A Corpus-Based Contrastive Analysis of Selected English and Croatian Lexemes for Taste

Mendaš, Simona

UNIVERSITY OF RIJEKA

FACULTY OF HUMANITIES AND SOCIAL SCIENCES

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

Simona Mendaš

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Supervisor:

Marija Brala-Vukanović, Ph.D.

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ABSTRACT

This M.A. thesis explores the differences and similarities between a selected group of English and Croatian lexemes for taste. More precisely, it analyses the usages of the following four basic taste adjectives: *bitter/gorak, salty/slan, sweet/sladak, sour/kiseo*. The theoretical part of the thesis primarily deals with the most recent cognitive linguistic and cognitive semantic findings. The second part of the thesis, i.e. the comparative-contrastive analysis was based on two web corpora, the Corpus of Global Web-Based English (GloWbE) and the Croatian Web Corpus (hrWaC). The aim of the analysis was to separate the literal uses of lexemes from their metaphorical uses. The examples found in the corpus were then categorized according to their common features and further analyzed. The findings reveal interesting differences at the lexical, syntactic and semantic levels between English and Croatian metaphorical usage of the four basic lexemes for taste. However, the results of the analysis also indicate a high degree of similarity between the languages in question in the overall usage of taste adjectives.

Keywords: taste lexemes*, bitter/gorak, salty/slan, sweet/sladak, sour/kiseo,* contrastive analysis, cognitive semantics

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1. INTRODUCTION

Human perceptual capabilities and their representation by means of language have been a vast resource of numerous discussions in various areas of scientific activity throughout history, especially in cognitive sciences. As for the linguistic studies on five sensory modalities (hearing, sight, smell, touch and taste), it is obvious that they tend to focus more on investigating the processing of visual, tactile or auditory stimuli, considering that there is not much specific relevant literature on the 'language' of taste or smell. Perhaps this is due to the fact that sight, hearing, and touch seem to be more crucial for understanding, learning or teaching of a language. Nevertheless, it is more than obvious that food is the most basic of human needs since its absence or presence dictates the continuation of life in every possible domain. This could directly imply the existence of necessity to communicate about food or rather its taste. Thus, it could be beneficial and considerably interesting to study the specific aspects of language we use to categorize different tastes. Accordingly, this thesis will try to provide useful insight into the differences and similarities between English and Croatian taste vocabulary, i.e. *taste adjectives,* based on four primary tastes and corresponding lexemes: *bitter ('gorak'), salty ('slan'), sweet ('sladak')* and *sour ('kiseo')*[1]. The analysis, which is the main part of this work, primarily focuses on the concrete/abstract usage of the above-listed taste adjectives and is based on two web corpora- Corpus of Global Web-Based English (GloWbE) and Croatian Web Corpus *(*hrWaC).

The thesis is composed of six chapters, including the introduction, the conclusion, and the bibliography section. The second chapter outlines the most recent work in the field of cognitive linguistics, relevant for the purposes of this thesis. The main part of this work, ''The

[1] Though there is an ongoing discussion on the existence of the fifth taste *umami* (described as savory or meaty) coined by Kikunae Ikeda in 1908, the present thesis adheres to the model of four primary tastes for maintaining similarity between two corpora in question.

Analysis'', is divided into four subchapters, each of which deals with one of the four above-mentioned tastes. The detailed structure and the description of the analysis can be found at the beginning of the respective chapter. The fourth chapter discusses the results of the analysis of the aspects of both languages in question while trying to connect the findings with the theoretical part of this work.

2. THEORETICAL BACKGROUND

The general purpose of this chapter is to provide an overview of literature relevant for the overall comprehension of the main part of this thesis, the corpus-based contrastive analysis of English and Croatian taste adjectives. After discussing various theoretical approaches to concepts, conceptual metaphors and specifically the concept of taste, I will turn to the main method used in this work, the contrastive analysis.

2.1. Concepts

Considering that it would be relatively inadequate to discuss **concepts** before providing at least one definition of them, I have opted to begin this section with what seems to be a generally accepted claim: *concepts are the constituents of thoughts*. Even though this definition is quite straightforward and comprehensible, the debates on the nature and formation of concepts have been ongoing since the very beginning of the human scientific thought and activity. More precisely, the roots of the discussion can be traced back to the works of Ancient Greek philosophers Plato and Aristotle. The primary focus of their philosophical inquiries on concepts was nature and structure of concepts such as knowledge, justice, courage or friendship, the much-valued virtues of the Ancient Greek society. The subdiscipline of philosophy that investigates the interrelation of concepts and senses and their influence on the scope of knowledge is called epistemology. Although there are many different issues trying to be resolved in this philosophical branch, the source of knowledge seems to be the most relevant for the purposes of this thesis, since it deals with questioning the validity of senses. For this reason, I will briefly mention the most important findings of the 'Innatism-Empiricism' debate between Plato and Aristotle on the following epistemological question: *how is knowledge acquired?* To begin with, both philosophers

