Conceptual integration and humor: Can learners unpack the joke?

Klarić, Martina

Sveučilište u Zagrebu

Filozofski fakultet

Odsjek za anglistiku

Katedra za metodiku

CONCEPTUAL INTEGRATION AND HUMOR: CAN LEARNERS "UNPACK" THE JOKE?

Diplomski rad

Studentica: Martina Klarić

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

Zagreb, 2020

University of Zagreb

Faculty of Humanities and Social Sciences

Department of English

TEFL Section

CONCEPTUAL INTEGRATION AND HUMOR: CAN LEARNERS "UNPACK" THE JOKE?

Graduation thesis

Student: Martina Klarić

Supervisor: Assoc. Prof. Renata Geld

Zagreb, 2020

Examining committee:

Assistant professor Stela Letica Krevelj, PhD

Jasenka Čengić, M. Ed.

Associate professor Renata Geld, PhD

Content

CONCEPTUAL INTEGRATION AND HUMOR: CAN LEARNERS "UNPACK" THE JOKE?

Abstract

The subject of this thesis is conceptual integration, which is a basic cognitive operation that enables people to construct meaning by integrating different concepts, and its connection to humor appreciation. More specifically, the study that was conducted for the purpose of this thesis aimed to investigate whether Croatian EFL learners would be able to understand the point of jokes in English and whether their analysis of jokes would be guided by the principle of conceptual integration called "unpacking", which can be defined as determining the input spaces that form the blended space in a joke. Although, to the author's knowledge there are no previous studies addressing the language learners' capacity to "unpack" humor, there are some studies that have proved to be useful and relevant for this thesis. The participants were first and fourth year students from the Department of English Language and Literature at the University of Zagreb. They were asked to analyze five jokes and try to describe what goes on in their minds when they read them.

Key words: conceptual integration, joke analysis, unpacking principle, EFL learners

1. Introduction

Gilles Fauconnier and Mark Turner, linguists and cognitive scientists, in their prominent work called *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities* (2002), argue that the emergence and gradual development of the cognitive capacity to put two different things together resulted in human beings being able to perform cognitively in a way that no other species can. They named this cognitive operation "blending" and claimed that it continuously developed "until it arrived at the critical point of double-scope blending" (2002, p. 186), which enabled the emergence of human singularities such as art, religion, science and language (*ibid.*, p. 174-175). One of the important properties of human language is its "equipotentiality", which means that it can be used to express any situation, and this extraordinary property is the consequence of double-scope conceptual integration (*ibid.*, p. 179). Scientific findings suggest that these modern human performances appeared and spread rapidly in the same epoch, about 50 000 years ago (*ibid.*, p. 187), marking the birth of "cognitively and socially modern human beings" (*ibid.*, p. 193).

Starting from the abovementioned considerations, Fauconnier and Turner developed the conceptual blending theory or the conceptual integration theory, putting it forward as a theory that can be used to account for many different cognitive phenomena. Furthermore, the theory was preceded by Fauconnier's mental space theory, which also dealt with meaning construction from a cognitive point of view. Fauconnier (1994) claimed that the process of meaning construction involves constructing "domains" or "interconnected mental spaces", which we structure with "elements, roles, strategies and relations" (p. 1). His theory was further developed through the conceptual integration theory, in which, as it will be seen in the theoretical part of the thesis, the concept of mental spaces has a vital role.

According to Fuconnier and Turner (2002), conceptual integration makes people what they are, it is the foundation of the way they think and live. Grammar, complex numbers, rituals, ceremonies, fantasies, different technologies and all kinds of discoveries and inventions are only a few of the numerous examples of what this mental operation allows people to come up with, understand and use. Due to the possibility to use it to explain a wide range of phenomena, especially in the field of cognitive linguistics, conceptual integration approach was also used in the field of humor, which is to some extent motivated by Fauconnier and Turner's (2002) claim

that jokes are also a product of conceptual blending (p. 368). Therefore, the same approach to humor will be adopted in this thesis and conceptual integration theory will be used in joke analysis. The study conducted for the purpose of this thesis is focused on comprehension or, metaphorically speaking, the process of "unpacking" jokes in English by Croatian EFL learners. The first part of the thesis is dedicated to theoretical background that is essential to understand conceptual integration in itself, as well as its connection to humor. After that comes a description of the study, the results, and a discussion and conclusion relating to the question of whether learners can identify the conceptual blends that form the jokes, that is, whether they can successfully unpack the joke by identifying its constituents.

2. Conceptual integration

Gilles Fauconnier and Mark Turner introduced conceptual blending, also known as conceptual integration, into linguistics, defining it as "a basic mental operation that leads to new meaning, global insight, and conceptual compressions useful for memory and manipulation of otherwise diffuse ranges of meaning" (2003, p. 57-58). In *The Way We Think: Conceptual Blending and The Mind's Hidden Complexities*, they presented various evidence that conceptual integration is a basic mental operation that is fundamental to all activities of the human mind (2002, p. 37-38) and it has a vital role in construction of meaning in everyday life (2003, p. 58). The conceptual integration theory arose partly as a reaction against the form approaches to meaning construction, according to which the meaning of the word derives from the form of the word. Fauconnier and Turner opposed these approaches, claiming that the form prompts the meaning, but the meaning itself is actively constructed through complex mental operations in our minds (2002, p. 5). The principle on which conceptual integration operates is matching between two different input spaces and then selectively projecting from them into a novel blended input space that contains emergent structure (Fauconnier, 2001). In order to fully grasp the operation of conceptual blending, the following section will be dedicated to explaining it by means of an example that is well known in the existing literature on conceptual integration

2.1. The Buddhist Monk

One of the examples of conceptual blending that is often encountered in literature is the example of the Buddhist Monk. Fauconnier and Turner also use it in *The Way We Think:*

Conceptual Blending and The Mind's Hidden Complexities to illustrate how conceptual blending works. The example is actually a riddle that goes like this:

> A Buddhist Monk begins at dawn one day walking up a mountain, reaches the top at sunset, meditates at the top for several days until one dawn when he begins to walk back to the foot of the mountain, which he reaches at sunset. Make no assumptions about his starting or stopping or about his pace during the trips. Is there a place on the path that the monk occupies at the same hour of the day on the two separate journeys? (Fauconnier, Turner, 2002, p. 39).

Fauconnier and Turner propose a way to solve the riddle. Instead of imagining the Buddhist Monk walking up one day and then walking down several days later, one should imagine that he is taking both walks on the same day. At some point he must meet himself on the path and this is actually the place that he occupies at the same hour of the day on the two separate journeys. Although we do not know where this place is, the fact that the Buddhist Monk must be there at the same time of the day on his two separate journeys is a solution to the riddle (Fauconnier, Turner, 2002, p. 39). However, the concern here is not finding the abovementioned place, but rather finding out how people are able to solve the riddle in this way. People know that it is not possible for the Buddhist Monk to make the journey up and down at the same time and meet himself at a certain place on the path. But Fauconnier and Turner suggest that people can imagine this seemingly impossible situation without any difficulty owing to the operation of conceptual blending. The scenario of two people meeting each other is very familiar to people and using it is key to finding the solution to the riddle (Fauconnier, Turner, 2002, p. 39). Imagining the Buddhist Monk meeting himself means blending his journey up the mountain and his journey down the mountain, and thus producing the emergent structure in the form of an "encounter" (Fauconnier, Turner, 2002, p. 40).

