Visual representation of English particle-verb (PV) constructions by Croatian secondary-school learners

Novosel, Ana

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VISUAL REPRESENTATION OF ENGLISH PARTICLE-VERB (PV)

CONSTRUCTIONS BY CROATIAN SECONDARY-SCHOOL LEARNERS

Diplomski rad

Studentica: Ana Novosel

Mentorica: dr. sc. Renata Geld, doc.

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University of Zagreb

Faculty of Humanities and Social Sciences

Department of English

TEFL Section

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Graduation Thesis

Student: Ana Novosel

Supervisor: Asst. Prof. Renata Geld

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Examining Committee:

Stela Letica Krevelj, PhD, postdoc.

Jasenka Čengić, MEd

Assistant professor Renata Geld, phD

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VISUAL REPRESENTATION OF ENGLISH PARTICLE-VERB (PV) CONSTRUCTIONS BY CROATIAN SECONDARY-SCHOOL LEARNERS

Abstract

The central aim of this study was to explore visual representation of English particle-verb (PV) constructions in Croatian secondary school students. The task was to investigate in what way PV constructions were represented. More specifically, we were interested if the participants would find the PV construction's components important enough for the meaning of the PV construction to include them in their drawings. There is a number of existing studies on strategic construal of particle verbs and on beneficial effects of pictures in the learning process. However, few studies analyse the nature of self-generated visual representations in connection to the meaning. Self-generated visual representations offer an insight into the collaboration of other cognitive processes and cognitive motivation in the process of the construal of meaning. Therefore, we were interested in seeing what the visual representations of particle-verb constructions would show. The sample consisted of four grades of high-school students aged 15 to 18 (N=92). The instrument included 24 English particle-verb constructions, but only 16 constructions were analysed in this study. Participants were provided with the meaning of each PV constructions with the task of drawing it. The results offered interesting findings. A large part (74.04%) of subjects' drawings corresponded to the PV constructions' figurative meanings provided in the questionnaire. A part of the subjects' drawings (22.07%) included meanings of one or both components, which means the data offered evidence of conceptual integration of meaning. In addition, the data offered insight into the use of conventional symbols and body language when presented with a task of visual representation of meaning.

Keywords: conceptual integration, conventional symbols, strategic construal, particle-verb (PV) constructions, visual representation

1. Introduction

English particle-verb (PV) constructions have proven to be a challenging area for both linguists and language learners. For a very long time it was considered that the meaning of a PV construction is not connected to the meaning of its components. An obvious problem that arises from that belief is the complete lack of cognitive motivation, which, therefore, leaves PV constructions to be simply learnt by heart. Cognitive linguists claim that language structures are cognitively motivated and that language is deeply rooted in our past experiences and perceptions of various situations, which we use to construct new meaning.

For a long time, particles were largely disregarded in terms of their contribution to the meaning of a PV construction, but various studies have proven that particles contribute to the meaning, and that their role is not purely directional or decorational (see Rudzka-Ostyn, 2003; Geld, 2009; Geld and Maldonado, 2011; Geld and Stanojević, 2016; Geld and Stanojević, 2018). In short, there is evidence that the components contribute to the meaning of a construction.

However, visual representation of linguistic meaning is still a widely unexplored area. While there is a number of studies on the beneficial effects of pictures in the learning process (see Carney & Levin, 2002; Levin, 1983; Weidenmann, 1989), few of them look into the contents of visual representations of meaning constructed by learners. Visual representations are valuable for a number of reasons: they offer insight into mental imagery of a learner, they may facilitate deeper processing and they enhance learner's motivation and later retrieval from memory.

After a brief description of PV constructions, strategic construal of meaning and the blending theory, the paper focuses on mental images, visual grammar and conventional symbols. We will discuss the functions of pictures in the learning process, as well as outline previous studies on similar topics. Finally, the research on the visual representation of particle-verb constructions by Croatian secondary-school learners is presented, followed by the discussion of results and new findings, ending with a conclusion.

2. Particle verb (PV) constructions

Firstly, we would like to start by addressing the term 'particle verb'. Even though a more commonly used term is 'phrasal verb', there is a number of reasons to opt for a different one, as is the term 'particle verb' used in this paper. The term 'particle verb' is defined as combination of a verb and a particle (see Capelle 2005; Darwin and Gray 1999; Geld, 2009; Geld, 2011; Lipka 1972). Furthermore, there is a distinction between particle verbs and prepositional verbs. With particle verbs, we discuss combinations in which the particle is semantically linked with the verb, whereas with prepositional verbs the opposite is the case, those being combinations in which the particle patterns with the following noun phrase, and not the verb (see Capelle 2005, Darwin and Gray 1999, Geld, 2009; Geld, 2011, Lipka 1972).

The main reason for using the term 'particle verb' is because of the connotations of the term 'phrasal verb'. In general, phrasal verbs are considered as combinations that have (figurative) meanings which are not connected to the meaning of the components considered separately. The term implies a kind of phrase where the components play no role. Geld (2009) states that the term 'phrasal verb' is "associated with the requirement of non-compositionality of meaning" (p. 9). Apart from that, the term 'phrasal verb' disregards the importance of the particle, implying it bears no significance to the meaning. The latter is proved to be untrue by a number of studies (Geld 2009; Geld 2011; Geld and Maldonado 2011; Geld and Stanojević 2016). The findings in studies conducted by Geld and associates, along with the findings in this paper, are not in line with the connotation of the term 'phrasal verb'. The basis of choosing the term 'particle verb' is the assertion that the meaning of a PV construction is in connection with the meaning of components, and that the components contribute to the meaning.

2.1. Strategic construal of meaning

When analysing the claim that PV components' meanings contribute to the figurative meaning of the construction, we firstly need to discuss the process of constructing a certain meaning. Construal is a term coined by Ronald Langacker, one of the founders of cognitive linguistics. Meaning construal refers to the human ability to understand the objectively same situation in different ways (Langacker 1987 and elsewhere). Because of the construal, which

is dynamic in nature, meaning is also seen as dynamic and subjective. Strategic construal is a term constructed by Geld (2006b) referring to construal of meaning in one's second language (L2), defined as following:

> Cognitive strategies we use in order to learn and understand a second language (or, simply, strategic construal of meaning), are in fact the universal cognitive potential realized by cognitive abilities which an individual develops throughout their life and which constantly interact with (first) language. Any cognitive processing activated by second language also involves strategic construal, which is based on basic cognitive abilities, along with knowledge of language and knowledge of the world.[1] (p. 70).

To sum up the theoretical framework (Geld 2006a, 2006b), it is useful to look at graphic representation in Figure 1.
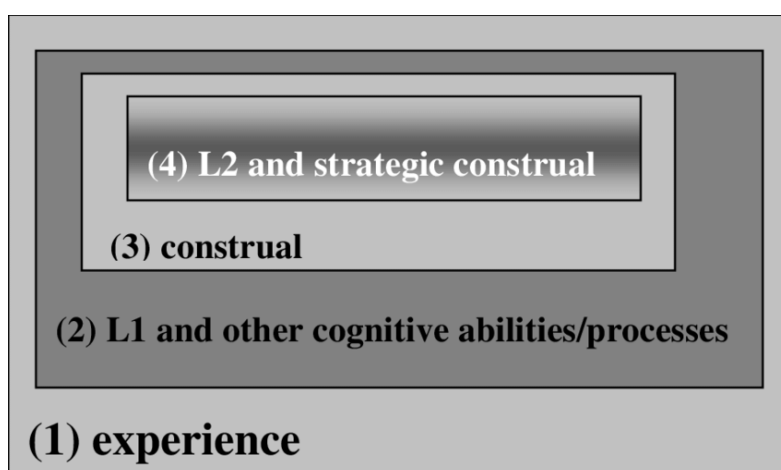
Figure 1. Integrated model of second language acquisition (taken from Geld, 2006, p. 108).