acknowledge the existence of our five senses. The most apparent difference between their positions is that Plato believes our senses are deceiving, i.e. invalid, and consequently unreliable for building objective knowledge of the world. Plato, in other words, postulates the existence of ''reality'' beyond human experience gained through senses. Although he listed numerous examples of what is now commonly known as perceptual illusions (e.g. a stick that appears to be bent when immersed in the water but is actually straight) to support this claim, the most prominent argument is certainly the *Allegory of the Cave*, presented in his political dialogue ''The Republic'' (380 BC). In short lines, Plato equated knowledge gained through senses with the experience of a caveman who is looking at shadows on the cave wall. This fictional man has never had the experience of the world outside the cave and is unaware of the fact that the Sun and real objects make those shadows. According to Plato, the only knowledge he can gain through senses is either that there is a shadow or there is not, and nothing beyond that. Considering that the caveman does not know that the outside world exists, his senses are simply inadequate to perceive it. Analogically, concludes Plato, there is a reality beyond our perceptual capabilities, just like there is a world outside the cave.[2] On the other hand, Aristotle's firm empirical viewpoint is that senses are a valid source of factual knowledge about the world and crucial for determining reality. In fact, a typical Aristotelian counterargument to the Allegory of the Cave would actually be extremely simple- exit the cave, experience the Sun and shadow casting by yourself. Unlike Plato, Aristotle did not believe that humans are born with any type of innate or universal concepts. On the contrary, his theory was that we formed concepts by the processes of abstraction and generalization from the empirically collected facts of the world. First, we use our senses to perceive instances (i.e. particularities) of a certain 'thing' and then we inductively derive universal concepts. In other words, Aristotle claimed that we selected common features of

[2] See Bloom (1991), pp. 193-200 for the complete *Allegory of the Cave.*

particularities in order to classify them under universalities. A typical example from the contemporary scientific discussions that can be applied here is the acquisition of universal color terms. For instance, after we see many red objects, we notice and focus on their shared feature of 'redness', while simultaneously ignoring the differences among them, such as size, shape and similar. Subsequently, we form the universal concept of red by generalization and we can then classify all perceived red objects under the category of red. According to Aristotle, this is the exact process by which we form all other possible sensory concepts. There is no need to go into further detail of the strictly philosophical discussions on the issue of forming concepts since my intention here was to present only the essence and the beginning of this epistemological debate.

The linguistic aspect of the discussion, however, focuses on the potential interrelation and interaction of **concepts and language**. It is obvious that language influences thought and vice versa, but the main question is to what degree and how. Certainly, the most notable position that should be mentioned here is the controversial Sapir-Whorf hypothesis which has been subjected to many objections in linguistic circles. The theory's general principle was first proposed by Edward Sapir in his essay ''The Status of Linguistics as a Science'' (1929):

> Human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society. It is quite an illusion to imagine that one adjusts to reality essentially without the use of language and that language is merely an incidental means of solving specific problems of communication or reflection. The fact of the matter is that the "real world" is to a large extent unconsciously built up on the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the same social reality. The

> worlds in which different societies live are distinct worlds, not merely the same world with different labels attached. (p. 209)

Probably the most common interpretation of Sapir's quote is that the language we speak and think in forms our perception of the world and thus affects cognitive processes to some extent. Consequently, it is of high possibility that the speakers who use different language systems also perceive the world differently. This idea, also known as *linguistic relativism*, is considered to be a weaker version of the Sapir-Whorf hypothesis, since Sapir obviously acknowledged the objectiveness of reality in the above-quoted passage. However, Sapir's ideas were further expanded by his student Benjamin Lee Whorf who developed a stronger version of the Hypothesis labeled as *linguistic determinism*,[3] ''stating that people's thoughts are determined by the categories made available by their language'' (Pinker, 1995: 57). Fascinated by his professor's work on the Native American languages, Whorf conducted contrastive studies of the Hopi Indian Language, trying to fortify and prove the Linguistic Relativism hypothesis. Namely, he primarily focused on the differences between the Hopi Indian Language and three languages (English, German and French) he considered to be ''Standard Average European'' (hereinafter: SAE) because they share similar structural features such as vocabulary, grammar or syntax. The results of Whorf's contrastive analysis showed that Hopi and SAE greatly differ in structure, while the most notable finding of his studies was the absence of grammatical tense for expressing time in the Hopi language. More precisely, it seems that he based his theory on the premise that Hopi possess a completely different concept of time, considering that they use validation markers (i.e. ''validity-forms'') instead of tense markers which are typically used in English for distinguishing between past, present and future. The example of this phenomenon depicted by Whorf in his essay ''Science and Linguistics'' (1940) involves translations of the following English sentences into the

[3] Whorf's deterministic formulation of Sapir's ideas is most commonly referred to as the Sapir-Whorf Hypothesis.

Hopi Indian language: *He is running; He will run; He runs.* Equivalent sentences from the Hopi Indian perspective would be as it follows: *It is a fact that he run; It is expected that he run; It is a continual law that he run* (Whorf, 1956: 213). Even though Hopi's interpretation of sentences may come as strange or unnecessarily long, it seems that the validity-forms serve their purpose since they can ''denote that the speaker (not the subject) reports the situation (answering to our past and present) or that he expects it (answering to our future) or that he makes a nomic statement (answering to our nomic present)'' (ibid.: 144). Nevertheless, it is obvious that the speakers of SAE would face some difficulties when trying to comprehend Hopi sentences and vice versa, due to the apparent differences in perceiving or rather expressing the concept of time. This, among other findings, encouraged Whorf to write one of his most often-quoted paragraphs on the notion of linguistic relativity:

> We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds—and this means largely by the linguistic systems in our minds. We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way—an agreement that holds throughout our speech community and is codified in the patterns of our language. The agreement is, of course, an implicit and unstated one, BUT ITS TERMS ARE ABSOLUTELY OBLIGATORY; we cannot talk at all except by subscribing to the organization and classification of data which the agreement decrees. (ibid.: 213-214)