2.2. The network model

Conceptual integration is usually studied and described in terms of the network model of conceptual integration (Fauconnier, Turner, 2002, p. 40), which will be elaborated and illustrated on the example of the Buddhist Monk. The basic terms and concepts that must be presented in

order to elaborate the network model are the following: mental spaces, input spaces, cross-space mapping, generic space, blend and emergent structure.

Mental spaces are defined as "small conceptual packets constructed as we think and talk" (Fauconnier, Turner, 2003, p. 58). Coulson (2001) explains that "a mental space contains a partial representation of the entities and relations of a particular scenario as perceived, imagined, remembered, or otherwise understood by the speaker" (p. 21). Mental spaces contain elements, i.e. the discourse entities, and are structured by frames (Fauconnier, Turner, 2003, p. 58), i.e. conventional and schematic organizations of knowledge (*ibid.*, p. 60). In other words, elements represent each of the discourse entities and frames represent the relationships between the elements (Coulson, 2001, p. 21). The term used to refer to mental spaces that build up a certain conceptual integration is the term of input spaces (Fauconnier, Turner, 2002, p. 40). In the Buddhist Monk example, there is an input mental space for ascent and an input mental space for descent. The elements in the two mental spaces are structured by the frame of *"walking along a path"* (Fauconnier, Turner, 2002, p. 40).

Another important term in conceptual integration network is cross-space mapping. Elements in one mental space have counterpart elements in the other (Coulson, Oakley, 2000, p. 177) and these counterparts are connected through the process of partial cross-space mapping (Fauconnier, Turner, 2002, p. 41). In this way, "mountain, moving individual, day of travel, and motion in one mental space" are connected with "mountain, moving individual, day of travel, and motion in the other mental space" (Fauconnier, Turner, 2002, p. 41).

A generic mental space contains the elements that the input mental spaces have in common (Fauconnier, Turner, 2002, p. 41). Its function is to help establish mappings between the input mental spaces and thus enable conceptual integration to continue (Coulson, 2001, p. 118). The generic space in the example of the Buddhist Monk contains "a moving individual and his position, a path linking foot and summit of the mountain, a day of travel, and motion in an unspecified direction" (Fauconnier, Turner, 2002, p. 41).

"The blend" is the term that is often used to refer to the blended space in a conceptual integration network. After conducting partial cross-space mapping between the input mental spaces, the next step is to selectively project from the input spaces into a new mental space, the

blended space (Fauconnier, 2001). In the example of the Buddhist Monk, the mountain slopes from both input mental spaces are projected to the same single mountain slope in the blended space (Fauconnier, Turner, 2002, p. 41). Also, the two different days of travel are mapped onto a single day. However, the two moving individuals and their positions are mapped according to the time of the day and their opposite directions of motion are maintained (Fauconnier, Turner, 2002, p. 42).

The fact that the projection of structure from the input spaces into the blended space is selective, enables the development of an emergent structure in the blend (Fauconnier, Turner, 2002, p. 42). By means of the processes of composition, completion and elaboration, "the blend develops structure not provided by the inputs" (Fauconnier, Turner, 1998, p. 1). Through the process of composition the elements from the input spaces are composed in such a way that relations that do not exist in the separate inputs are established. Counterparts from the input spaces can be brought into the blended space "as separate elements or as a fused element" (Fauconnier, Turner, 1998, p. 13). In the example of the Buddhist Monk, composition generates two monks making two journeys. This is not the case in neither of the two inputs. Accordingly, "the two days in the inputs are fused into one day in the blend, but the two monks from the inputs are brought into the blend as distinct entities" (*ibid.*). After composition, the next step is completion in which "composed structure is completed with other structure" (*ibid.*). This other structure is unconsciously recruited from background knowledge and frames that are already known to us. In this way, the structure of two monks moving on the path is a part of a common background frame of "two people starting a journey at the same time from the opposite ends of a path" (Fauconnier, Turner, 2002, p. 43). Elaboration is the third process that is involved in constructing the blend. It is defined as "running of the blend" (*ibid.,* p. 44), which means that the blend, which has been previously integrated through composition and completion, is developed "through imaginative mental simulation" (Fauconnier, Turner, 1998, p. 14). Imagining the two monks moving towards each other on the path results in their encounter at a certain point. The imagined encounter is obviously the emergent structure in the blend since it does not exist in any of the two input spaces. Furthermore, the blend can be run in many different ways. Fauconnier and Turner (2002) give an example of the two monks meeting each other and having "a philosophical discussion about the concept of identity" (p. 49). All three of the described blending processes participate in generating the emergent structure in the blend.

In summary, the basic steps of creating an integration network are "setting up mental spaces, matching across spaces, projecting selectively to a blend, locating shared structures, projecting backwards to inputs, recruiting new structure to the inputs or the blend, and running various operations in the blend itself" (Fauconnier, Turner, 2002, p. 44). Since the integration network is a common means of describing conceptual blending, it will be used in this thesis as well.

2.3. The optimality principles of conceptual integration

According to Fauconnier and Turner (1998), there are five optimality principles that guide conceptual integration with the goal of creating blended spaces at human scale: integration, topology, web, good reason and unpacking (p. 37). Although Fauconnier and Turner (2002) expand the list of optimality principles to eight, naming them "governing principles" and describing them in greater detail, only the initial five optimality principles will be explained in this section because they meet the theoretical requirements of this thesis.

The integration principle states that the blend "must constitute a tightly integrated scene that can be manipulated as a unit" (Fauconnier and Turner, 1998, p. 37). As conceptual integration involves projecting from different and sometimes incompatible input spaces into one blended space, integration in the blended space "enables the thinker to run the blend without constant reference to the other spaces in the network" (Fauconnier and Turner, 2002, p. 329).

The term topology refers to "organizing relations within and between input spaces" (*ibid.*, p. 325). The first is called "inner-space topology" and the second "outer-space topology" (*ibid.*). According to the topology principle, it is optimal to set up the blend and the input spaces so that the way in which elements in the input spaces and their outer-space relations are organized is "reflected by inner-space relations in the blend" (*ibid.*, p. 327).

According to the web principle, "manipulating the blend as a unit must maintain the web of appropriate connections to the input spaces easily and without additional surveillance or computation" (Fauconnier and Turner, 1998, p. 37). Although we are mostly consciously focused on only one input space, the entire network is active. Since connections in the web are maintained unconsciously, "some work in the blend can have automatic effects in the inputs or across inputs" (Fauconnier and Turner, 2002, p. 331).

Fauconnier and Turner mention the following principle under two names: the good reason principle (1998) and the relevance principle (2002). It states that "an element in the blend should have relevance, including relevance for establishing links to other spaces and for running the blend" (Fauconnier and Turner, 2002, p. 333). An element in the blend gains relevance "by indicating its connections to other spaces or indicating the lines along which the blend is to develop" (*ibid.*). When communicating, the speaker and the listener know this, and it directs their "construction and interpretation of the network" (*ibid.*, p. 334).