Geld (2006a, 2006b) states that there are certain steps involved in the strategic construal of meaning. The starting point is the claim that language is deeply connected with human experience (1), and in fact, that language emerges from experience. Language is connected to other cognitive abilities and processes (2), from which emerges the fact that meaning construal is subjective and dynamic in nature (3). The conclusion is that L2 and strategic construal are affected by all those factors – one's knowledge of the world, learner's L1 and learner's general cognitive abilities (4).

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[1] Author's translation from Croatian.

2.2. The blending theory

The blending theory was developed by Gilled Fauconnier and Mark Turner. Conceptual integration, or blending, is "a general cognitive operation on a par with analogy, recursion, mental modeling, conceptual categorization, and framing" (Fauconnier & Turner, 2001, p. 1). Simply, the blending theory explains that in everyday life, in different situations, including using and learning a language, we use various elements and relations from different situations and blend them subconsciously. It is a dynamic cognitive process that is routine to us. Fauconnier and Turner (2001) explain: "In blending, structure from input mental spaces is projected to a separate, 'blended' mental space. The projection is selective. Through completion and elaboration, the blend develops structure not provided by the inputs." (p.1).

The theory can be applied to particle-verb constructions. Their components may be considered as input spaces filled with particular aspects of knowledge. When discussing meaning, Fauconnier and Turner (2003) argue:

> Meaning potential is the essentially unlimited number of ways in which an expression can prompt dynamic cognitive processes, which include conceptual connections, mappings, blends and simulations. Such processes are inherently creative, and we recognize them as such when they are triggered or produces by art and literature. In everyday life, the creativity is hidden by the largely unconscious and extremely swift nature of the myriad cognitive operations that enter into the simplest or our meaning constructions. (p. 79).

The strategic construal of meaning and the blending theory are vital for this study. When we incorporate them into a framework for investigating particle verbs, the assumption that learners use their previous experiences and knowledge (in this case, the knowledge of the components), in order to form new meaning seems logical. The nature of visual representations analysed in this study offers insights into creativity in the process of the construal of meaning.

3. Linguistic meaning and mental images

In this paper, we will explore linguistic meaning in the form of mental images. In the framework of cognitive linguistics, language is "an experiential phenomenon intimately related to general cognitive processes" (Geld 2014). Linguistic meaning is considered as subjective and dynamic, and it is equated with imagery. In contrast to previous language acquisition theories (nativist theories), which did not take experience into account when it comes to learning a language, cognitive linguistics, as a constructivist theory of language, insists on (and offers evidence) the connection of general cognitive processes, language and experience.

Evidence on the connection of language and mental imagery may be found in studies conducted by Geld (and associates) and presented in her paper *Investigating meaning construal in the language of the blind: A cognitive linguistic perspective* (2014). In this study, Geld presents the results which show that the blind use their own experience of the world in order to express meaning. In one study when the blind were asked to describe the rising sun, they opted for presenting it as a symbolic event, for example, as the beginning of a new day, rather than describing the visual elements, such as colours, as the sighted group did. Furthermore, when describing landscape with trees, mountains and a lake, the sighted group typically offered a stereotypical postcard-like answers, while the blind focused on the elements they could touch, such as the trees and the lake, without paying much attention to the mountains. Geld's studies on the blind offer valuable and strong evidence on the importance of experience in our perception, which then serves as the basis for meaning formation. In short, we are able to *see* meaning in the form of mental images, which we then convert into (usually) words. After presenting various studies on the blind, whose experience is undeniably different, Geld (2014) concludes that meaning is based on special mental *imagery*.

In his paper *Mental Imagery Improves Comprehension*, Rasinski (1988) presents a mental pictures-constructing task which could be used with children. First, he proposes to instruct children to draw pictures while reading a story, after which he instructs them to construct mental images. The instruction states: "Tell them that instead of drawing the pictures on paper they will be drawing the pictures in their heads." (p. 867). In short, when we make mental images, we are simply drawing in our heads, for which we use past experiences.

The latter is one of the basic premises of the research presented in this paper. If we draw the meaning in our minds, it is possible to transfer that mental image onto a paper. What we wished to find out was what is included in the mental images when thinking of particle verbs, and, consequently, what is included in our participants' drawings based on the mental image they created.

3.1 Visual grammar

In their book *Reading Images – The Grammar of Visual Design*, Kress and Leeuwen (2006) define visual grammar as "the way in which depicted elements – people, places and things – combine in visual 'statements' of greater or lesser complexity and extension." (p. 1). In today's world, we are heavily dependent on the visual element. There are conventional symbols and images that we often encounter, which we do not consider as being symbols anymore – we see them as only natural. Conventional symbols are often featured in visual material and visual representations. Geld and Stanojević (2018) state: "Visual representations are a kind of language that is never arbitrary, but always motivated." (p. 105).[2] Because of this motivation and great intelligibility of conventional symbols and visual representations around us, it is easier to both express and understand a particular meaning by using conventional symbols.

Nonetheless, it has to be noted that visual imagery is not universal. Without being aware, the way we perceive the world around us is heavily dependent on the culture of which we are a member. There is a number of common conceptions we take as granted and as universal. That point of view offers a compelling perspective of analysing various visual representations of meanings, since "visual structures point to particular interpretations of experience and forms of social interaction" (Kress and Leeuwen, 2006, p. 2). Kress and Leeuwen (2006) conclude that "visual language is not – despite assumptions to the contrary – transparent and universally understood; it is culturally specific." (p. 4). Yet, some authors have claimed there are symbols that are cross-cultural and widely understandable. For example, Geld and Stanojević (2018) present a study in which the sample consisted of Croatian, Mexican and Arabic participants. The results show that all of them, despite being members of different cultures, share some conceptions and symbols.

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[2] Author's translation from Croatian.

3.2. Conventional symbols

Let us now consider how visual representations of meaning may be analysed. Self-generated visual representations are individual and, in some part, a result of the culture in which they are produced. That latter assertion is not a problem on its own if the researchers share a specific culture with the participants or they are familiar with the participants' culture. Nonetheless, when we think about the fact that every participant provides his or her own visualization, or maybe their own idea of what should represent what, the task of categorizing such data may appear daunting. Again, the already mentioned conventional symbols emerge as useful. Geld and Stanojević (2018) argue that we live in a world in which the visual effect is highlighted, and we are not even aware of many symbols that appear as conventional. They list some of the conventional symbols they have detected when analysing drawings of PV constructions. In other words, they list (2018, p. 115) a number of motifs that often appeared in the drawings and that could be considered as something participants have in common. Some of the symbols are:

- A piece of clothing for the verb *break in* meaning 'wear something until it is comfortable'
- Fire or burning for the verb *go out* meaning 'stop burning'
- An image of a body for the verb *put out* meaning 'injure your back, shoulder'
- Broken machines for the verb *break down* meaning 'stop working'
- Cars for the verb *cut up* meaning 'suddenly drive in front of another vehicle in a dangerous way'
- A house that is visited for the verb *call in* meaning 'make a short visit'

When reading the list, it may seem self-explanatory, however, it is such only because of our experience and culture. There is no specific reason to decide to draw only cars when drawing *cut up*. Still, such conventional symbols make the interpretation easier for the researcher, and also provide insight into the nature of visual imagery.

4. Pictures as learning devices

Another area of interest for researchers is determining to what extent visual representations (pictures) facilitate the learning process. Humans are visual beings, and even before we learn how to read, we look at storybooks[3] and interpret the meaning of the drawings in front of us. Later on in our learning process we are encountered with textbooks, which are also full of pictures[4]. A number of studies (Lesgold et al. 1975; Rubman and Waters 2000; Dretzke 1993, cited in Carney and Levin, 2002) show beneficial effects of including pictures in the learning material. Weidenmann (1989) states that "probably no other instructional device leads to more consistently beneficial results than does adding pictures to a text." (p.158).