This formulation gained negative connotations and became known as linguistic determinism or the Whorfian Hypothesis. One of the sharpest contemporary criticisms of the above-quoted passage can be found in ''The Language Instinct'' (1995) by Steven Pinker who went so far

as to say ‘’but it is wrong, all wrong’’ (p. 57). Upon reading the chapter titled *Mentalese*, it becomes apparent that his counterarguments are truly based on ‘’a body of experimental studies that break the word barrier and assess many kinds of nonverbal thought’’ and ‘’a theory of how thinking might work’’ (p. 67). To put it differently, Pinker adheres to historically well-known and firm psycholinguistic findings (e.g. translatability of languages, ‘tip of the tongue’ phenomenon, Second Language Acquisition) to refute both the weaker and the stronger version of the Hypothesis. Of course, he does not miss mentioning thorough ethnolinguistic studies of the Hopi Indian language by Ekkehart Malotki (1983) who found instances of tense, time units and metaphors of time in Hopi speech, which seemed to be a direct disproval of Whorf’s starting premise. Finally, after rejecting both versions of the Sapir-Whorf hypothesis (the linguistic relativism and linguistic determinism), Pinker continues to present his own theory which postulates the existence of ‘mentalese’, ‘’the hypothetical language of thought, or representation of concepts and propositions in which ideas, including the meanings of words and sentences, are couched’’ (p. 478). According to Pinker, this hypothetical conceptual construct enables us to compose all possible thoughts, whereupon we ‘’translate mentalese into strings of words and vice versa’’ (p. 82) by communicating. Considering that ‘mentalese’ is innate, universal, and common to all individuals, it is impossible that language determines thought and leads to differences in perceiving reality.

To conclude, it can be said that the strong form of Sapir-Whorf hypothesis is not a sustainable theory due to its overly deterministic implications which can lead to the subjectification of reality. The notion of linguistic relativism, on the other hand, regained the interest of contemporary cognitive linguists such as George Lakoff and Mark Johnson (2003), who argued that ‘’the most fundamental values in a culture will be coherent with the

metaphorical structure of the most fundamental concepts in the culture'' (p. 22). Their groundbreaking work on metaphors will be discussed in the following chapter of this thesis.

2.2. Conceptual Metaphors

The very first discussions on metaphors can be found as early as in 350 BC in Aristotle's ''Poetics'' where he argues that ''metaphor is the application of an alien name by transference either from genus to species, or from species to genus, or from species to species, or by analogy, that is, proportion'' (Aristotle, 1902: 77-79). Ever since, it seems that metaphors have traditionally been perceived as the embellished figurative language used for creating a somewhat poetical effect on the readers of literary works. Arguably, there is hardly any written work which does not contain at least one instance of a metaphor.

As for the etymological background, the term 'metaphor' stems from the Greek verb 'metapherein' (to transfer, change, alter) and Latin noun 'metaphora' which literally means ''a carrying over''.[4] The preservation of the original meaning is reflected in the above-quoted Aristotle's assertion as well as in the dictionary definition of metaphor which is as it follows: ''a figure of speech in which a word or phrase literally denoting one kind of object or idea is used in place of another to suggest a likeness or analogy between them (as in *drowning in money*)''.[5]

Within the classical model of metaphors, they are most commonly described as a merely linguistic artifact and the property of language alone. However, George Lakoff and Mark Johnson decided to go beyond such a viewpoint and gave (conceptual) metaphors a crucial role in our everyday lives. Their pioneering and highly-valued 1980 work ''Metaphors We Live By'', at the very least helped establish the discipline of cognitive linguistics. As the title

[4] Retrieved from: https://www.etymonline.com/word/metaphor.
[5] Retrieved from: https://www.merriam-webster.com/dictionary/metaphor.

of the book suggests, Lakoff and Johnson (2003) argue that ‘’our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature’’ (p. 1). In other words, the metaphorical nature of our cognitive apparatus dictates our everyday activities of communicating, thinking or behaving in a certain manner. To support these bold claims, they provide a great amount of linguistic evidence in the form of numerous conceptual metaphors listed throughout the book. Still, before considering those examples, a definition of conceptual metaphors ought to be provided.

In the glossary of his book ‘’Metaphor: A Practical Introduction’’ (2010), Zoltan Kövecses plainly but almost circularly explains it as it follows: ‘’when one conceptual domain is understood in terms of another conceptual domain, we have a conceptual metaphor’’ (p. 324). As for Lakoff and Johnson (2003), they claim that ‘’the essence of metaphor is understanding and experiencing one kind of thing in terms of another’’ (p. 5). Interestingly, according to Lakoff (1993), the term ‘metaphor’ has gained a new meaning in contemporary linguistic research as ‘’a cross-domain mapping in the conceptual system’’. Thus, to avoid any possible confusion, it is important to note that whenever the authors use the term ‘metaphor’, they actually refer to metaphorical concepts, i.e. conceptual metaphors.

The two above-mentioned domains that form conceptual metaphors are labelled as the *source* and *target domain* in cognitive linguistics. In the general formula of conceptual metaphors - CONCEPTUAL DOMAIN (A) IS CONCEPTUAL DOMAIN (B)[6] - B is the *source domain* from which metaphorical expressions are drawn, whereas A is the *target domain* which is trying to be understood by using source domain. Objects or entities that are in the source domain are usually definite, concrete or physical (e.g. WAR, BUILDINGS, MONEY, PLANTS, JOURNEY) while the abstract concepts (e.g. ARGUMENT, THEORIES, TIME,

[6] Adhering to the conventions of cognitive linguistics, all conceptual metaphors and conceptual domains are written in small capital letters indicating the underlying concept.

