are capable of (either partially or completely) conceptually integrating the form and the meaning of figurative particle verbs, it seems counterproductive to relegate particle verbs to the category of items which non-native speakers of English need to learn by rote memorization. Rather, learners are able to uncover potential conceptual links between the literal meanings of the components of particle verbs and the figurative meaning of the composite whole, sometimes relying on established conceptual metaphors (such as MIND IS A CONTAINER (see Figure 15)), other times finding idiosyncratic associations that stem from their knowledge of the world in order to make sense of that conceptual link (see Figure 26). Discussing metaphorical extensions of meaning and sharing individual associations in a learning environment could be beneficial for learners who wish to learn particle verbs and other idiomatic language expressions.

The results also confirm that the sematic nature of the lexical part of a particle verb influences how learners might conceptualize the particle verb when asked to contemplate its meaning: the participants of the study relied more on the literal meaning of the particle when

visually representing particle verbs with a light lexical part, compared to particle verbs with a heavy lexical part, in which case the lexical element was more frequently the focus. It was also shown that schematic representations occur more often with particle verbs containing a light lexical part, even though concrete images were overall much more numerous in the sample. It would be interesting to see if highly proficient English learners would produce a higher percentage of schematic drawings compared to high school students, since their language systems and metacognitive learning strategies might be more developed. Also, it would be useful to explore whether schematic (widely applicable and simpler) or concrete (more detailed and specific) visual representations would be more beneficial as visual aids in the context of learning and teaching complex figurative expressions.

References

Brown, A. & Gullberg, M. 2010. "Changes in encoding of path of motion after acquisition of a second language." *Cognitive Linguistics*, 21, pp. 263-286.

Campoy Cubillo, M. C. 2002. "Phrasal and prepositional verbs in specialized texts: a creative device." *Ibérica, Revista de la Asociación Europea de Lenguas para Fines Específicos,* no. 4, pp. 95-111.

Croft, W. & Cruse D. A. 2004. *Cognitive Linguistics*. Cambridge University Press, Cambridge.

Danesi, M. 2008. "Conceptual errors in second language learning." In S. De Knop, & T. De Rycker (Eds.), *Cognitive approaches to pedagogical grammar*, pp. 231-256. Mouton de Gruyter, Berlin.

de la Cruz, J. M. 1972. "The Origins of the Germanic Phrasal Verb." *Indogermanische Forschungen*, vol. 77, no. 1, pp. 73-96.

Farley, A. P., Ramonda K. & Liu, X. 2012. "The Concreteness Effect and the Bilingual Lexicon: The Impact of Visual Stimuli Attachment on Meaning Recall of Abstract L2 Word." *Language Teaching Research*, vol. 16, no. 4, pp. 449-466.

Fraser, B. 1976. *The Verb Particle Combination in English*. Academic Press, New York.

Gardner, D. & Davies, M. 2007. "Pointing out frequent phrasal verbs: A corpus-based analysis." *TESOL Quarterly*, vol. 41, no. 2, pp. 339-359.

Geld, R. & Letica Krevelj, S. 2009. "Centrality of space in the strategic construal of *up* in English particle verbs." In M. Brdar, M. Omazić, V. Pavičić Tkač, T. Gradečak-Erdeljić, G. Buljan (Eds.), *Space and Time in Language*, pp. 145-166. Peter Lang, Frankfurt em Main.

Geld, R. & Stanojević, M. 2016. "Topologically biased construal in offline processing: The case of up and down in the language of the blind." *Suvremena Lingvistika*, vol. 42, no. 81, pp. 1-25.

Geld, R. & Stanojević, M. 2018. *Strateško konstruiranje značenja riječju i slikom*. Srednja Europa, Zagreb.

Geld, R. & Šarčanin, M. 2019. "Textual and pictorial representations in strategic thinking about linguistic meaning." *Jezikoslovlje*, vol. 40, no. 3, pp. 423-445.

Geld, R. 2009. *From Topology to Verbal Aspect; Strategic Construal of* in *and* out *in English Particle Verbs*. Ph. D. dissertation, Faculty of Humanities and Social Sciences, University of Zagreb, Zagreb.

Gordon, J. K. & Dell, G. S. 2003. "Learning to divide the labor: an account of deficits in light and heavy verb production." *Cognitive Science*, vol. 27, pp. 1-40.

Greenbaum, S. 2000. *The Oxford Reference Grammar*, Ed. Weiner, E. Oxford University Press, Oxford.

Johnson, M. (1987). *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason.* The University of Chicago Press, Chicago.

Kiss, T. & Weninger, C. 2017. "Cultural learning in the EFL classroom: the role of visuals." *ELT Journal*, vol. 71, no. 2, pp. 186–196.