Finally, according to the unpacking principle, "the blend all by itself should prompt for the reconstruction of the entire network" (*ibid.,* p. 332). As Fauconnier and Turner (2002) explain, if the entire network of the blend is active, running it provides inferences for the other parts of the network (p. 332). However, if the network is not entirely built or some important parts of it are not active, the blend prompts for their activation (*ibid*.). In addition, Fauconnier and Turner (2002) claim that "disintegrations and incongruities in the blended space" make the process of unpacking the blend easier (p. 333). Incongruity is indispensable for humor and this fact makes it possible to link conceptual integration and humor, as it will be explained in more detail in the following section.

3. Conceptual integration and humor

Some authors (Coulson, 2001, Fauconnier and Turner, 2002) mention jokes as typical examples of the operation of conceptual blending. However, Coulson (n.d.) goes even a step further by proposing that blending is "an inherent feature of humor" (Blending and Humor section, para. 1). Furthermore, Coulson (n.d., 2001) identifies the connections between the conceptual blending theory and some previous theories of humor. Researching humor, Koestler (1964, as cited in Larkin-Galiñanes, 2017) came up with a term "bisociation" (p. 14), which is defined as the perception of a situation or an idea "in two frames of reference" (p. 14). Koestler (1964, as cited in Coulson, n.d.) explains that the bisociation of an idea or event "with two habitually incompatible matrices" will result in "a comic effect", on the condition that the narrative possesses "the right kind of emotional tension" (Blending and Humor section, para. 2). Essentially, what Koestler proposes is that humor often requires "the unlikely combination of related structures" (Coulson, n.d., Blending and Humor section, para. 3). Koestler's bisociation theory is subsumed under the category of the "incongruity theory" of humor (Larkin-Galiñanes,

2017, p. 12) which has been shown to be most useful for contemporary linguistic theories (Larkin-Galiñanes, 2017, p. 14). In terms of this theory, understanding a joke is seen as "a two-stage process involving the discovery of an incongruity followed by the resolution of that incongruity by the application of a different cognitive rule" (Larkin-Galiñanes, 2017, p. 14). As evident from theoretical constructs described so far, it is possible to connect Koestler's bisociation theory and the incongruity theory of humor with conceptual blending. As previously stated, conceptual blending involves matching between two different input spaces and selectively projecting to a novel blended space. In addition, according to Fauconnier and Turner (2002), "the flexibility of blending with selective projection and contextual elaboration allows for situations that do not fit the usual characterizations" (p. 141). Therefore, the abovementioned "unlikely combination of related structures" can be seen as matching between two different input spaces in such a seemingly unfitting way that it is funny. In order to make this claim more understandable, it is necessary to illustrate it on an example of a specific joke. The following joke is discussed by Coulson (n.d., Blending and Humor section, para. 5):

Q: Why did the chicken cross the road?

A: To get to the other side.

In terms of conceptual blending, there are two input spaces in this joke. The first input space contains chickens that live in barnyards and are, like all animals, known to behave instinctively. The second input space contains people who live in villages or cities and are known to behave intentionally. Matching between these two input spaces and selectively projecting from them results in a blended space that contains chickens that live in villages or cities like people and act intentionally like people. Coulson (n.d.) comments on this joke by stating that the incongruity resides in the question, which is a blend in which the chicken is conceptualized as a person (Blending and Humor section, para. 8). It is not usual to have chickens crossing the street, especially not intentionally. The resolution of the incongruity is found in the answer which is "so obvious that it is funny" (Coulson, n.d., Blending and Humor section, para. 6). To prove that incongruity is crucial to humor, Lewis (1989, as cited in Coulson, n.d.) modifies this joke in such a way that the chicken is framed as a chicken, not a person:

Q: Why did the chicken cross the barnyard?

A: To get some scraps.

Obviously, the joke is not funny anymore. A chicken who crosses the barnyard to eat some scraps fits the regular chicken frame unlike a chicken who crosses the road to get to the other side. This comparison supports the conclusion that what gives rise to the funniness of a joke are precisely "the various incongruities, contradictions and tensions compressed within the blended space" (Fujii, 2008, p. 187). Fujii (2008) also emphasizes the fact that "the clash within the blend" generates humor (p. 185). Furthermore, although incongruity in the blended space is crucial for appreciation of the joke, Attardo (1994) claims that this cannot happen without the resolution of that incongruity (p. 143). However, as Attardo (1994) explains, this does not mean that the resolution completely eliminates the incongruity, but rather that the two "coexist" (p. 144). Namely, resolution enables one to perceive and understand the source of incongruity, and thus to get the joke. Another important thing that Attardo (1994) points out is that the resolution of the incongruity in jokes is not "real", but only "accepted playfully as a pseudo-resolution" (p. 144). This also can be shown on the example of the abovementioned chicken joke in which, as it has been said, the resolution lies in the answer "*to get to the other side".* Although the reader or the listener knows that it is impossible for the chicken to cross the road intentionally or to possess any kind of intentionality that is characteristic of human beings, they can still find "an element of resolution" (Attardo, 1994, p. 144) in the fact that, if chickens behaved like human beings, it would be perfectly reasonable for them to cross the road with the intention of getting to the other side.

3.1. Unpacking the joke

In the previous section, the link between conceptual integration and jokes has been established by stating that jokes involve blends which "have incongruous properties that people find funny" (Coulson, 2005, p. 118). Now, the question is how exactly people "get the joke". To be more specific, the question is what goes on in people's minds that enables them to appreciate the joke. The view that is adopted in this thesis is that getting the joke is equivalent to unpacking the joke. It has already been stated that it is necessary to resolve the incongruity of the joke in order to get it. Analyzing humorous political cartoons, Coulson (n.d.) concludes that "unpacking the blend and structuring the input spaces allows the viewer to solve the puzzle" (Sex, Lies and Blending section, para. 1) and, thus, understand what is funny. Since the humor in the political

cartoons that Coulson analyzes is based on incongruity and resolution of incongruity, her conclusion may be applied to jokes as well. Furthermore, Lewis (1989, as cited in Coulson, n.d.) suggests that the means of resolving the incongruity of the joke is "by retrieving or discovering an image or idea that can connect its oddly associated ideas or images" (Sex, Lies and Blending section, para. 1), which can be considered a valid description of unpacking the joke. Coulson (n.d.) explains that the challenge of unpacking the joke is "to activate the appropriate information" in response to the blend's prompts for reconstruction, i.e. unpacking, and "to integrate it with abstract narrative structure" (Sex, Lies and Blending section, para. 1). Fauconnier and Turner (2002) maintain that conceptual integration is creative, but at the same time conventional, which is the reason why people "know immediately and without conscious effort how to interpret the blend" (p. 64). However, although no aspect or process of blending, including unpacking the blend in jokes, requires conscious effort, Coulson (n.d.) stresses the fact that appreciation of humor is dependent on people possessing "relevant knowledge and shared understandings" (Sex, Lies and Blending section, para. 2) of the domains, i.e. input spaces, that participate in creating the humorous blend. This means that the joke must offer the reader or the listener enough information "to reconstitute the input spaces" (Coulson, n.d., Sex, Lies and Blending section, para. 2) that is to say, to unpack the joke. Since one of the main aims of the study that was conducted for the purpose of this thesis was to see if EFL learners would be able to unpack jokes in English, the examples of this process will be shown in the research section of the thesis.