When discussing the beneficial effects of pictures in the learning process, Duchastel (1978, as cited in Weidenmann, 1989, p. 159) assigns 3 main roles to pictures:

- an attentional role, signifying that pictures attract the learner's attention
- an explicative role, signifying that pictures help the reader to understand information
- a retentional role, which means that pictures increase the possibility of remembering the information

In short, according to Duchastel, pictures can be beneficial in a number of ways: they have a potential to motivate a person, to help with the understanding of the material and to facilitate the process of retrieving the material from memory (as cited in Weidenmann, 1989, p.159).

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[3] Fang (1996) discussing roles pictures play in storybooks, as mentioned in Carney, R. N., Levin, J. R (2002).
[4] It has to be noted that not all pictures are beneficial – the ones serving decorational purpose usually do not benefit the learning process.

4.1. The function pictures serve as learning devices

Pictures can serve different functions when they are a part of the learning process and learning material, as discussed by Levin (1979, p. 14). He suggests a number of functions:

1) Decorational function – pictures decorate the text, with little or no relationship to the text content;

2) Representation function – pictures represent major elements mentioned in the text, the most common type of pictures included in various materials;

3) Organization function – pictures in the form of a map or a diagram that integrate text content

4) Interpretation function – pictures that clarify difficult information in the text, used to clarify abstract concepts and make them understandable

5) Transformational function – pictures that include systematic mnemonic (memory enhancing) components that are designed to improve reader's retention and recollection of text information

The most substantial benefits were found with the use of transformational pictures when it comes to learning and retrieving information. Transformational pictures are based on mnemonic strategies. Levin (1993) states that "a mnemonic strategy involves a transformation of otherwise difficult to remember material into something more memorable" (p. 236). Consequently, it is preferable to include transformational materials in the learning process.

Generally, learners are presented with different visual material. The beneficial effects of the material has to be insured by using appropriate illustrations, that is, using pictures that are not purely decorational. There are also individual factors connected to the learner, for example, one's concentration, motivation and self-assessment. As Weidenmann (1987) argues, learners may perceive something as easy, unimportant material, focusing more on the verbal information provided, which they consider as being more informative. In short, simply including a picture is not a guarantee that the learner will benefit from it. The logical question is what would happen if learners themselves were asked to produce illustrations for complex meanings. The next section of the paper provides an overview of previous studies on (self-constructing) picture effects in the learning and retention process.

5. Previous studies

Numerous studies were conducted in order to gather data on the effect of pictures on learning, remembering and retrieving information. When it comes to research in the field of mnemonic illustrations, Dretzke (1993, as cited in Carney and Levin, 2002) investigated the effects of mnemonic illustrations on the prose recall of participants of different ages (younger, middle-aged and older adults). The task included passages describing different fictitious cities. In the mnemonic conditions, the cities' names were presented with the help of illustrated keywords, as, for example, is a bell presenting a fictitious city called Belleview. The results showed that mnemonic illustrations proved to be a useful tool when recalling concrete text material and that "keyword orientations served to organizes participants' subsequent recall of the text information (i.e., attribute clustering) at all three age levels" (Carney and Levin, 2002, p. 17). After reporting on various experimental studies on mnemonic illustrations, Carney and Levin (2002) report that "the pictorial mnemonomy was found to be a potent facilitator of students' information reconstruction and application performance (relative to performance in a free-study condition), both on immediate tests and on delayed tests up to two months later" (p.18).

As reported in Carney and Levin (2002), the Rubman and Waters study (2000) provided additional data on the effects of picture-constructing tasks. Following the Lesgold et al. (1975, as cited in Carney and Levin, 2002) study in which first graders constructed pictures while listening to a story, Rubman and Waters similarly presented third and six graders with a picture-construction task involving reading a passage on their own while constructing pictures related to it. The studies showed that picture-constructing children were able to better recall the story (Lesgold et al., 1975, as cited in Carney and Levin, 2002), and they were better able to notice some inconsistencies found in the story (Rubman and Waters, 2000, as cited in Carney and Levin, 2002).

Even though there are studies that observe the effect of pictures in the learning process, along with studies with picture-constructing tasks, it seems that not many studies examine the material participants draw. In other words, the content drawn is not analysed, but rather only the results of using or constructing pictures is examined. However, some advances have been made in the field of analysing self-generated pictures in connection to language meaning.

In their book, *Strategic Construal of Using Words and Images: Cognitive motivation in second language learning* (2018), Geld and Stanojević present a part of their study, which involves a picture-constructing task. They presented the results obtained from 10 participants whose task was to illustrate the meanings of PV constructions. The study included a total of 91 answers. Geld and Stanojević wished to find out which part(s) of the construction were presented in the drawing and which elements were included in the drawings. The first research question produced the following categories (Geld and Stanjovević, 2018, p. 109-110):

- Literal compositionality – the drawing shows the literal meanings of both lexical and topological components of the PV construction

- Visual paraphrase of meaning – the drawing shows only the figurative meaning of the verb, without including the lexical and/or topological component of the PV construction

- Partial integration – the drawing is a combination of the figurative meaning and the meaning of either the lexical or the topological component of the PV construction

- Complete integration – the drawing shows a combination of the figurative meaning as well as the meaning of the lexical component and the topological component of the PV construction

They also found that half of the drawings analysed showed either partial integration or complete integration, meaning that the participant integrated both the components' meanings as well as the figurative meaning of the PV construction into their drawings. The finding is contrary to the popular belief that PV constructions' meanings should be learnt by heart, since their meaning is opaque and cannot be "unpacked". Additionally, Geld and Stanojević (2018) found that there are elements occurring across participants' answers, suggesting that they represent conventional symbols.

The work of Geld and Stanojević (2018) and other similar studies on the construal of meaning (especially when discussing particle verbs) served as the basis for this paper. The categories Geld and Stanojević formed were a starting point for categorizing the data collected and used in this paper. However, other categories were added, which will be explained in the next section of the paper.

6. Research

6.1. Aims and hypotheses

The central aim of this study was to investigate how English particle-verb (PV) constructions were visually represented by Croatian secondary school students. In more exact terms, our aim was to establish which elements of PV constructions were represented when drawing meaning. The elements observed were the lexical component of the PV, the topological component of the PV and the figurative meaning of the PV. In other words, the goal was to investigate which elements of the PV constructions were considered important and salient enough by the participants. The idea is that if a component is considered important in terms of its semantic contribution, it will be included in the visual representation of the PV constructions' meanings provided in the questionnaire. As it was mentioned, there is a number of existing studies on strategic construal of particle verbs (see Geld, 2009; Geld 2011; Geld & Maldonado 2011; Geld and Stanojević 2016; Geld & Stanojević 2018). The studies generally presented participants with the task of verbally explaining the contribution of the components in relation to the meanings of the PVs in the instrument, with the additional option of drawing the meaning. In this study the focus was on drawing, that is, on the visual representation of meaning, with the aim of establishing the content of the drawings. This study was exploratory in nature. There were two basic research questions:

a)   In what way are PV components represented?

b)   What is the relationship between PV components and the meaning of the construction?

The following hypotheses were formed:

1.   The majority of drawings will include the figurative meaning of the PV construction provided.
2.   Some drawings will include meaning(s) of one or both components of PVs.
3.   Some drawings will show evidence of conceptual integration.

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6.2. The instrument

The instrument used in the research was a questionnaire adapted from Geld (2009). It was adapted in the way that it consisted only of the verb, its selected figurative meaning and an empty box for the drawing, excluding the part for verbal explanation of the PV meaning. The questionnaire consisted of 24 PVs with their meanings. Each PV construction consisted of a lexical and a topological component (*in*, *out*, *up* and *down)*. The participants were asked to draw how the PV construction makes sense. Even though variations of the instrument were used in previous research, this was the first time that the participants were asked only to draw the meanings, without explaining them with words. The participants were informed that the participation is entirely voluntary and the results would not in any way affect their English grade. They were also told that the results would be used only for the purpose of the research in question, and that they can decide to withdraw from it at any point during their work on the questionnaire. The instrument consisted of 24 verbs.