IDEAS, LOVE) can be found in the target domain. Intuitively, this is one of the main reasons why the most abstract concepts are usually defined *via* conceptual metaphors. Moreover, Kövecses (2010) dedicated an entire chapter to listing and explaining the most common source and target domains. The most frequent source domains are as it follows: THE HUMAN BODY, HEALTH AND ILLNESS, ANIMALS, MACHINES AND TOOLS, BUILDINGS AND CONSTRUCTION, PLANTS, GAMES AND SPORT, COOKING AND FOOD, ECONOMIC TRANSACTIONS, FORCES, LIGHT AND DARKNESS, HEAT AND COLD, and MOVEMENT AND DIRECTION. On the other hand, the common target domains include EMOTION, DESIRE, MORALITY, THOUGHT, SOCIETY, RELIGION, POLITICS, ECONOMY, HUMAN RELATIONSHIPS, COMMUNICATION, EVENTS AND ACTIONS, TIME, and LIFE AND DEATH (Kövecses, 2010: 18-28).

The question that should be answered at this point concerns the nature of the relationship between the target and the source domain, or the exact process by which conceptual metaphors gain their meaning. Namely, the process is technically called *metaphorical mapping* and it can be described as a set of systematic ontological correspondences between the source and the target domain. In other words, when constituent conceptual elements of the source domain correspond to constituent elements of the target domain, the conceptual metaphor is created. However, because the target domain is formed by the source domain, it will only grasp the pragmatically relevant features within the internal structure of the source. Lakoff (1993) refers to this feature as the *Invariance Principle*, arguing that ‘’metaphorical mappings preserve the cognitive topology (that is, the image-schema structure) of the source domain, in a way consistent with the inherent structure of the target domain’’ (p. 215). Therefore, the invariance principle ensures the absolute degree of correspondence between the target and source domain. Another important remark on conceptual metaphors that needs to be made here is their shared feature or rather principle of unidirectionality which states that

‘’the metaphorical process typically goes from the more concrete to the more abstract but not the other way around’’ (Kövecses, 2010: 7). This is the primary reason why most of our everyday conventional metaphors are irreversible in structure. For instance, it is highly unlikely that one would refer to war as an argument or to journey as love and similar.

Before moving on to discussing examples of metaphors from ‘’Metaphors We Live By’’, the distinction between conceptual metaphors and metaphorical linguistic expressions must be made. Kövecses (2010) argues that the latter are words or other linguistic expressions that belong to the language or terminology of the source domain. To be more precise, conceptual metaphors are the ways of thinking, whereas metaphorical linguistic expressions are the ways of speaking. This distinction becomes clear after going through numerous examples of conceptual metaphors presented in ‘’Metaphors We Live By’’. Let us consider the much-quoted ARGUMENT IS WAR where the concept of ARGUMENT is structured and understood in terms of WAR. This conceptual metaphor is denoted and present in the following metaphorical linguistic expressions:

- Your claims are *indefensible*[7].
- He *attacked every weak point* in my argument.
- His criticisms were *right on target*.
- I *demolished* his argument.
- I’ve never *won* an argument with him.
- You disagree? Okay, *shoot*!
- If you use that strategy, he’ll *wipe you out*.
- He *shot down* all of my arguments.

(Lakoff & Johnson, 2003: 4)

[7] Adhering to the conventions of cognitive linguistics, metaphorical linguistic expressions are italicized.

Without a doubt, we use the above-listed linguistic expressions in everyday communication and especially during the act of arguing which could imply that we indeed live by the concept ARGUMENT IS WAR. As Lakoff and Johnson (2003) put it, ‘’the metaphor is not merely in the words we use – it is in our very concept of an argument’’ (p. 5). We can consider another example containing the same source domain:

LOVE IS WAR

- He is known for his many rapid *conquests*.
- She *fought* for him, but his mistress *won out*.
- He *fled from* her *advances*.
- She *pursued* him *relentlessly*.
- He is slowly *gaining ground* with her.
- He *won* her hand by marriage.
- He *overpowered* her.
- She is *besieged* by suitors.
- He has to *fend* them *off*.
- He *enlisted the aid* of her friends.
- He *made an ally* of her mother.
- Theirs is a *misalliance* if I’ve ever seen one.

(ibid.: 49)

The conceptual metaphors that were discussed until this point are called *structural* since ‘’one concept is metaphorically structured in terms of another’’ (ibid.: 14). However, Lakoff and Johnson distinguish between two other types of metaphors according to their cognitive functions, *orientational* and *ontological*. The cognitive function of orientational metaphors is to form a set of target concepts coherent in our conceptual apparatus. Such metaphors are

based on our physical and cultural experience of spatial relations up-down, in-out, front-back, deep-shallow, on-off and central-peripheral. For instance, HAPPY IS UP and SAD IS DOWN both have a physical basis: ‘’drooping posture typically goes along with sadness and depression, erect posture with a positive emotional state’’ (ibid.: 15). HIGH STATUS IS UP and LOW STATUS IS DOWN have both cultural and physical basis since social status is correlated with physical power that is UP. Among other findings, the implications behind the mechanism of orientational metaphors encouraged Lakoff and Johnson to argue that ‘’no metaphor can ever be comprehended or even adequately represented independently of its experiential basis’’ (p. 19). The third type is ontological metaphors which give ontological status to abstract concepts so that we are able to perceive them and talk of them as if they were concrete things. The ontological metaphor INFLATION IS AN ENTITY, for example, provides us with the ability to refer to inflation, quantify it or see it as a cause and act accordingly. This category also includes *personification* and *container metaphors*, according to Lakoff and Johnson. Personification, or the act of ascribing human characteristics, activities and motivations to something nonhuman, is the most obvious form of ontological metaphors, whereas container metaphors represent concepts as being capable of containing something and having an inside-outside.

To sum up, the innovative notion of conceptual metaphors and their empirically proven prevalence in our everyday language or even reasoning certainly brought a revolution in cognitive linguistics as well as in cognitive sciences. With respect to all written in this section, Aristotle (1902) seemed to be right when he claimed that ‘’the greatest thing by far is to have a command of metaphor’’ (p. 87).