4. Previous research

The subject of how learners of English as a foreign language (EFL) understand and deal with humor in English has not been researched in Croatia, especially not in the context of conceptual integration theory. Generally, there is not much research that focuses on humor appreciation in terms of the role of conceptual integration. What is more, there is not a single piece of research that employs the conceptual integration theory to look into how EFL learners understand the jokes in English. Although there are no previous studies that correspond to the one that was conducted for the purpose of this thesis, the studies that will be outlined in this section are in certain ways relevant for the topic of this thesis.

Investigating how the meaning of jokes is processed, Coulson (2001, as cited in Coulson, Urbach, & Kutas, 2006) introduced the term "frame-shifting" which is defined as "the semantic and pragmatic reanalysis that reorganizes existing elements in the message-level representation" (p. 232). This means that the meaning of jokes is constructed by activating the background knowledge and establishing mappings between counterpart structures in the two frames (*ibid.*). Moreover, according to Coulson, Urbach, and Kutas (2006), "jokes are deliberately constructed to suggest one frame while evoking elements consistent with another" (*ibid.*). Frame-shifting is mentioned in this section due to the fact that some parallels can be drawn between frame-shifting and conceptual blending. Coulson (2001) elaborates both the theory of frame-shifting and the theory of conceptual blending. She defines frame-shifting as "a process in which abstract frames are integrated with more specific frames to yield novel concepts" (p. 64) and conceptual blending as a process in which "frames from established domains, known as inputs, are combined to yield a hybrid frame, a blend or blended model, comprised of structure from each of the inputs, as well as a structure of its own" (p. 115). Comparison of the two definitions indicates that both frame-shifting and conceptual blending involve the merging of different knowledge structures to generate new ones. It seems that a parallel can be drawn between the concepts of a frame and an input space, the former belonging to the frame-shifting theory and the latter to the conceptual blending theory. Therefore, what follows is a description of two studies associated with frame-shifting in joke comprehension, the findings of which have shown to be relevant for this thesis.

To prove that a process such as frame-shifting occurs during joke comprehension, Coulson and Kutas (1998, as cited in Coulson, Urbach, & Kutas, 2006) conducted a study using the self-paced reading time technique (p. 235). In the study the participants read sentences one word at a time and after they finished reading one word, they pressed the button to move to the next one. The sentences used in the study were one-line jokes, the comprehension of which requires frame-shifting, and straight, non-funny versions of the same sentences, the comprehension of which does not require frame-shifting (*ibid.*). Since the aim was "to detect the effect of frame-shifting on the processing of a single word" (*ibid.* p. 236), the final word of the joke sentences was always "the frame-shifting trigger", the so-called "disjunctor" (*ibid.*). Coulson (2001) defines the disjunctor as a word that causes the reader "to revise the default assumption of the frame" (p. 55) and "search the working memory for something that can be reinterpreted" (p. 57). The term was first introduced by Attardo (1994), who defines it as the element in a joke that

performs “the passage from the first sense to the second one” (p. 96). The disjunctor is closely connected with “the connector” which is “any segment of the text that can be given two distinct readings” (*ibid.*). This means that the disjunctor causes the reader or the hearer of the joke to move from one possible reading of the connector to another one “which had previously been discarded by the process of selection” (*ibid.*). Coulson and Kutas’ (1998, as cited in Coulson, Urbach, & Kutas, 2006) study showed that readers spend more time reading the final word in the joke sentences than in the non-funny versions of the same sentences (p. 236). The fact that it takes people more time to read the final word in a joke sentence, which ends with a disjunctor, than in a straight version of that sentence, which ends with a word that is usually expected in that context, indicates “a processing cost associated with frame-shifting” (*ibid*. p. 237).

To find out more about the nature of difficulty that people encounter when processing jokes, Coulson, Urbach and Kutas (2006) conducted a study based on eye movement registration (p. 241). Unlike the self-paced reading time technique, the eye movement registration technique involved reading the sentence as a whole, not one word at a time, and allowed the researchers to track the eye movements of the readers because, as they explain, people often move their eyes leftwards while reading “to re-examine earlier parts of the text” (*ibid.*). In the study, reading times for sentences that ended as jokes were compared to reading times for the same sentences that ended with logical, but unexpected words (*ibid.*). It was found that the participants in the study spent more time reading the joke sentences and that they were more likely to move their eyes leftwards when they came across a joke ending than a logical one (*ibid.* p. 245). Coulson, Urbach and Kutas (2006) concluded that the results of their study strongly suggest that people “literally revisit aspects of the preceding context in order to activate a new frame so as to better get the jokes” (*ibid.*). The regressive eye movement may be considered a physical sign of a cognitive process of re-assessing the sentence to find clues that lead to “alternative frames” (*ibid.* p. 246).

A group of students at the English Language Department of the University of Chile, under the supervision of their professor, conducted a study called *Dimensions in the Conceptual Integration of Jokes* (2017), which proposed a model for the analysis of jokes based on the conceptual integration theory. In the study, they accepted the claim that jokes are incongruous blends which can be represented through conceptual integration network (p. 54), like all blends.

However, their study hypothesizes the existence of another mental space which is not present in Fauconnier and Turner's network model and which is characteristic of joke blends. This mental space is called the ad-hoc generic space and it is a result of deliberately bringing attention to the "conceptually incongruent mapping between features from two inputs" (p. 55). The difference between the generic space and the ad-hoc generic space is that conceptually possible mappings emerge in the generic space, allowing the reader to make sense of the joke, while conceptually infeasible mappings emerge in the ad-hoc generic space, creating "a structured ambiguity in meaning" (*ibid.*) that is acceptable only in the context of a joke. It is suggested in the study that the existence of two different generic spaces in the conceptual networks of jokes, which are humorous incongruent blends, is what sets them apart from non-humorous incongruent blends (*ibid.*). Therefore, the general aim of the study was to identify the elements in the conceptual network of jokes that are crucial for the distinction between the conceptual structure of jokes and other types of blends (p. 56). Researchers selected 25 jokes and met three times a week to analyze them as a team. The analysis of jokes involved the following steps: identifying the build-up and the punch-line of each joke, discussing which conceptual frame is prompted when the reader or the hearer processes the build-up and the punch-line of the joke (e.g. food, baseball, marriage, etc.), tagging the frame prompted by the build-up of the joke as input Z and the frame prompted by the punch-line of the joke as input Δ, determining the sentence that represents the blended space, searching for elements in the two input spaces that could account for the counter-conceptual meaning of the blend, classifying the features that the two input spaces have in common as belonging to either the generic space or the ad-hoc generic space, identifying the connector and the disjunctor. In addition, the researchers compared each joke blend to a non-humorous blend that integrates the same frames in order to find evidence for the existence of two different generic spaces, which could provide an explanation for the humorous effect of the joke blends, and drew a diagram of the conceptual integration network for each joke. The analysis confirmed the existence of an ad-hoc generic space in all 25 jokes, leading the researchers to conclude that jokes are "a special kind of blend" (p. 124) and that their conceptual analysis should include "the consideration of non-entrenched, contextual elements" (i*bid.*). Furthermore, the analysis showed that the removal of the connector or the disjunctor caused the loss of the humorous effect, emphasizing the significance of these elements for joke appreciation. Finally, based on the fact that a conceptual generic space and a blended space with an emergent structure

were determined in all jokes, the researchers concluded that jokes can be analyzed and discussed successfully in terms of Fauconnier and Turner's conceptual integration theory.