The following particle verbs and their meanings were included in the analysis, listed as appearing in the instrument:

1. *Cut out* – 'stop doing something'
2. *Put up* – 'resist strongly of right 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'

6.3.   The sample and the procedure

The sample consisted of 92 high school students. They were divided into two groups. The younger group consisted of 48 learners (grade 1) and the slightly older group of 44 learners (grades 3 and 4). All the participants were native speakers of Croatian, they attended the same high school, located in Zagreb, and had the same English teacher.

The research was conducted in the academic year 2017/2018, over the period of two weeks during which the researcher attended the classes in order to collect data. The participants had 45 minutes to fill in the questionnaire. The participants were asked to draw the meanings as they visualize it. After the collection of the data, the number of the PV constructions which would be analysed was discussed by the researcher and the supervisor. Due to the high number of participants (92) and the number of PV constructions included in the questionnaire (24), the total number of anwers was quite high (2208). We decided to analyse 16 PV constructions for the purpose of this thesis, that number providing 1472 answers. When choosing the verbs for the analysis the goal was to include the four particles and four different lexical components. Two lexical components were heavy verbs and the other two were light verbs. The selected verbs were *cut* and *break* included as heavy verbs, and *take* and *put* as light verbs, each of those combined with four particles coding topological orientation: *in*, *out*, *up* and *down*.

6.4. Coding

Out of 1472 answers analysed, 68 were left empty. The remaining 1404 answers were analysed and coded. The four main categories (LC, VP, PI, CI) were taken from Geld and Stanojevic (2018). Other sub-categories were added while studying the data. The final categorisation included eight categories:

1) LC for literal compositionality (the code is used for the answers in which the PV construction's figurative meaning was disregarded, and the drawing only included the literal meanings of the PV construction's components);

2) VP for visual paraphrase (the code is used for the answers which paraphrased the figurative meaning of the PV, without considering the meanings of the components);

3) VP + TXT for visual paraphrase with included text (the code is used for the answers that paraphrased the PV's figurative meaning, but that being obvious only due to the text included);

4) VP – MIS for visual paraphrase with misconstrued context (the code is used for answers which paraphrased the figurative meaning, but in a different context from the one the PV is used in);

5) PI for partial integration (the code is used for drawings in which the answers show the figurative meaning provided, as well as include the meaning of one of the PV construction's component);

6) PI – MIS for partial integration with misconstrued context (for drawings in which the answers show the figurative meaning provided, as well as include the meaning of one of the PV construction's component, but the context in which the PV construction is used is misconstrued);

7) CI for complete integration (the code is used for answers which include the figurative meaning and both of the components' meanings);

8) MIS for misinterpretation (the code used for examples when the answer is in no way related neither to the figurative meaning of the PV construction nor the meanings of the components).

Before presenting the data, the categories will be illustrated, i.e., chosen participants' answers will be presented and explained in the framework of each category
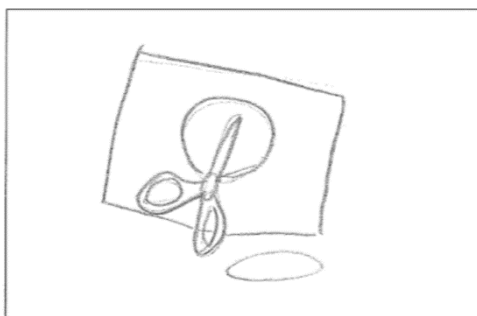
1. Literal compositionality (LC)

Figure 2. Verb *cut out* meaning 'stop doing something'.

Figure 2 is an example of a drawing that represents the category of literal compositionality. Figure 2 shows that the participant did not considered the figurative meaning of the PV construction, but rather only focused on the literal meanings of the PV's components. In Figure 2 we see that the lexical component, *cut*, is presented by the scissors[5], which are cutting a circle *out* of a piece of paper – there is the final product presented, the circular, smaller piece of paper. The smaller piece of paper is not a part of the larger one anymore, and we could perceive it as being "out", not a part of the bigger piece. Literal compositionality provides us with answers which show no sign of the PV's figurative meaning being understood or learned. However, we see that the participant did pay attention to the PV's components.

2. Visual paraphrase (VP)

Figure 3. Verb *break in* meaning 'wear something until it is comfortable'

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[5] An element noticed by Geld and Stanojević (2018).

When discussing visual paraphrases, we are examining drawings that illustrate the figurative meaning, disregarding the components' meanings. Figure 3 shows the meaning 'wear something until is comfortable', highlighting the shoes, and signalling comfort with a smile on the character's face. Sometimes, when participants do not know the meaning of a PV construction, it is the easiest to reach for the visual paraphrase of meaning. Geld and Stanojević (2018) label visual paraphrase as a "way out"[6] (p. 112) when the participants have trouble connecting the figurative element with the literal elements. In addition, when a certain meaning is "experientially prominent"[7] (Geld and Stanojević, 2018, p. 115), a person almost automatically opts for the visual paraphrase, which is connected with conventional symbols. Geld and Stanojević argue that some meanings are full of prominent elements (conventional symbols) which obstruct the participant to focus on the components. Further on, learners are generally instructed to learn the meanings of PV constructions by heart. For these reasons, visual paraphrases were generally expected in the study. A considerable number of answers belongs into this category. Two sub-categories related to the visual paraphrase were formed during the analysis of the data, one being visual paraphrase with included text, and the other visual paraphrase with misconstrued context. Both will be explained and presented in the following two sections.

3. Visual paraphrase with included text (VP + TXT)

Figure 4. Verb *break in* meaning 'wear something until it is comfortable'

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[6] Translation by the author from Croatian.
[7] Translation by the author from Croatian.

The first sub-category relating to visual paraphrase is visual paraphrase with included text. The category was formed to separately code answers where the meaning of the drawing was clear only because of the text included. In Figure 4 we see a stick figure, and the only way to know what it stands for is the text that states the figure is 'wearing in new jeans'. This type of answers shows the participants' need to make themselves understood and avoid possible ambiguity. Many felt that they needed words in order to accomplish that. The answers which included text, but whose meaning was understandable from the drawings, were coded as visual paraphrases, and the text was disregarded.

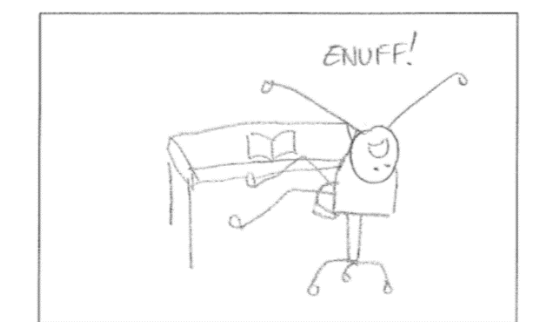4. Visual paraphrase with misconstrued context (VP – MIS)

Figure 5. Verb *break down* meaning 'stop working'

As mentioned, in the case of the visual paraphrase, the salient element in the drawings is the PV construction's figurative meaning. Participants disregard the contribution of components to the meaning. More specifically, visual paraphrases with misconstrued meaning do not show the PV's meaning, but simply focus on the definition provided. For example, the verb *break down*, resulted in quite a number of visual paraphrases with misconstrued context. Since our participants were high-schoolers, many of them drew 'stop working' in the sense of 'stop studying', the data being full of illustrations of books, cups of coffee and people laying on or beside a table full of notes and other materials, as seen in Figure 5. The finding was surprising, since one would assume the participants were familiar with this meaning of the verb. In other words, this PV is quite common in the early stages of learning the English language,

when the example "my car broke down"[8] is frequently encountered, and high-schoolers are expected to know the verb. It may be possible that the misinterpretation of *break down* is a sign of lack of concentration and motivation put into the task.
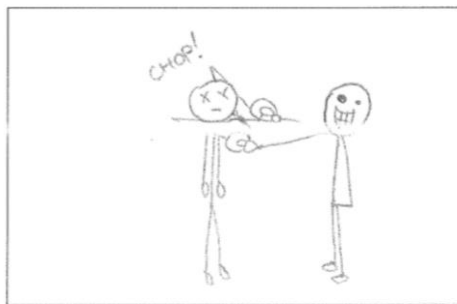
5. Partial integration (PI)

Figure 6. Verb *cut down* meaning 'kill somebody'

The category called partial integration consists of drawings which include both the PV construction's figurative meaning and the meaning of one of the components. Partial integration is indicative of complex strategic construal. For example, in Figure 6 we see a character literally chopping the other character's head off. The scissors imply *cut*, and the meaning is conveyed by the lexical part of the PV construction. The character's eyes are X's, the conventional symbol standing for a dead person, which is enough information to consider 'to kill somebody' included in the drawing. Both characters are standing, there is no *down* represented in the drawing. Therefore, since two out of three elements are included in the drawing, it is coded as partial integration.