2.3. The Concept of *Taste*

Relying on the fact that all humans possess the same anatomical and neurological apparatus for perceiving taste, most of the physiological, psychophysical and neurological research proposes a model of four primary tastes: bitterness, sourness, sweetness, saltness (Erickson, 2008). Correspondingly, both English and Croatian contain only four basic lexemes for expressing taste, i.e. taste adjectives: bitter (‘gorko’), sour (‘kiselo’), sweet (‘slatko’), salty (‘slano’).

The faculty of taste is, unlike other senses, most commonly characterized as being highly subjective and unique in its essence for several reasons. First, in order to process the received gustatory stimuli, an immediate physical contact with food or a beverage must occur which is not the case in sight, smell or hearing, for instance. Inevitably, the very act of tasting simultaneously utilizes olfactory and tactile stimuli so it can be said that a certain taste-description is a result of processing information gathered by three senses. This is why we tend to borrow lexical items from olfactory or tactile domains when describing taste (e.g. minty, fresh, sharp). Moreover, it can be said that every individual perceives certain tastes differently which implies that they also identify and describe them differently. This uncertainty of our taste-naming tendencies implies that taste is difficult to encode linguistically. It is thus demanding to discover or derive adequate cross-linguistic universals for denoting tastes beyond the above-mentioned basic adjectives. For this reason and the lack of a richer taste vocabulary, we adhere to other known linguistic items when describing taste such as *strong, plain, tough* and similar.

However, as remarked in the introductory section of this thesis, it seems that there is not much strictly linguistic literature investigating the language of taste, especially in comparison with the vast amount of research of other four sensory modalities. According to Raffaelli and Kerovec (2017), the reason for this lies behind the fact that ‘’linguistically (and possibly also

experientially) taste seems to be at the bottom of the hierarchy of sense modalities'' (p. 24). Namely, in his extensive typological cross-linguistic study of around fifty languages, Viberg (1984) discovered the universal hierarchical structure between basic perception verbs which is shown below in Table 1. As for his remarks on the concept of taste, Viberg briefly asserts that the main target domain of taste generally extends to domains of 'experience' or 'likes/dislikes', which has also been noted by Sweetser (1990).

SENSE MODALITY	**ACTIVITY**	**EXPERIENCE**	**COPULATIVE**
SIGHT	*Look (at)*	*See*	*Look*
HEARING	*Listen (to)*	*Hear*	*Sound*
TOUCH	*Touch/feel*	*Touch/feel*	*Feel*
TASTE	*Taste*	*Taste*	*Taste*
SMELL	*Smell*	*Smell*	*Smell*

Table 1: The basic model of English perception verbs (adapted from Viberg, 1984: 125)

Before going further into the discussion, it is important to note that the established hierarchy is unidirectional, i.e. the verbs that are higher in order can extend their meaning over subsequent senses, but not vice versa. In the case of taste, in particular, this means that verbs pertaining to it never extend their meanings to the domains of sight, hearing or touch. As shown above, Viberg (1984) distinguishes three categories of dynamic systems which signify the relationship between the source (the experienced entity) and the experiencer (the entity that receives sensory input) in perception acts: *activities, experiences, and copulatives*. The first category presupposes processes that are consciously controlled by a human agent (e.g. ''Peter *listened to* the birds.''), whereas the category of experience refers to uncontrolled or bound states in which the subject is passive (e.g. ''Peter *heard* the birds.''). The final category includes source-based states because the verbs are based on the source itself (e.g. ''Peter

sounded happy.’’). The implications of Viberg’s model are particularly prominent in the vocabulary of a certain language, as noted by Raffaelli and Kerovec (2017):

> This means that many languages do not have simple verbs for encoding taste, but instead they use compound verbs, noun–verb constructions, or verbs related primarily to experiences from other sense modalities (like sight, hearing and touch). If compound verbs or noun–verb constructions are used, they usually consist of a noun denoting the taste modality and 1) a verb from another sense modality (e.g. ‘**feel** the taste’, ‘*osjetiti* okus’) or 2) a verb with a rather general meaning (e.g. ‘**take** the taste’) (p. 24).

2.4. On Contrastive Analysis

To conclude the theoretical part of this work, a few words need to be dedicated to Contrastive Analysis (CA). In its broadest sense, a contrastive analysis is the study and comparison of two or more language systems with the aim of identifying and outlining their structural differences and similarities on any linguistic level (grammar, vocabulary, morphology, syntax, phonology, semantics, and pragmatics). The historical value of contrastive analysis lies in the fact that it has been the first influential theory dealing with the interrelation of learners’ native and acquired or mastered languages. Thus, it can be said that its primary intended purpose was detecting and overcoming potential language learning difficulties.

The concept of this method within the discipline of foreign language teaching was originally proposed by Charles Fries (1945) who argued that ‘’the most efficient materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner’’ (p. 9). Robert Lado, who is considered the father of contrastive analysis, continued to further develop Fries’

ideas from the pedagogical perspective and formulated the *Contrastive Analysis Hypothesis* (CAH) in his influential book ‘’Linguistics across Cultures’’ (1957):

> Individuals tend to transfer the forms and meanings, and the distribution of forms and meanings of their native language and culture to the foreign language and culture - both productively when attempting to speak the language and to act in the culture, and receptively when attempting to grasp and understand the language and the culture as practiced by natives (p. 2).