5. Research

5.1. Aims

The general aim of this study was to see whether EFL learners would be able to "unpack" the jokes offered to them and how successful they would be in doing so. The learners who participated in the study were not familiar with Fauconnier and Turner's conceptual integration theory, which means that their analysis and "unpacking" of the jokes could not have been influenced by the knowledge of conceptual integration's mechanisms. In other words, the study aimed at tracing signs of the unpacking process that is believed to take place in the minds of the learners when they read the jokes. Furthermore, there were two groups of participants which differed in proficiency and experience in learning the English language. The aim of including learners of two different proficiency levels in the study was to see whether the more experienced learners would be better at "unpacking" the jokes than the less experienced ones.

There were several hypotheses in the study:

a) The participants would be able to recognize and name the domains or input spaces that form the blend on which the joke is based. Although they are not familiar with the principles of conceptual integration or its connection to humor, learners would identify the combining of two unrelated domains as the cause of the joke's humorous effect;
b) The participants would mention the words that function as the disjunctor and the connector in the joke when explaining what makes the jokes funny due to their importance for triggering the re-assessing of the joke (see Attardo 1994, Coulson and Kutas 1998, Coulson 2001) and the fact that removing one or both of these elements leads to the loss of humor in the joke (see Dimensions in the Conceptual Integration of Jokes 2017);
c) The learners of the English language who are more proficient and have more experience with language analysis and metalanguage would be more successful at "unpacking" and "getting" the jokes than the less proficient and experienced ones.

5.2. The instrument

The instrument that was used for the purpose of this study was an online questionnaire that was created with the Google Forms application. The questionnaire included the following five jokes:

1. Two fish are in a tank. One says to the other, "Can you drive this thing?"

2. What do you call a witch who verifies her incantations? A spell checker.

3. A man went to the bank and asked the cashier, "Will you check my balance?" So she pushed him.

4. An x-ray specialist married one of his patients. Everybody wondered what he saw in her.

5. Why are robots never afraid? Because they have nerves of steel.

The five jokes were randomly selected from 25 jokes that were used in the previously described study that was conducted at the English Language Department of the University of Chile, under the title Dimensions in the Conceptual Integration of Jokes (2017).

The participants were asked to read the jokes and try to "unpack" the meaning of each joke. This instruction was additionally explained by asking the participants to try to analyze the processes and elements that make a joke funny and to describe what goes on in their mind when they read the joke (see Appendix 1: The instrument).

5.3. The sample and the procedure

The sample in this study consisted of 68 students from the Department of English Language and Literature at the Faculty of Humanities and Social Sciences, University of Zagreb. 45 of them were first year students, while 23 of them were fourth year students. The study was conducted in the academic years 2018/2019 and 2019/2020.

The questionnaire was distributed to the participants by means of e-mail and Facebook groups. Since it was an online questionnaire, the participants had no time limit for completing it. Also, their answers were not limited by the minimum or maximum number of words.

In the first section of the questionnaire the participants were asked, in Croatian, to state whether they are first year students or fourth year students. The second section of the questionnaire consisted of the instructions for analyzing the jokes and the jokes themselves. The instructions were written in English.

5.4. Results

The results of the study will be presented for each joke separately and will consist of three parts. The first part will be in a form of a paragraph that includes an interpretation of the blend that the joke is based on. The second part will be in the form of a table that shows how many participants managed to identify the input spaces and mentioned the disjunctor and the connector. The third part will include the participants' comments on what makes the joke funny. It is important to mention that two questionnaires that were completed by first year students had to be discarded because their answers led to the conclusion that they did not take the task seriously. Therefore, there was the total of 66 questionnaires that were taken into consideration.

Joke 1

Two fish are in a tank. One says to the other, "Can you drive this thing?"

This joke is based on an incongruous blend between the input spaces of *'fish tank'* and *'military tank'*. The first input space contains fish that people keep as pets in containers filled with water which are usually called *'fish bowls'*, *'aquariums'* or *'fish tanks'*, and that do not possess any human abilities such as speaking or driving vehicles. The second input space contains military officials who possess all the usual human abilities and whose profession usually includes driving heavy armored fighting vehicles which are called *'tanks'* or *'military tanks'*. Matching between these two input spaces and selectively projecting from them results in a blended space that contains two fish that are military officials and are speaking to each other and driving a military tank. The incongruity resides in the punch-line in which the fish are allocated two features that do not fit the frame of fish as pets and these are the ability to speak and to drive. The verb *'to drive'* is the disjunctor because it causes the reader to re-read the joke and search for a different interpretation, and the word *'tank'* is the connector because it can be interpreted as both the fish tank and the military tank, enabling the reader to connect the two input spaces.

Table 1 The number of participants who identified the input spaces, the disjunctor and the connector in *Joke 1*

	The number of participants who identified:		
	THE INPUT SPACES	THE DISJUNCTOR	THE CONNECTOR
1st year students	38/43	15/43	32/43
4th year students	18/23	4/23	20/23

The participants who identified the input spaces that form the blended space in which two fish are trying to drive a military tank mostly commented that they first assumed that the fish were in an aquarium, but then realized that the fish were in a military vehicle and this insight made them laugh. Some of the participants described the process of unpacking this joke in more detail by writing that the first part of the joke made them imagine the two fish being in a fish tank, but then the second part of the joke made them realize that the fish were actually in a military tank. A smaller number of participants identified the disjunctor in the joke, but the ones who managed to do it explained that the fact that fish cannot drive makes the joke funny or that this enhances the humorous effect that is already achieved by the sudden realization that the fish are in a military tank. When it comes to the connector, a considerable number of participants wrote that the joke is funny because the word '*tank'* "has two meanings" or "is a polysemous word", or because the joke "plays on the double meaning of tank", or because of "the ambiguity of the word tank". Finally, none of the participants explicitly stated that they do not understand the point of the joke.

Joke 2

What do you call a witch who verifies her incantations? A spell checker.

The first input space that emerges in this joke contains a witch who performs magic by saying a series of words which are usually called spells or incantations. This input space belongs to the frame of magic and sorcery. The second input space evokes the concept of a spellchecker, a computer program that checks the spelling of words in a text, from the frame of grammar. Matching between these two input spaces and selectively projecting from them results in a

blended space that contains a witch who is called *'a spell checker'* because she corroborates the accuracy of her spells. The word *'witch'* would be the disjunctor because it makes the reader wonder why a witch would verify her magic words. Witches usually casts spells without thinking too much about it so it is odd to imagine a witch checking her spells before she casts them. The connector in this joke is *'spell'* because *'spell'* can be linked to both a magic spell (incantation) and spelling. Furthermore, the word *'checker'* comes from the verb *'to check'* which is a synonym of the verb *'to verify'*, which can also help the reader to connect the two input spaces.