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[8] Broken down cars, computers and mobile phones were frequently drawn, so the assumption is true for a number of participants.
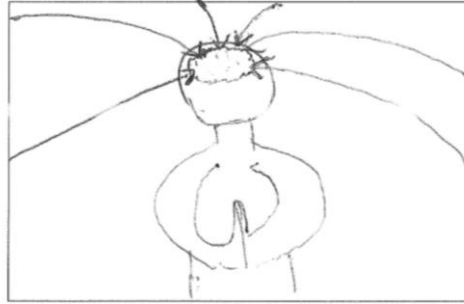
Figure 7. Verb *take in* meaning 'understand or absorb something'

While analysing the data, it became evident that the participants found it convenient to signal the topological component with arrows. When discussing the meanings of particles in the English language, Rudzka-Ostyn (2003) explains *in* as a particle that stands for entering or being inside a container. Containers are not only physical, and she enumerates elements that are perceived as containers, such as atmospheric circumstances, time, set of groups, and psychological and physical states. In Figure 7, the brain stands for absorbing and understanding, while we see arrows literally going *into* the brain. The mind is often perceived as a container, and it is experientially familiar to us that we store information inside our minds. For that reasons, it seems quite logical to indicate the entering the container of our minds by arrows, while the brain stands for understand and absorbing. Since two out of three elements of the PV construction are evident in the drawing, it is coded as partial integration of meaning.

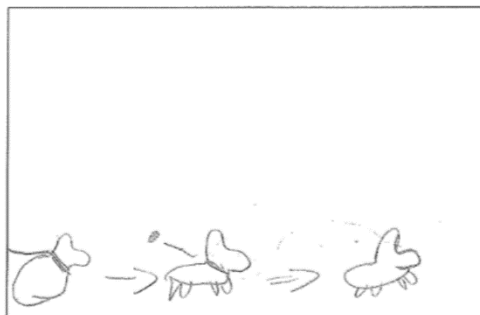6. Partial integration with misconstrued context (PI-MIS)

Figure 8. Verb *break out* meaning 'to escape'

As the previous section explains, partial conceptual integration shows that the meaning of one of the PV components is included in the drawing, along with the PV's figurative meaning. As with visual paraphrases with misconstrued context, answers coded as partial integration with misconstrued context show that the participants focused on the definition provided, along with paying attention to the components. However, the drawing does not represent the PV construction's figurative meaning. In Figure 8, we see a dog escaping, and we see that its collar broke, so we have two elements present – both 'break' and 'to escape'. However, we do not use *break out* in this sense. It is interesting to observe the particle *out* in this example. As Rudzka-Ostyn (2003) states, *out* stands for leaving some kind of container, be that physical containers or metaphorical ones, as brains, minds, situations etc. In this example we see no container present (the collar can hardly be seen as a container), and the meaning illustrated is simply not used in the English language. Therefore, the data is coded as being in the category of partial integration with misconstrued context.
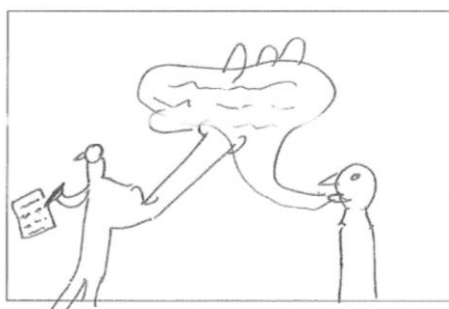
7. Complete integration (CI)

Figure 9. Verb *take down* meaning 'write something'

The last and most compelling category is that of complete conceptual integration. The answers belonging into the category show very complex strategic construal of the given meaning. The drawing includes 3 elements – the meaning of both components incorporated and connected to the PV construction's figurative meaning. It shows that PV's meanings are cognitively motivated and dependent on the components' meanings. For example, in Figure 9 we can see a character[9] writing something on a piece of paper, which indicated the figurative

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[9] It is interesting to notice that the characters resemble birds, the main hint being the beaks.

meaning. At the same time, we see the same character reaching *up* towards a comic book cloud representing text which is coming out of another character's mouth. The character that is writing down literally *takes* the cloud with its hand (we can say that it represents hearing the words), and then uses the other hand to write it *down* on a piece of paper. We have all three elements present, which is characteristic of complete conceptual integration.
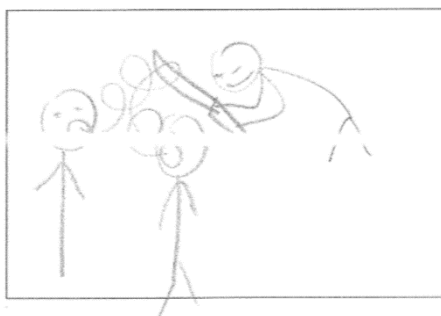

Figure 10. Verb *cut in* meaning 'interrupt somebody's conversation'

In Figure 10, we see two characters talking, which is presented by a wavy line coming out of both characters' mouths. Geld and Stanojević (2018) mention conversations being represented as a physical link between two people. They state: "Understanding conversation / communication as a physical connection [between them] is a metaphorical element (there is no "physical" connection, it is a metaphor of a transmitter – the fact that what we want to say to another is transmitted by a physical bond between us)." (Geld and Stanojević, 2018, p. 121). In Figure 10 there is a third character visible, crucial for the meaning. The character is holding a sword, which is representative of the verb *cut*, and the character is trying to cut the line *in the middle, in between* the two people, or, in other words, trying to interrupt the conversation between the two people. Geld and Stanojević (2018) stress that *in* "refers to the interruption of the metaphorical link" (p. 121). This representation is a good example of integration of different meaning components, that is, of complex strategic construal.

After briefly presenting the categories identified in the data analysed, results will be presented, followed by discussion.

7. Results and discussion

7.1. The representation of the PV's figurative meaning

Our first hypothesis was that the majority of drawings will include the figurative meaning of the PV construction provided. The assumption was that the meaning provided would be easy to recognize in the subjects' drawings, but that was not always the case. As already stated, meaning is dynamic and subjective and sometimes it may be difficult to analyse what the participant had in mind. Therefore, we decided to divide the answers into two basic groups. The first group consists of answers in which the participants managed to draw the figurative meaning provided in the questionnaire. The second group of answers consists of misinterpretation – misconstrual of meaning or context.

The categories which represent the PV's figurative meaning are visual paraphrase (VP), visual paraphrase with included text (VP-TXT), partial integration (PI) and complete integration (CI). The category of visual paraphrase was the most frequent category with 766 cases (52,04%). The result was generally expected. Visual paraphrase is a category in which we examine drawings focusing only on the figurative meaning. To draw only the figurative meaning and to disregard the components is the easiest option, so a high number of VPs was expected. VPs are 'the easy way out' – one does not need to think thoroughly about a PV, but only needs to focus on the definition provided. However, VPs included a number of interesting elements, such as gesture-like movements and conventional symbols in the drawings. Visual paraphrases with included text (VP-TXT) formed a relatively small category with only 51 answers (3,46%). Partial integration was the second most frequent category with 241 cases (16,37%). Partial integration shows that the participants attended to the figurative meaning of the whole PV construction, but that they also included the components' meanings, which is a sign of complex strategic construal. There were only 32 cases of complete integration (CI) (2,17%). Even though this category is quite small, it is conceptually the most complex one and it points to an extremely elaborate attempt of representing visually strategic construal of complex linguistic meaning and its 'building components'. The categories of drawings that in any way address the meaning provided in the questionnaire account for 74.04% of the data analysed.