Kost, C. R., Foss, P. & Lenzini Jr., J. J. 1998. "Textual and Pictorial Glosses: Effectiveness on Incidental Vocabulary Growth When Reading in a Foreign Language." *Foreign Language Annals*, vol. 32, no. 1, pp. 89-97.

Kurtyka, A. 2001. "Teaching English phrasal verbs: A cognitive approach." In P. Martin, Niemeier, S. & Dirven, R. (Eds.), *Applied Cognitive Linguistics II: Language Pedagogy*, pp. 29-54. Mouton de Gruyter, Berlin/New York.

Lakoff, G. & Johnson, M. 1980. *Metaphors We Live By*. University of Chicago Press, Chicago/London.

Langacker, R. W. 1987. *Foundations of Cognitive Grammar: Volume I: Theoretical Prerequisites*. Stanford University Press, Stanford.

Langacker, R. W. 2008a. *Cognitive grammar: A Basic Introduction*. Oxford University Press, Oxford.

Langacker, R. W. 2008b. "The relevance of Cognitive Grammar for language pedagogy." In De Knop, S. & De Rycker, T. (Eds.), *Cognitive Approaches to Pedagogical Grammar*, Mouton de Gruyter, Berlin/New York.

Langacker, R. W. 2017. *Ten Lectures on the Basics of Cognitive Grammar*. Brill, Leiden/Boston.

Morgan, P. S. 1997. "Figuring out *figure out*: Metaphor and the semantics of the English verb-particle construction." *Cogl*, vol. 8, no. 4, pp. 327-358.

Neagu, M. 2007. "English verb particles and their acquisition: a cognitive approach." *Revista española de lingüística aplicada*, vol. 20, pp. 121-138.

Nikolić, M. 2019. *Conceptual Motivation in Visual Representations of English Particle Verb (PV) Constructions*. Master's Thesis, Faculty of Humanities and Social Sciences, University of Zagreb, Zagreb.

Paivio, A. 1986. *Mental Representations: A Dual Coding Approach*. Oxford University Press, Oxford.

Risager, K. 2011. "The Cultural Dimensions of Language Teaching and Learning." *Language Teaching*, vol. 44, no. 4, pp. 485-499.

Rudzka-Ostyn, B. 2003. *Word Power: Phrasal Verbs and Compounds: A Cognitive Approach*. Mouton de Gruyter, Berlin/New York.

Schmiedtová, B. 2013. "Traces of L1 patterns in the event construal of Czech advanced speakers of L2 English and L2 German." *International Review of Applied Linguistics in Language Teaching*, vol. 51, no. 2, pp. 87-116.

Stevick, E. W. 1986. *Images and Options in the Language Classroom*. Cambridge University Press, Cambridge.

Talmy, L. 2000. *Toward a Cognitive Semantics, vol. 2: Typology and Process in Concept Structuring*. MIT Press, Cambridge, Mass.

Taylor, J. 1993. "Some pedagogical implications of cognitive linguistics." In Geiger, R. & Rudzka-Ostyn, B. (Eds.), Conceptualizations and Mental Processing in Language, pp. 201-223. Mouton de Gruyter, Berlin.

Thim, S. 2012. "Phrasal Verbs: The English Verb-Particle Construction and its History." De Gruyter Mouton, Berlin/Boston.

Treffers-Daller, J. & Tidball, F. 2015. "Can L2 learners learn new ways to conceptualize events? A new approach to restructuring in motion event construal." In Guijarro-Fuentes, P, Schmitz, K. & Müller N. (Eds.), *The acquisition of French in multilingual context*, pp. 145-178. Multilingual Matters, Bristol.

van Beek, G., Flecken, M. & Starren, M. 2013. "Aspectual perspective taking in event construal in L1 and L2 Dutch." *International Review of Applied Linguistics in Language Teaching*, vol. 51, no. 2, pp. 199-227.