Seemingly influenced by the psychological behaviorism and linguistic structuralism, Lado (1957) argued ‘’that the student who comes in contact with a foreign language will find some features of it quite easy and others extremely difficult’’ (p. 2), depending on the degree of similarity between their native (L1) and foreign or second language (L2). Lado, thus, implies that a learner will more easily acquire linguistic features of L2 which are similar to their L1. Though the contrastive analysis hypothesis was widely accepted and used in the Second Language Acquisition (SLA) for explaining why some features of a Target Language (TL) were more difficult to acquire than others during the 1950s and 1960s, its popularity declined in the 1970s, mostly due to the paradigm shift in cognitive sciences (e.g. Noam Chomsky’s criticism of behavioristic view on language acquisition).

However, it is important to mention that this does not mean the method of contrastive analysis lost its position in linguistic studies. On the contrary, there seems to be a growth in the number of recently conducted contrastive analyses for several reasons. First, there has been a general rise of interest in the notion of linguistic universals, which establishes one of the most important prerequisites for language comparison. The second reason is the emergence and rise of Corpus Linguistics in the 1990s, which provided linguists with large corpuses of natural texts as the basis for more systematic interlingual comparisons. The final reason is of merely practical nature, and it arose from the fact that the world has become a

global village. Undoubtedly, globalization increased the need for intercultural literacy which certainly includes the analysis of discourse, i.e. the contrastive analysis (Kružić, 2011).

One final remark that needs to be made here is the division of contrastive studies. J. Fisiak (1981) has drawn the distinction between theoretical and applied contrastive studies as stated in the following passage:

> Theoretical CS give an exhaustive account of the differences and similarities between two or more languages, provide an adequate model for their comparison, determine how and which elements are comparable, thus defining such notions as congruence, equivalence, correspondence, etc. (…) Applied CS are part of applied linguistics. Drawing on the findings of theoretical contrastive studies they provide a framework for the comparison of languages, selecting whatever information is necessary for a specific purpose, e.g. teaching, bilingual analysis, etc. (p. 9).

According to Fisiak, theoretical contrastive studies are supposed to be language independent and non-directional, which means that they investigate the realization of universal category X in languages A and B instead of observing how an item present in language A is presented in language B. Applied contrastive studies, on the other hand, strive to discover how a universal category X, denoted in language A as Y, is expressed in language B. Historically, applied contrastive studies were mainly preoccupied with making reliable predictions of the learners' difficulties in the foreign or second language acquisition and they are considered to be the beginning of the Error Analysis in SLA.

Though the Contrastive Analysis Hypothesis is generally disproved due to its over-simplistic postulations, the value of contrastive analysis in general sense cannot be neglected, especially in translation studies, the study of language universals, and foreign language teaching.

3. THE ANALYSIS

The contrastive analysis of selected English and Croatian taste adjectives (*bitter, salty, sweet, sour; 'gorak', 'slan', 'sladak', 'kiseo')* is based on two web corpora, the Corpus of Global Web-Based English (GloWbE) and the Croatian Web Corpus (hrWaC). As for the definitions of the respective lexemes, they were drawn from the '*Hrvatski jezični portal'* and the monolingual Oxford Advanced Learner's Dictionary of Current English. The primary aim of the analysis was to separate the literal and concrete uses of lexemes from their metaphorical and abstract uses. For this purpose, corpus instances of the lexemes in English were categorized according to their common properties and were compared with the Croatian equivalents. The analysis included three steps, the first of which was extracting dictionary definitions of lexemes. The second step was a thorough and detailed search of corpora whereby the most prominent and interesting examples of lexemes were singled out and further analyzed. The final step included the categorization of examples with respect to their common features, as well as deriving conclusions based on the results that had been obtained.

Each of the following four subsections will begin with a corresponding table containing English examples contrasted with their Croatian equivalents, but not vice versa, since the focus of the analysis was primarily placed on the English language. Moreover, there will be a table providing a general overview of the most common semantic categories and their presence or absence in English and Croatian at the end of each subsection.

3.1. Bitter – Gorak

ENGLISH	CROATIAN
Bitter dispute	-
Bitter claim	-
Bitter rivalry	Gorko rivalstvo
Bitter rivals	Gorki rivali
Bitter wrangling	-
Bitter war	Gorak rat
Bitter debate	-
Bitter divorce	-
Bitter feud	-
Bitter victory	Gorka pobjeda
Bitter taste after a victory	Gorak okus nakon/od pobjede
(To be) bitter over/about/with	Biti ogorčen
Bitter tears	Gorke suze
Bitter sorrow	Gorka tuga
Bitter disappointment	Gorko razočarenje
Bitter anger	-
Bitter jealousy	-
Bitter hatred	-
Bitter sin	Gorak grijeh
A bitter pill to swallow	**Gorka pilula/gorki zalogaj**
To/until the bitter end	**Do gorkog kraja**
Bitter-sweet	Gorko-slatko

Bitter winter	-
Bitter wind	-

Table 2: Examples of the abstract usages of the English lexeme *bitter* and their Croatian equivalents

The first lexeme in the analysis, ***bitter,*** is primarily defined as having a strong, unpleasant taste, or not sweet (Hornby, 2005). The literal and concrete uses of the adjective generally pertain to food and beverages in the most frequent syntagms such as *bitter taste, bitter herbs, bitter orange, bitter beer, bitter chocolate,* etc.

The abstract or metaphorical meaning, on the other hand, is particularly interesting since it is manifested in four categories: the category of arguments and disagreement, the category of people, the category of feelings and the category of weather conditions. To begin with, the most notable examples of the first category are: *bitter dispute, bitter claim, bitter rivalry, bitter rivals, bitter wrangling, bitter war, bitter debate, bitter divorce, bitter feud.* As well as in Croatian, the noticeable common constitutive pattern is ADJ + N. There is also ADJ + N + PP which would correspond to the Croatian pattern ADJ + N (Nom.) + N (Gen.). For instance, while Croatian contains expressions such as *gorak okus pobjede,* the English language either simply has *bitter victory* (ADJ + N) or more complex version *bitter taste after a victory* (ADJ + N + PP). It can be stated that the first pattern is more commonly used in English examples which would correspond to similarly used expressions in the Croatian language. This becomes evident when we consider the fact that the second pattern is often literally translated from English into Croatian (*gorak okus nakon pobjede* or *gorak okus od pobjede*).