The categories which include answers with misinterpretation of meaning are the following: visual paraphrase with misconstrued context (VP-MIS), partial integration with misconstrued context (PI-MIS) and misinterpretation (MIS). The category of misinterpretation (MIS) refers to answers which are in no way related neither to the figurative meaning nor to the meaning of the components. The categories of visual paraphrase with misconstrued context (VP-MIS) and partial integration with misconstrued context (PI-MIS) included drawings that did in some way indicate the meaning provided in the questionnaire, but in a context that does not correspond to the actual meaning of the PV construction in question. The analysis of the answers resulted in 177 cases of visual paraphrase with misconstrued context (12.02%), 4 cases of partial integration with misconstrued context (0.27%) and 86 cases of misinterpretation (5.84%), as shown in Table 1. When we consider all three categories together, the result is 267 cases of some sort of misconstrued meaning. One possible explanation for misinterpretation of meaning is that the participants were not familiar with the meaning in question. However, there were also cases that are likely to indicate simple lack of attention. For example, with the verb *take out* 'go out socially with somebody', there were cases of misinterpretation which showed people taking out the trash, indicating that the participant did not even read the meaning provided in the questionnaire.

Very frequent examples of misinterpretation were found when analysing the verb *break down* meaning 'stop working'. There was a considerable number of answers in the category of visual paraphrase with misconstrued context. The drawings showed people that stopped working, in the sense of 'stopped studying', which was signalled by a person leaving books and notes behind. With visual paraphrases with misconstrued meaning, our interpretation was that the participants were not familiar with the meaning of the verb, i.e., did not know its context of use. *Break down* is a frequent particle verb even at elementary levels, featuring machines such as cars being broken down. However, our participants were probably guided by their experience as high schoolers, and this experience overrode the most frequent use of the verb in question. Being a high schooler means studying all the time, and the first thing on their minds when thinking about 'stop working' is simply to stop studying. In short, they used their previous experiences in order to construct and draw the meaning. Nevertheless, even these answers are valuable because they suggest that strategic meaning construal depends on a variety of factors that are salient for particular learners.

To sum up, the categories which represent the PV's figurative meaning provided in the questionnaire are VP, VP-TXT, PI and CI, and they account for 74.04% of the data analysed. In conclusion, the first hypothesis was confirmed. The categories of answers with misinterpreted meaning (VP-MIS, PI-MIS and MIS) account for 18.13% of the answers. As already mentioned, even the categories where the PV's meaning was not represented in the right context offer insight into the dynamic, subjective meaning affected by one's experiences.

7.2. The frequency of PV components' meanings included in the drawings

Our second hypothesis was that some drawings will include meaning(s) of one or both components of the PV, and the third hypothesis was that some drawings will show evidence of conceptual integration. As already discussed, our initial aim was to examine the frequency of PV components' meanings included in the drawings, which is a sign of complex strategic construal. The main categories that include components' meanings in the drawings are literal compositionality (LC), partial integration (PI), partial integration with misconstrued context (MIS-PI) and complete integration (CI). Table 1 shows that there were 48 cases of LC (3.26%), 241 cases of PI (16.37%), 32 cases of CI (2.17%) and 4 cases of MIS-PI (0.27%), all together resulting in 325 cases (22.07%).

With the category of literal compositionality, the focus of the participants' attention was on the PV's components. They focused on drawing the literal meaning of the lexical and the topological component. Even though in these cases the figurative meaning is disregarded, LC still shows that the participants tried to "unpack" the particle verb, which is a sign of their strategic thinking in constructing linguistic meaning. The categories of PI, CI and PI-MIS offer valuable evidence of complex strategic construal. The data has shown that some of the participants did recognize one or both components as being important contributors for the figurative meaning. When discussing signs and representations, Gunther and Kress (2006) argue that we are most interested in what we perceive as the "criterial aspect" of some object, and that criterial aspect then becomes the representative of the object in given context (p. 7). Same as assigning a sign to an object, participants choose what is representative of which meaning. Geld and Stanojević (2018) point out that each visual representation shows one's

choice of elements to be represented. The choice means that the learner perceived an element as an "sufficiently important strategic trigger" and decided to visually represent it[10] (p. 104).

In this study, the elements of interest were the lexical component of the PV, the topological component of the PV and the figurative meaning of the PV. The assumption was that if a component is recognized as semantically valuable, it will be included in the drawing, along with the figurative meaning. Including one or both PV components' meanings is a sign of complex strategic construal. As data shows, 22.07% of participants decided that one or both components were significant, and decided to include them in their drawings. With partial integration (16.37%), the participants processed that the meaning of one component is important for the figurative meaning. The cases forming the category of complete integration are another step forward in terms of the complexity of what was visually represented, but their frequency is, quite expectedly, very low (2.17%). In these answers we could see that the participants were able to recognise individual contributions of both components as well as integrate and relate the meaning(s) of the components to the figurative meaning of the whole PV construction provided in the task.

To sum up, the second hypothesis was confirmed – 22.07% of participants did include meanings of one or both components of PVs in their drawings. Consequently, the third hypothesis is also confirmed, since the categories of PI, CI and PI-MIS offer evidence of conceptual integration.

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[10] Author's translation from Croatian.

ALL								
LC	VP	VP - TXT	VP-MIS	PI	PI-MIS	CI	MIS	N/A
cut down	2	30		1	34		20	4	1
cut up	4	26		20	39				3
cut in	3	65	2	2	7		2		11
cut out	9	12	4	49	5	1		10	2
break down	1	27		42	9			8	5
break up	1	20	8	2	58			2	1
break in		76	1	3	3			5	4
break out		26		4	50	1	4	3	4
take down	1	80		2	4		1	2	2
take up	3	49		15				19	6
take in	3	63	5		11		1	8	1
take out	2	68	2	6	2		1	1	10
put down	1	62	10	2	11		1	2	3
put up	14	34	10	18			2	8	6
put in	2	59	7	6	6	1		6	5
put out	2	69	2	5	2	1		8	3
TOTAL	48	766	51	177	241	4	32	86	67
	3,26%	52,04%	3,46%	12,02%	16,37%	0,27%	2,17%	5,84%	4,55%

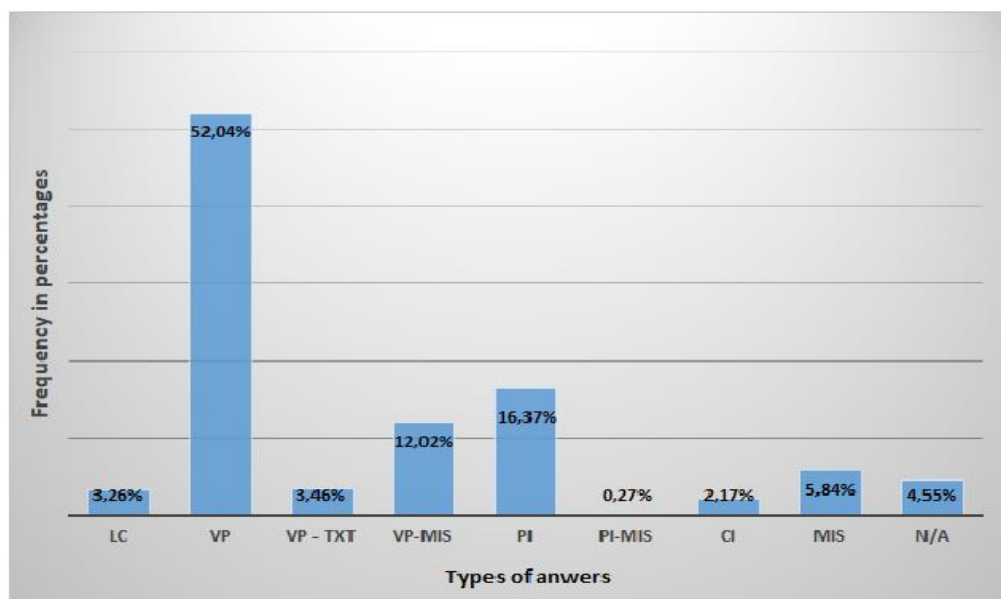Table 1. The frequency of the types of answers in the whole sample (N=92)