List of tables and figures

Summary in Croatian – Sažetak

Cilj ovog rada je istražiti aspekte strateškog konstruiranja značenja engleskih fraznih glagola s naglaskom na čimbenike koji utječu na slikovni prikaz fraznih glagola kod učenika engleskog jezika. Kako bi se utvrdilo koje značajke idiomatskih fraznih glagola određuju kako će učenici vizualno koncipirati te strukture, provedeno je istraživanje na 80 hrvatskih srednjoškolaca koji uče engleski. Od sudionika se tražilo da nacrtaju značenje 24 frazna glagola, u kojima su bila zastupljena 4 različita prijedloga (*out*, *in*, *up* i *down*), kao i jednak broj značenjski određenih te značenjski neodređenih glagola. Utvrđeno je da značenjska struktura (određenost) glagola igra ulogu u tome kako sudionici slikovno prikazuju frazne konstrukcije, s obzirom na to da su u većem broju slučaja prikazali jednu ili obje komponente fraznih glagola u crtežima koji se odnose na konstrukcije sa značenjski određenim glagolima. Nadalje, frazne konstrukcije sa značenjski određenim glagolima polučile su više crteža koje karakterizira leksičko određenje, dok se gramatičko/topološko određenje pokazalo svojstvenim za neodređene glagole. Veliki udio svih analiziranih crteža sadržava konkretne simbole i specifične predmete, što ukazuje na to da učenici preferiraju takav oblik individualnih vizualnih prikaza, i što potencijalno implicira da bi konkretne ili detaljne ilustracije mogle biti razumljivije srednjoškolcima, u usporedbi sa shematičnim dijagramima lišenima konteksta. Također je utvrđeno da su hrvatski srednjoškolci koji uče engleski sposobni konceptualno integrirati doslovna značenja elemenata fraznog glagola s cjelokupnim prenesenim značenjem izraza, što predočuje činjenica da su ispitanici u crtežima prikazali doslovno značenje jedne ili obiju komponenti frazne konstrukcije uz ciljano preneseno značenje fraznog glagola u 31.74% svih crteža.

Ključne riječi:

strateško konstruiranje značenja, frazni glagol, vizualni prikaz, topološko određenje, leksičko određenje, konceptualna integracija

Appendix A – The questionnaire

Rješavanjem ovog upitnika dajem pristanak da se rezultati istraživanja koriste u svrhu izrade diplomskog rada studenta Enija Brečevića.

Zadatak

a) Pred tobom je popis 24 frazna glagola (24 zasebnih značenja). Nakon svakog glagola stoji kratka rječnička definicija njegovog značenja na engleskom.

b) Molim te da razmotriš glagole jednog po jednog i nastojiš obaviti sljedeće:

Objasni značenje izraza svojim riječima. Molim te **nemoj ponavljati** (ili parafrazirati, prepričati) definiciju. Pokušaj svojim riječima objasniti smislenost značenja - frazna konstrukcija stvara značenje. **Uz svoje objašnjenje također nastoj "nacrtati značenje" u prazne kvadrate zdesna.**

U ovim zadacima nema točnih i netočnih odgovora. Opusti se, razmisli o značenjima i pokušaj opisati što misliš da u navedenoj konstrukciji stvara značenje koje je navedeno.

1) **cut out** – stop doing something

2) **put up** – resist strongly or fight hard

3) **go down** – be sent to prison

_____

_____

_____

_____

_____

4) **pull in** – move to the side of the road to stop

_____

_____

_____

_____

_____

5) **cut down** – kill somebody

_____

_____

_____

_____

_____

6) **go in** – become hidden

_____

_____

_____

_____

_____

7) **put out** – injure your back, shoulder, hip, etc.

_____

_____

_____

_____

_____

8) **take in** – understand or absorb something

_____

_____

_____

_____

_____

9) **pull up** – stop while driving, especially for a short period of time

_____

_____

_____

_____

_____

10) **break down** – stop working

_____

_____

_____

_____

_____

11) **put in** – interrupt

_____

_____

_____

_____

_____

12) **take up** – fill an amount of space or time

_____

_____

_____

_____

_____

13) **pull down** – destroy a building

_____

_____

_____

_____

_____

14) **break in** – wear something until it is comfortable

_____

_____

_____

_____

_____

15) **pull out** – stop being involved in something

_____

_____

_____

_____

_____

16) **cut up** – suddenly drive in front of another vehicle in a dangerous way

_____

_____

_____

_____

_____

17) **put down** – criticize somebody and make them feel stupid

_____

_____

_____

_____

_____

18) **break up** – end a relationship

_____

_____

_____

_____

_____

19) **go out** – stop burning

_____

_____

_____

_____

_____

20) **take down** – write something

_____

_____

_____

_____

_____

21) **go up** – be destroyed by fire or explosion

_____

_____

_____

_____

_____

22) **break out** – to escape

_____

_____

_____

_____

_____

23) **cut in** – interrupt somebody's conversation

---

24) **take out** – go out socially with somebody

Dob:

Materinji jezik:

Razred:

S koliko si godina počeo/la učiti engleski:

Koja će ti biti zaključna ocjena iz engleskog:

Ostali strani jezici koje govoriš:

Zaokruži koliko ti je, od 1 do 5, bilo teško ispuniti ovaj upitnik (1 – veoma lako; 5 – veoma teško):
        1   2   3   4   5

Zaokruži koliko ti je, od 1 do 5, ovaj zadatak bio nov (1 – već sam rješavao/la slične zadatke; 5 – nikad nisam trebao/la napraviti nešto slično):
        1   2   3   4   5

Zaokruži koliko ti je, od 1 od 5, ovaj zadatak bio kreativan (1 – zadatak nije iziskivao kreativnost; 5 – zadatak je iziskivao puno kreativnosti):
        1   2   3   4   5