Furthermore, the category of people includes instances of syntagms that contain three different prepositions: *over, about,* and *with*. Thus, people can be *bitter over* (*He's still bitter over being replaced on the list.*), *bitter about* (*She is still bitter about losing her job.*) and *bitter with* (*You can be as angry and bitter with the world as you want, but leave them alone*.).

On the syntactic level, it is important to mention that the adjective *bitter* holds the function of a subject complement whereas it would be an attribute in Croatian. Moreover, the morphosyntactically rich Croatian language contains the phrase *biti ogorčen* while English employs adjectives for describing the feeling of bitterness due to the absence of grammatical cases. For this reason, the meaning of the English sentence *She is still bitter about losing her job* can be expressed in Croatian as it follows: *Ogorčena je gubitkom posla*.

As mentioned above, the third category refers to feelings. It is important to remark that the syntagms within this category mostly have negative connotations in examples such as *bitter tears, bitter sorrow, bitter disappointment, bitter anger, bitter jealousy, bitter hatred,* and *bitter sin*. Croatian also contains phrases which express dreary, sad and negative emotions or feelings (*gorke suze, gorak grijeh, gorko plakati*), and they are used in the same contexts as English equivalents. The expressions have the identical constitutive pattern ADJ + N in both languages. In addition, the category of feelings also includes the English idiom *a bitter pill to swallow* (*It was a bitter pill to swallow when he was told his columns were not good enough for publication.*) which appears as *gorka pilula* (*Bolan rezultat, gorka pilula koju moramo popiti.)* and *gorki zalogaj* (*Konačno je progutao gorki zalogaj koji mu je stajao u grlu i gušio ga, sprječavajući ga udisati život punim plućima.*) in Croatian. Their usage is manifested in the same contexts, but their syntactic structure differs insofar as in English the noun is modified by an infinitive supplement while in Croatian simply by attribute. Another English idiom found in this analysis is *to/until the bitter end* (*Build up powerful armies, wreak havoc on the map, fight to the bitter end, and you'll be rewarded for your efforts!*) and it appears as a literal translation in the Croatian language, i.e. *do gorkog kraja* (*Borba do gorkog kraja, bez oklijevanja je najtočniji parametar pravog sportaša.*). Moreover, the category of feelings also includes the combination of two tastes, *bitter* and *sweet,* that form the compound adjective *bitter-sweet*. Its metaphorical meaning is extended to situations which simultaneously bring

pleasure and sadness as it is the case in the following sentence: ‘’This is a bitter-sweet journey where pain and pleasure collide, dreams curdle and potential disappears over a warped horizon.’’ Although less frequently used than in English, Croatian equivalent *gorko-slatko* appears in the same context (*Harms piše gorko-slatko, istovremeno zaigrano i ozbiljno.*)

The final category seems to be the most interesting of all since it is not found in the Croatian language. It is the category of weather conditions found in two most frequent syntagms, *bitter wind* (an extremely cold wind) and *bitter winter* (an extremely cold winter). On the other hand, one would describe cold winds or winters as *oštri* or *ljuti* in Croatian. Interestingly, the preceding examples do not show a complete shift in the selection of lexemes that describe cold weather conditions since coldness is expressed by referring to the sense of taste in both languages. However, it is apparent that the Croatian language also employs the sense of touch for expressing coldness. The emergence of this usage is probably closely related to the occurrence of ‘’bura’’ which is an extremely cold and strong wind specific to Croatian climate. Namely, people tend to say that ‘’bura’’ swishes (*Tatjana šeće morskim žalom dok joj bura šiba lice*.) or even cuts their faces, which makes it logical to describe it as sharp. Consequently, this particular usage is extended to the entire category of cold weather conditions in the Croatian language.

As for the Croatian taste adjective ***gorak*****,** its basic meaning is ‘which has a taste of wormwood, opposite of sweet’, according to ‘*Hrvatski jezični portal’.* The examples of literal use typically refer to herbs, food and beverages (*gorka naranča, gorka rajčica, gorka djetelina, gorko piće, gorki napitak, gorki aperitiv*), which is also the case in English. Structurally more complex examples found in ‘hrWaC’ were *gorka morska voda* and *gorki ljekoviti pripravci*. Furthermore, there is a noticeable constitutive pattern ADJ + N (Nom.) + N (Gen.) in the expressions containing the lexeme *okus* such as *gorak okus kadulje, gorak okus korijenja, gorak okus kakaa*, and similar. The most interesting example within the scope

of literal use of *gorak* that should be mentioned here is *gorke mrlje (na jabukama)*. Although the syntagm denotes dark stains on apples or any other fruit which are primarily perceived via a sense of vision, they are exemplified by the sense of taste.