Table 2 The number of participants who identified the input spaces, the disjunctor and the connector in *Joke 2*

	The number of participants who identified:		
	THE INPUT SPACES	THE DISJUNCTOR	THE CONNECTOR
1st year students	23/43	0/43	25/43
4th year students	14/23	1/23	17/23

The data in the table shows that almost half of the participants did not understand the point of this joke or they misunderstood it. Five out of 43 1st year participants said that they did not get the joke, while one out of 43 said that he or she understood "that the joke centers around the word verify", but was not sure "what verify also means"[1]. One out of 23 4th year participants wrote that "the joke is a bit predictable" and that "the analysis process was very short", which could not in any way show whether he or she unpacked the joke. However, the participants who did understand the point of the joke mostly started the unpacking process with the connector, the word *'spell'*, and proceeded to mention the two input spaces that form the blend of the joke. A few of them only wrote that the joke was funny because of the ambiguity or double meaning of *'spell'*, but did not mention the input spaces. Some of them also commented that *'check'* and *'verify'* are synonyms. Only one participant identified the disjunctor as important for

[1] The participant probably did not know the meaning of the verb *'to verify'*, but he or she correctly concluded that knowing this is key for unpacking the joke.

understanding the point of the joke by saying that "the question of the joke serves to remind the listener of the original meaning of spell, divorced from spelling".

Joke 3

A man went to the bank and asked the cashier, "Will you check my balance?" So she pushed him.

In this joke the blended space is composed from two input spaces that both revolve around the word *'balance'*. The first input space involves a situation that is typical of the bank frame. A man goes to the bank to ask the cashier, whose job is to check how much money the clients have on their bank accounts, i.e. to check their account balance. On the other hand, the second input space projects the frame of equilibrium. People's physical balance can be examined by pushing them to see whether they will lose the balance and fall or manage to keep it and remain standing. Combining these two input spaces results in a blended space in which a bank cashier checks a client's physical balance instead of his account balance. The humorous effect in the joke is achieved by the polysemy of the word *'balance'* that allows the reader to produce two different interpretations and connect two different input spaces. Therefore, *'balance'* functions as the connector in this joke. Furthermore, since the punch-line *'so she pushed him'* prompts the reinterpretation of the first sentence, it functions as the disjunctor.

Table 3 The number of participants who identified the input spaces, the disjunctor and the connector in *Joke 3*

	The number of participants who identified:		
	THE INPUT SPACES	THE DISJUNCTOR	THE CONNECTOR
1st year students	35/43	4/43	26/43
4th year students	16/23	3/23	19/23

Although the participants' comments on this joke indicated that they managed to understand the point of the joke, not all of them explained the joke in such a way that would provide enough

evidence of the unpacking process and the participants' identification of the input spaces. For example, they wrote that "the wrong interpretation of the cashier makes the joke funny", they "expected her to check his account balance", "multiple meaning of a noun makes a punch-line", "the cashier understood the word balance literally". The participants who succeeded in identifying the input spaces generally identified the connector as well. However, some participants only explained that the joke relies on the double meaning of the word *'balance'*, which means that they identified the connector, but did not mention the input spaces. On the other hand, in some cases the participants described the input spaces, but did not bring attention to the connector. Finally, a small number of participants stressed the importance of the disjunctor for the humorous effect of the joke. Although not very numerous, the answers in which the disjunctor is identified were quite interesting. For example, one participant wrote that "the funny part is the second sentence because it makes the whole situation absurd", while one participant wrote that "it's also funny because why would you push somebody in a bank". Furthermore, one of them explained that "since the cashier ends up pushing him, the meaning we had established is rapidly shifted, which creates a humorous effect" and one of them pointed out "the absurdity of the cashier in a bank pushing a customer". Finally, one out of 23 4th year participants only said that he or she "first thought it had something to do with the word check", which does not show whether the joke is unpacked.

Joke 4

An x-ray specialist married one of his patients. Everybody wondered what he saw in her.

The blended space in this joke involves two input spaces from the frames of x-ray specialty and human behavior respectively. The first input space contains an x-ray specialist whose job is to scan the internal composition of a human body with the help of an x-ray machine and analyze the scans. The second input space contains an average person who falls in love with another person because he or she notices some special quality in the latter, which is often expressed with the phrase *'to see something in someone'*. Matching between these two input spaces and selectively projecting from them generates a blended space in which an x-ray specialist was able to see some positive values in his wife-to-be, but also to literally see inside her body with an x-ray machine. The verb *'to see'* is the connector in this joke and it is key for producing the humorous effect because it can refer to both the x-ray specialist seeing the qualities of his wife-to-be and the

inside of her body. The word *'x-ray specialist'* would be the disjunctor in the joke because it triggers the reinterpretation of the punch-line in the light of his profession.

Table 4 The number of participants who identified the input spaces, the disjunctor and the connector in *Joke 4*

	The number of participants who identified:		
	THE INPUT SPACES	THE DISJUNCTOR	THE CONNECTOR
1st year students	29/43	26/43	36/43
4th year students	15/23	9/23	19/23

More than a half of the participants managed to recognize the input spaces that form the blend in the joke. However, it can be seen in the table that the number of participants who identified the connector is higher than the number of participants who identified the input spaces. This is because some of the participants only wrote that the joke is funny because *'to see something in someone'* can mean two different things, which indicates that they probably recognized the input spaces and understood the point of the joke, but focused only on the connector when describing why the joke is funny. Furthermore, some of the participants stressed the importance of the disjunctor, explaining that the joke is funny because x-ray specialist's job is to literally see inside people's bodies. Lastly, one out of 43 1st year participants commented only that this joke is "just boring and used way too often", which does not indicate whether the joke is unpacked and one out of 23 4th year participants only wrote the following: "saw = image; I imagined an x-ray image", which also does not indicate whether the joke is unpacked.

Joke 5

Why are robots never afraid? Because they have nerves of steel.

In this joke, the first input space belongs to the frame of robots. It contains a robot, a machine that resembles a human being and is able to reproduce certain human movements and functions automatically. However, unlike human beings, robots are typically made out of some kind of

metal such as steel and are incapable of experiencing any kind of emotion. On the other hand, the second input space contains human beings and, more specifically, the composition of their bodies. It is known that nerves, fibres or bundles of fibre in the human body, transmit the impulses that trigger people's feelings and emotions. Furthermore, this input space also holds the idiom *'to have nerves of steel'*, which refers to a person who is not easily upset or frightened. Matching between these two input spaces produces a humorous blended space in which there is a robot that does not feel fear due to its steel nerves. This is funny and absurd because robots have wires, not nerves, and they do not feel fear because they are not human. The connector in this joke is the expression *'nerves of steel'*, as both the idiomatic and the compositional meaning can be accessed through it. Moreover, the word *'robots'* is the disjunctor, as it prompts the reader to choose the literal meaning of *'nerves of steel'*.

Table 5 The number of participants who identified the input spaces, the disjunctor and the connector in *Joke 5*

	The number of participants who identified:		
	THE INPUT SPACES	THE DISJUNCTOR	THE CONNECTOR
1st year students	34/43	40/43	40/43
4th year students	12/23	19/23	16/23

The participants who identified the input spaces in this joke mostly explained the idiomatic meaning of the expression *'nerves of steel'* and then proceeded to say that robots "literally have nerves of steel because it is what they are made of". One of the participants wrote that "the joke here lies in the absurdity of robots even having emotions and the truth of robots' composition". The data in the table show that there were more participants who identified the disjunctor and the connector than the ones who identified the input spaces. This is because some participants only mentioned the disjunctor and the connector, but did not provide any elaboration that would indicate the process of unpacking of the blend. For example, some of these answers were: "the joke depends on listeners having a certain idea of a robot, which is contrasted with an idiom used in its most literal meaning"; "we connect the phrase nerves of steel and the fact that robots can be

made of steel"; "the expression nerves of steel is, in this case, quite literal as robots are made of steel or such metal". One out of 43 1st year participants only wrote: "they literally do". One out of 23 4th year participants said that he or she "didn't get that joke", while one of them only said that he or she "thought about a robot's head being full of wires", and one of them commented that the joke is "same as the other jokes, funny because of word play, instantly understood". Naturally, these kind of answers did not indicate whether the joke is unpacked accurately.