Figure 11. The frequency (%) of the types of answers in the whole sample (N=92)

7.3. Conventional symbols and body language detected in the drawings

7.3.1. Conventional symbols in the drawings

While analysing the data, it became clear that subjects' drawings include a considerable number of gesture-like elements signalling the meaning. Moreover, participants also used universal conventional symbols to express the PV constructions' figurative meaning. This tendency was already suggested by Geld and Stanojević (2018), who discuss conventional symbols when examining learners' self-generated visual representations of meanings. They argue that certain PV meanings are so "experientially salient" that the meaning itself includes certain prominent elements which prevent the participants from focusing on the components of a PV construction. (p. 115)[11].

The prominent elements are those which are salient for us as speakers of a language. They are well-known, we encounter them in everyday situations and we share them with other members of our culture. In short, prominent elements become conventional symbols. Some of the symbols Geld and Stanojević (2018) mention were found relevant in this study. These are:

- A piece of clothing for the verb *break in* meaning 'wear something until it is comfortable'
- Scissors for cutting with all the verbs including *cut*
- An image of a body for the verb *put out* meaning 'injure your back, shoulder'
- Broken machines such as cars, computers and phones for the verb *break down* meaning 'stop working'
- Cars for the verb *cut up* meaning 'suddenly drive in front of another vehicle in a dangerous way'

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[11] Author's translation from Croatian.

Furthermore, other symbols appearing in the data in this study included:

- A broken heart for the verb *break up* meaning 'end a relationship'
- Prison bars for the verb *break out* meaning 'to escape'
- The letter X as eyes of a dead person for the verb *cut down* meaning 'kill somebody'
- Light bulb for the verb *take in* meaning 'understand something'
- Papers, pens and wavy lines for the verb *take down* meaning 'write something'
- Various containers such as glasses, bottles and bowls for the verb *take up* meaning 'fill an amount of space or time'

As argued, conventional symbols represent something prominent, well-known to us. When constructing meaning we use our experience. Geld and Stanojević (2018) argue that our cultural experience has a "potential impact" on us when constructing reality, which means it also has an impact on strategic construal of meaning and "strategic performance"[12] (p. 129).

Furthermore, a part of a study presented by Geld and Stanojević (2018) shows that conventional symbols are not strictly culture-dependant. When analysing visual representations of particle-verb constructions, Geld and Stanojević analysed data from Croatian, Mexican and Arab participants. Similarities were found across all the answers analysed, and the authors conclude that "at the level of visual grammar and cultural realities, the drawings feature same non-topological elements that have the same metaphorical potential and are shown in the same way" (Geld and Stanojević, 2018, p. 129)[13]. In short, there are conventional symbols shared across different cultures. One of the conventional symbols recognized in this study is pen and paper representing writing, as shown in Figure 12.

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[12] According to Geld and Stanojević, strategic performance consists of structured thoughts and ideas, activites, etc. that result from the speakers'/learners' strategic thinking triggered by a variety of strategic triggers. Author's translation from Croatian.
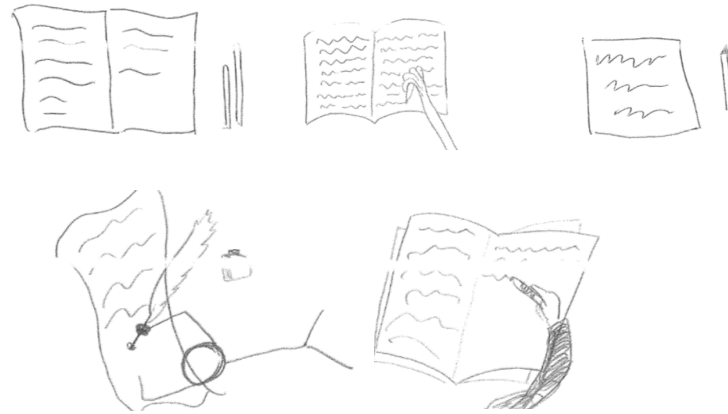
[13] Author's translation from Croatian.

Figure 12. Conventional symbols for the verb *take down* meaning 'write something'

As previously stated, participants use conventional symbols in order to express themselves more clearly, to make the visual representation as legible as possible, and therefore, to transmit the message. They are communicating by expressing themselves visually. When discussing communication, Gunther and Kress claim that communication requires our messages to be "maximally understandable in a particular context" and that we choose the form of expression which we believe will make the massage "maximally transparent" (p. 13). The symbols are entrenched in our minds and we are not even aware of using them with the goal of making our message as comprehensible as possible. Precisely due to the fact that they are so entrenched, they appear as only natural and highly understandable to the recipient of a certain message. In short, the goal is establishing understanding between the sender and the recipient of the message. The understanding is often ensured by using conventional symbols. For example, our participants decided to draw a light bulb to represent understanding, as shown in Figure 13.

Figure 13. A lightbulb for the verb *take in* meaning 'understand or absorb something'

7.3.2. Gesture-like movements and facial expressions in the drawings

In addition to conventional symbols, we have come across a high number of gesture-like movements and facial expressions. McNeil (2006) defines the term 'gesture' as "a multiplicity of communicative movements, primarily but not always of the hands and arms" (as cited in Gugo and Geld, 2017, str. 127). As with conventional symbols, we use gestures to make our message more comprehensible. Hostetter and Alibali (2008) claim that people use gestures when they want to describe mental images, especially "spatial and motor information" (p. 500). Their claim is of particular interest to the study, since the assumption is the participants used mental images to form visual representations. Furthermore, Monteparte, Koff, Zaitchik and Albert (1999) present a study with evidence that we use body movements and gestures in order to signal emotions, and vice versa, as cues to recognise emotions. Another way one can express emotions and communicate them across is with facial expressions, which were also detected in the data. Due to the nature of our data, we cannot talk about gestures, but gesture-like movements and facial expressions integrated in the drawings:

- Raging faces, hands in the air for the verb *break down* meaning 'stop working'
- Smiling signalling comfort for the verb *break in* meaning 'wear something until it is comfortable'
- Mouth as a wavy line or a straight line signalling discomfort for the verb *break in* meaning 'wear something that is comfortable'
- Crying for the verb *break up* meaning 'end a relationship'
- Various emotions such as crying, smiling and raging of the killer for the verb *cut down* meaning 'kill somebody'
- Mouth as a straight line representing annoyance for the verb *cut in* meaning 'interrupt a conversation'
- Crying, sad faces for the verb *put down* meaning 'criticize somebody and make them feel stupid'
- Faces signalling pain, yelling, discomfort for the verb *put out* meaning 'injure your back, shoulder, hip, etc.'

It is evident that participants felt the urge to enrich the visual meaning they are trying to express with emotions, which we often express with gestures and facial expressions. The presence of gesture-like movements and facial expressions signalling emotions in the drawings points to the fact that various cognitive processes collaborate when constructing a particular meaning.