6. Discussion

The aim of this study was to examine whether EFL learners are able to conceptually "unpack" jokes in English. "Unpacking" the joke refers to identifying and linking the input spaces that form the blended space underlying the joke in question. Even though the participants in this study were not familiar with the conceptual integration theory or its connection to humor, their written analyses of jokes implied that they unconsciously activated the mechanism of unpacking the blend in their minds during the interpretation of jokes. The results of the study showed that the participants, first and fourth year students at the Department of English Language and Literature in Zagreb, were able to identify the input spaces that form the blends in the five jokes that they were presented with in the questionnaire. However, some jokes proved to be more difficult for the participants to unpack than others. Both groups of students were most successful in unpacking Joke 1, with 88 % of first year students and 78 % of fourth year students recognizing the input spaces. The possible reason for this is that, out of the five jokes in the questionnaire, Joke 1 required the most general background knowledge from the fish domain and the military domain in order to be unpacked. Most people know that fish live in tanks and that soldiers drive tanks, while the other jokes require more specific background knowledge. First year students were the least successful in unpacking Joke 2 as only 53 % of them managed to identify the input spaces, while fourth year students were the least successful in unpacking Joke 5, with 52 % of them identifying the input spaces.

The second aim of the study was to determine whether the fourth year students would be more successful in unpacking the jokes than the first year students, as they are more proficient and experienced learners of English. Contrary to what was first hypothesized, first year students were shown to be better at unpacking the jokes than their fourth year counterparts. More specifically, while describing the input spaces of the blends on which the jokes are based, first

year students outperformed their more experienced colleagues in four out of five jokes. Nevertheless, the fact that a part of fourth year students did not outline the input spaces in some of the jokes does not necessarily mean that they did not unpack them. They often identified only the connector and/or the disjunctor, but did not describe the input spaces, which can be seen from the tables in the previous section. For example, one of the fourth year students commented on Joke 1 in the following way: "The joke is achieved through the two meanings of the word tank – the first sentence establishes one meaning, and the joke depends on the ability of the listener/reader to swiftly switch to the other meaning in sentence two." The comment suggests that the participant unpacked the joke, but he or she only mentioned the connector *'tank'* and tried to explain how the funniness of the joke is achieved, but probably concluded that the input spaces are self-evident and did not mention them. Furthermore, answers of this type, which were common among fourth year students, also indicated that they were prone to elaborating on the funniness of the jokes in a more objective way. In other words, they often resorted to using terms and concepts from linguistics in order to explain the joke instead of simply describing the input spaces that form the blend. For example, they explained Joke 5 by briefly commenting that "the joke depends on listeners having a certain idea of a robot, which is contrasted with an idiom used in its most literal meaning", and that "it is again a literal reading of a phrase whose meaning is not a sum of its parts." In addition, one of them explains Joke 4 in a similar vein, saying that "we ignore the idiomatic meaning of the phrase and instead take the literal one". On the other hand, their first year counterparts were more prone to explaining the jokes in their own words, which generally resulted in them describing the input spaces.

In addition, the analysis showed that some of the participants' descriptions of what goes on in their minds when they read the joke signaled the process of re-reading and re-assessing. Previous research suggests that this process takes place in our minds when we read or hear a joke in order to work out the alternative meaning and understand it (see Coulson, Urbach and Kutas, 2006). For example, some of the first year students explained Joke 1 in the following ways:

"First I imagine two fish in an aquarium. I imagine bubbles going out of their mouths as they're speaking. Then, when one says can you drive it my brain switches the image of the fish from an aquarium to a German Tiger tank with two fish whose heads are sticking out of the tank looking confused and trying to drive it underwater."

“Reading the first sentence I imagined two fish in an aquarium, but then remembered that the word tank also means a vehicle used for fighting…so I had to remember that the same word can mean two things before I understood the joke.”

“So the tank is not a fish tank but the big one used in wars. While the second line of the joke didn’t make sense at first, after reading the first line again it became funny.”

“I assumed it was a fish tank because fish are usually kept in them. I was surprised as to why they would drive a fish tank, went back to re-read the joke and had a moment of realization. The word ‘tank’ can also mean a fighting vehicle.”

“The joke is funny because after reading the second sentence our mind perceives the word ‘tank’ as a military vehicle rather than an object where fish are held.”

These answers can be considered as evidence of the re-assessing or backtracking that goes on in the participants’ minds and leads them to a different meaning of the joke, which is key to appreciating the joke. What is more, these answers also serve to illustrate how the first year students were more likely to explain the jokes in their own words, unlike their fourth year counterparts who often tended to use linguistic terms.

Moreover, the fourth year students’ answers also imply the occurrence of the re-assessing process, as they elaborate on jokes in the following way:

“The tank is an aquarium; the first time the reader reads the first sentence, they logically think of an aquarium. But due to the word’s dual meaning (an aquarium and a war vehicle), there is a twist (or the punch-line) at the end of the second sentence, because the reader realizes that the meaning of the first word is not an aquarium, but rather a war vehicle.” (Joke 1)

“The joke here also relies on the semantic relation of polysemy, where ‘balance’ can refer to both the difference between the debit and the credit total of an account and the physical steadiness or stability of a person. Considering the man is at the bank leads us to believe he’s checking the status of his account, but in the punch-line, since the cashier ends up pushing him, the meaning we had established is rapidly shifted, which creates a humorous effect. ” (Joke 3)

"I first interpreted the phrase 'what he saw in her' metaphorically, then I reread the joke to associate it with the job of an x-ray specialist." (Joke 4)

Although the participants were not familiar with the conceptual integration theory, most of them answered the question of what makes the joke funny by describing the input spaces that form the blend of the joke and appropriately connecting them. Also, they often mentioned the connector and/or the disjunctor in their answers and there were only a few cases in which they explicitly stated that they do not get a certain joke. Therefore, the results show that EFL learners who participated in this study are able to appreciate jokes in English and, more importantly, that they achieve this through an unconscious process of unpacking the blends in the jokes.

7. Conclusion

The general conclusion based on the results of this study is that EFL learners, in this case the first and fourth year majors in English, can "unpack the joke". The basic assumption that the participants' answers would include descriptions of the input spaces that form the blended space in the joke was confirmed. However, in some cases the participants did not describe the input spaces, but they mentioned the connector and/or disjunctor, which shows that they successfully unpacked the joke. Therefore, it can be concluded that they probably went through the process of unpacking the joke in their minds, but did not consider the description of input spaces necessary to answer the question of what makes the joke funny. Furthermore, it can be concluded that the students were most successful in unpacking Joke 1, which can be attributed to the kind of background knowledge that they have to recruit in order to perceive how the input spaces relate to each other and how they form the blended space in the joke. Compared to the other four jokes in the questionnaire, the unpacking of the blend in Joke 1 seems to call for the most general background knowledge.