It is compelling to look at cases where various emotions were represented for the same verb, i.e. same situation. For example, when analysing data for *cut down*, a wide range of emotions was found. In some cases, the 'killer' is in shock, crying and lifting its hands to the head in disbelief. In other cases, the 'killer' is smiling, and we can say, not regretting the act. It shows that each participant focuses on something different, which they find important for meaning. The participants opt for various gestures because of different situations probably seen in movies and TV shows. Let us take a look at a diverse range of gestures represented in our participants' drawings of *cut down* meaning 'kill somebody':

Figure 14. Various emotions for the verb *cut down* meaning 'kill somebody'

Varying emotions were also noticed with the verb *break in* 'wear something until it is comfortable'. Some participants drew characters with smiles on their faces, signalling comfort. The smile seems to indicate that the piece of clothing is broken in, that it fits and that is it comfortable. On the other hand, other participants decided to focus on the process of breaking a piece of clothing – so, they decided to draw faces with mouths as wavy or straight lines which signal discomfort, and show the process of breaking something in as being in progress. Those type of answers provide insight into the process of constructing a particular meaning. We see that each participant chooses something that seems the most salient element for the meaning in question, something that he/she finds important at that particular moment and in that particular context. Previous experiences are in the background, used to construct a meaning and to represent it visually. Geld and Stanojević (2018) state that the verb *break in* 'wear something until it is comfortable' is "well-known to us from our everyday experience – remembering the unpleasant feeling of pinching when our shoes are uncomfortable" [14] (p. 116). For that reason, the participants probably used their own experiences, as various examples show in Figure 15.

Figure 15. Various emotions for the verb *break in* meaning 'wear something until it is comfortable'

[14] Author's translation from Croatian

There were cases when almost all participants included the same facial expression (emotion) for a particular meaning. For example, many decided to include crying in their visual representation of the verb *break up* meaning 'end a relationship', as seen in Figure 16. Interestingly, in most cases, the female character is the one crying. One of the reasons for that may be our society and the way we are conditioned to think – our reactions are somewhat pre-determined because women are generally perceived as more emotional. Generally speaking, it is evident that many participants feel as if crying would be a good element to include when representing the end of a relationship, probably also relying on their own experiences.
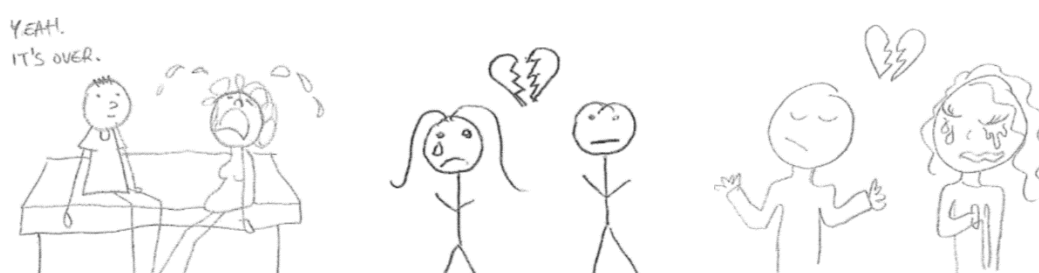
Figure 16. Crying for the verb *break up* meaning 'end a relationship'

In conclusion, our analysis has shown that the participants find conventional symbols, gesture-like movements and facial expressions important and included them in their visual representations of meaning. They also include elements related to body language such as gesture-like movements and facial expression which signal diverse emotions. Our participants' answers indicate that people rely on both their individual and shared experiences when constructing and representing linguistic meaning. In other words, their construal is highly dynamic.

8. Conclusion

The hypotheses formed at the beginning of the study were confirmed. Subjects' drawings did, in most part, represent the PV constructions' figurative meanings provided in the questionnaire. Furthermore, the answers in the categories of partial and complete integration showed that some participants found the meaning(s) of one or both components important enough for the PV construction's figurative meaning. Consequently, these categories of answers offer evidence of conceptual integration.

Results have shown that participants formed mental image that represented figurative meanings in question, and they were able to communicate the content by visually representing those meanings. The results may serve as further evidence for cognitive linguists' claims that various cognitive processes collaborate with experience in the process of meaning construal and both aspects of those processes as well as experience get coded in linguistic meaning. These findings are relevant in a variety of context, and especially in the context of meaningful language teaching. More specifically, these findings are important for re-considering the ways we teach PV constructions and idiomatic language in general. Despite traditional claims, it is possible to relate the meaning of a particular PV construction with the meanings of its components, which makes the construction motivated and, hence easier to process and learn.

And additional value in our data are specific qualitative elements such as conventional symbols, gesture-like movements and facial expressions in the drawings. While conventional symbols were already noticed in similar studies, gesture-like movements and facial expressions had not been previously discussed. These specific elements could serve as a good starting point for future studies on the role of conventional symbols and the elements related to representation of body language in the process of strategic construal of meaning.

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List of tables and figures

Summary in Croatian – Sažetak

Cilj ovog rada bio je istražiti vizualnu reprezentaciju engleskih fraznih glagola hrvatskih učenika srednje škole. Cilj je bio istražiti na koji se način frazni glagoli prikazuju, to jest, smatraju li sudionici komponente fraznih glagola dovoljnih bitnima za značenje da bi ih prikazali svojim crtežima. Postoje razna istraživanja na temu strateškog konstruiranja značenja fraznih glagola te na temu pozitivnih učinaka slika u procesu. Međutim, ne postoji mnogo istraživanja koja proučavaju sam sadržaj individualnih vizualnih prikaza te vezu istih sa značenjem. Individualne vizualne reprezentacije pružaju uvid u suradnju drugih kognitivnih procesa i kognitivne motivacije u procesu konstruiranja značenja. Stoga, zanimalo nas je što će biti prikazano u vizualnim prikazima fraznih glagola. Uzorak se sastojao od 4 razreda srednjoškolaca u dobi od 15 do 18 godina (N = 92). Instrument se sastojao od 24 engleska frazna glagola, ali samo je 16 glagola analizirano u ovom radu. Sudionici su uz svaki frazni glagol imali dano značenje, te zadatak crtanja navedenog značenja. Iz rezultata su proizašli zanimljivi zaključci. Veliki dio (74.04%) crteža ispitanika odgovarao je figurativnim značenjima fraznih glagola koji su dani u upitniku. Dio crteža ispitanika (22.07%) uključivao je značenje jedne ili obje komponente fraznog glagola, što znači da su podaci pružali dokaze o konceptualnoj integraciji značenja. Osim toga, nova otkrića uključuju podatke koji pružaju uvid u uporabu konvencionalnih simbola i gesta u zadatku vizualne reprezentacije značenja.

Ključne riječi: konceptualna integracija, konvencionalni simboli, geste, strateško konstruiranje značenja, frazni glagoli, vizualna reprezentacija
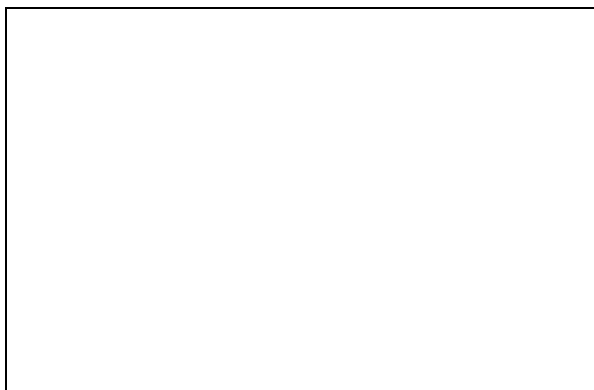
Appendix 1

Pristupanjem rješavanju ovog istraživanja dajete pristanak da se rezultati koriste za izradu diplomskog rada i kao dio većeg znanstvenog projekta. Zadaci se rješavaju anonimno i ni na koji način neće utjecati na ocjenu iz engleskog niti opći uspjeh u školi.

Task

a) You have a list of 24 phrasal verbs (24 meanings). Each verb is followed by a short dictionary definition of its meaning.

b) Please go through the verbs one by one and try to do the following:

Take a look at each phrasal verb and then its meaning. For each phrasal verb, try to draw how the constructions makes sense – that is, what it is in each construction that produces the meaning given. Use the boxes below the verbs.

1) cut out – stop doing something