The assumption that the fourth year students would be better at unpacking the jokes than the first year students proved to be wrong. The fourth year students tended to use their linguistic knowledge and analytical skills to answer the question of what makes the joke funny, while the first year students generally answered in their own words, not relying on their knowledge of linguistics, but simply describing the input spaces. It can be concluded that the fourth year students' longer involvement with linguistic terms and concepts they had been using in language

analysis influenced their answers, which resulted in linguistic explanations of jokes rather than direct descriptions of what goes on in their minds when they read the joke.

In conclusion, although the participants were asked to analyze the jokes in English, which is not their native language, they were quite successful in doing so and, in most cases, their written analyses showed that this process included determining the input spaces that formed the blend of the joke. Most of the participants were able to unpack the blends of the jokes that they were presented with in the questionnaire. Namely, they could identify and describe the input spaces, which was the basis for understanding the point of joke. Also, since the participants were most successful in unpacking Joke 1, it can be concluded that the blends that require the most general background knowledge were the easiest for them to unpack. Furthermore, some of the participants said that they had to reread the joke in order to understand it, which indicates that the process of re-assessing in order to access alternative meanings is active during joke comprehension. Finally, the results of this study are yet another evidence in favor of Fauconnier and Turner's claim that conceptual integration is a general cognitive operation by means of which people construct meaning and it may serve as motivation for further research of conceptual integration in general, as well as humor analyzed in terms of it.

References

Albornoz, H.B., Castillo, K.M., Cuadra, C.A., Gomez, L., Martinez, A., Michea, B., Ramos, M.A., Rojas, J., & Silva, P.M. (2017). *Dimensions in the conceptual integration of jokes: Or how a dissertation got lost in generic space* [Unpublished master's thesis]. Faculty of Philosophy and Humanities, University of Chile. http://repositorio.uchile.cl/handle/2250/148370

Attardo, S. (1994). *Linguistic Theories of Humor*. Mouton de Gruyter.

Coulson, S. (2001). *Semantic leaps: Frame-shifting and conceptual blending in meaning construction* (2006). Cambridge University Press.

Coulson, S. (2005). Extemporaneous Blending: Conceptual Integration in Humorous Discourse from Talk Radio. *Style, 39*(2), 107-122. http://www.cogsci.ucsd.edu/~coulson/spaces/coulson-style.pdf

Coulson, S. (n.d.). What's so funny?: Conceptual integration in humorous examples. http://cogsci.ucsd.edu/~coulson/funstuff/funny.html

Coulson, S., & Kutas, M. (1998). *Frame-Shifting and Sentential Integration*. (Cognitive Science Technical Report No. 98.02). Department of Cognitive Science, University of California, San Diego. http://www.cogsci.ucsd.edu/~coulson/Papers/coulson-kutas98.pdf

Coulson, S., & Oakley, T. (2000). Blending Basics. *Cognitive Linguistics, 11*(3/4), 175-196. https://doi.org/10.1515/cogl.2001.014

Coulson, S., & Urbach, T. P., & Kutas, M. (2006). Looking back: Joke comprehension and the space structuring model. *Humor, 19*(3), 229–250. https://doi.org/10.1515/HUMOR.2006.013

Fauconnier, G. (1994). *Mental Spaces: Aspects of Meaning Construction in Natural Language*. Cambridge University Press.

Fauconnier, G. (2001). Conceptual Blending. In Smelser, N., & Baltes, P. (eds.), *The Encyclopedia of the Social and Behavioral Sciences* (pp. 2495-2498).

Fauconnier, G., & Turner, M. (1998, April-June). Conceptual Integration Networks (February 10, 2001). *Cognitive Science*, *22* (2), 133-187. https://ssrn.com/abstract=1292966

Fauconnier, G., & Turner, M. (2002). *The way we think: Conceptual blending and the mind's hidden complexities.* Basic Books.

Fauconnier, G., & Turner, M. (2003, March). Conceptual Blending, Form and Meaning. *Recherches en communication, 19: Sémiotique cognitive - Cognitive Semiotics*, 57-86. https://doi.org/10.14428/rec.v19i19.48413

Fujii, A. (2008). Meaning construction in humorous discourse: Context and incongruities in conceptual blending. In A. Tyler, & Y. Kim, & M. Takada (Eds.), *Language in the context of use: Discourse and cognitive approaches to language* (pp. 183-198). Mouton de Gruyter.

Koestler, A. (1964). *The act of creation* (1989). Harmondsworth: Penguin.

Larkin-Galiñanes, C. (2017). An Overview of Humor Theory. In S. Attardo (Ed.), *The Routledge Handbook of Language and Humor* (pp. 4-16). Routledge.

Lewis, P. (1989). *Comic Effects: Interdisciplinary Approaches to Humor in Literature*. State University of New York Press.

Table of figures

Appendix 1: The instrument

Opće informacije

S obzirom na to da će u istraživanju sudjelovati studenti prve godine preddiplomskog studija i studenti prve godine diplomskog studija anglistike, odnosno prva i četvrta godina studija anglistike, molim Vas da označite koja ste godina studija.

Koja ste godina studija anglistike? *

Prva godina preddiplomskog studija

Prva godina diplomskog studija

Please, read the five jokes that are listed below and try to "unpack" the meaning of each joke. In other words, try to analyze the processes and elements that make it a joke; that make it funny. Try to describe, in your own words, what happens in your mind when you read the joke and try to be as specific as possible.

1. Two fish are in a tank. One says to the other, “Can you drive this thing?”

_____

2. What do you call a witch who verifies her incantations? A spell checker.

_____

3. A man went to the bank and asked the cashier, “Will you check my balance?” So she pushed him.

_____

4. An x-ray specialist married one of his patients. Everybody wondered what he saw in her.

_____

5. Why are robots never afraid? Because they have nerves of steel.

_____

Summary in Croatian (Sažetak)

Tema je ovog diplomskog rada konceptualna integracija, temeljna kognitivna operacija koja ljudima omogućava da konstruiraju značenje integracijom različitih koncepata, i njezina povezanost s razumijevanjem humora. Cilj je istraživanja provedenog u svrhu ovog diplomskog rada bio utvrditi mogu li hrvatski studenti engleskog kao stranog jezika shvatiti bit šala na engleskom jeziku i vode li se pri analiziranju tih šala načelom konceptualne integracije koje se zove "raspakiravanje" (eng. *unpacking*). Koliko je autorici ovoga rada poznato, nema drugih istraživanja koja se bave sposobnošću učenika nekog stranog jezika da "raspakiraju" humor na tom jeziku, postoje istraživanja koja su se pokazala korisnima i važnima za temu ovoga rada. Ispitanici su bili studenti prve i četvrte godine s Odsjeka za engleski jezik i književnost na Sveučilištu u Zagrebu. Zadatak im je bio analizirati pet šala i pokušati opisati što im prolazi glavom kada pročitaju iste.

Ključne riječi: konceptualna integracija, analiza šala, načelo raspakiravanja, učenici engleskog kao stranog jezika