The abstract meaning of the adjective *gorak* appears in two basic constitutive patterns, ADJ + N (Nom.) + N (Gen.) which contains the noun *okus* in Nominative, and ADJ + N (Nom.). The first pattern gathers syntagms such as *gorak okus pelina, gorak okus izostanka, gorak okus ovrhe, gorak okus neuspjeha, gorak okus slobode, gorak okus krivnje, gorak okus posljedica, gorak okus niskog odaziva,* etc. There are also few examples with prepositions *u* and *od* (*gorak okus u ustima, gorak okus od pomisli*) but they are not frequent enough to form a specific new pattern. The second pattern includes two categories, the category of life and the category of feelings. Along with the examples such as *gorak život, gorak put, gorka svakidašnjica, gorka sjećanja, gorke godine,* and *gorko iskustvo,* the category of life contains an exceptionally metaphorical sentence: ‘*’Nikog nisam krivila, život donosi gorke plodove ponekad.’’* Another notable example of extended metaphoricity is *gorka čaša* which signifies certain temptation, inconvenience or trouble that needs to be faced with as in: ‘’*Premda mi je još nedavno, kada su ono Horde zla poharale Široki, kristalno jasno bilo da me ni ova gorka čaša neće mimoići.’’* As for the category of feelings, it includes expressions such as *gorak smijeh, gorka briga, gorak jad, gorki osjećaji,* and *gorak dojam*.

Other related instances found in ‘hrWaC’ presented an additional constitutive pattern which contains the lexeme *gorko* as an adverb before verbs. Though there are numerous examples of such use, the most frequent syntagms seem to be*: gorko iskusiti, gorko se našaliti, gorko se razočarati, gorko se pitati,* and *gorko reći*.

CATEGORY	ENGLISH	CROATIAN
Arguments and disagreement	+	+
People	+	+
Feelings	+	+
Weather conditions	+	-
Life	-	+

Table 3: Semantic categories of *bitter/gorak* in English and Croatian

3.2. Salty – Slan

ENGLISH	CROATIAN
Salty air	Slani zrak
Salty wind	Slani vjetar
Salty (synonym of *annoyed*)	-
Salty (synonym of *expensive*)	-
Salty dog	-
Salty language	-

Table 4: Examples of the abstract usages of the English lexeme *salty* and their Croatian equivalents

The primary literal meaning of the English taste adjective ***salty*** is ‘’containing or tasting of salt’’ (ibid.). Accordingly, it is most frequently used in descriptions of various food (*salty sauce, salty chips, salty taste, salty snacks, salty cheese*), as well as for referring to water or liquids that are not sweet (*salty water, salty ocean, salty lakes, salty liquid*). Interestingly enough, the syntagm *salty tears* is frequently found in somewhat ‘poetic’ contexts as in the

following sentence: ‘*’My lips quivered, my eyes went red, and salty tears stained my already salty face*.’’

The instances of the abstract use of *salty* found in this analysis mostly pertain to natural occurrences usually experienced close to seas or oceans. Namely, the basic meaning of the lexeme within this category is extended into the domains of smell and touch. The following prominent examples were found in ‘GloWbE’: *salty air* (*I was immediately calm, breathing in the salty air and day dreaming to the sound of small waves breaking along the shoreline*.), *salty breeze* (*In time, we find ourselves on a long wide dirt road, the Eyre Highway at our backs, a salty breeze in our faces*.), and *salty wind* (*I walked towards the beach shore and looked ahead; the tide was high and I could taste the salty wind*.).

Moreover, there were two abstract meanings denoted by the same lexeme *salty* found in this analysis. The first meaning refers to the feeling of annoyance and agitation (*Since then they have eased up on the end game...well the whole game's difficulty and that has made me salty about it*.), whereas the second is synonymous with the adjective expensive (*This price is a little salty*.).

The final two prominent examples in ‘GloWbE’ are idiomatic syntagms *salty dog* and *salty language*. The expression *salty dog* is colloquially used for describing sailors which have plenty of experience at sea. This meaning is evident in the following sentence: ‘’*He's this old salty dog working for sort of an exploitation system the way that the ship is run.*‘’ As for *salty language*, it signifies stimulating but rude and provocative utterances (*Take a look, but turn your volume down if you're at work, because there is some salty language.*)

To continue with the analysis, the basic meaning of the Croatian adjective ***slan*** corresponds to its English equivalent. Also, the literal use of the lexeme can be found in the

same contexts, i.e. in descriptions of food, water or liquids (*slana srdela, slani inćun, slane grickalice, slano jezero, slana voda, slana otopina,* etc.).

On the other hand, the abstract use is manifested in two categories. The first one is related to the disease called cystic fibrosis (hereinafter: CF). Namely, children who suffer from CF are referred to as *djeca slanog poljupca* in the Croatian language (*Zahvaljujući gradu Zagrebu podignuli smo novi web portal pod nazivom Info portal djece slanog poljupca*.) due to the increased amount of salt in their sweat which is most commonly noticed when kissing them on the forehead, for instance. Considering that this is also the simplest way for a parent to notice CF in their child, such usage is not surprising. However, it is important to mention that English does not contain this category.

Finally, as well as in English, there is the category of natural occurrences present in Croatian. Thus, we have sytagms such as *slani zrak* (*Jer smilje je 'zrelo' kad je suho, osuši ga slani zrak i sunce, i tada još jače miriše*.), *slani vjetar* (*Nećemo šetati obalom, držeći se za ruke i milujući se uz slani vjetar*.) or *slane kiše* (*A rasli su maslinici, možda i nedovoljno dobro i brzo ali ne trpješe slane kiše ni onda a niti danas*.).

What can be noticed at this point of the analysis is the fact that *salty* formed considerably fewer categories of abstract meanings than *bitter* in both languages. However, the similarities between languages in question were obvious in instances of literal use, as well as in the category of natural occurrences.

CATEGORY	ENGLISH	CROATIAN
Natural occurrences	+	+
Feelings of annoyance and agitation	+	-
Synonym of *expensive*	+	-

Table 5: Semantic categories of *salty/slan* in Croatian and English

3.3. Sweet – Sladak

ENGLISH	CROATIAN
Sweet companion	Slatki prijatelj
Sweet lady	-
Sweet girl	Slatka djevojka
Sweet children	Slatka djeca
Cute baby	Slatka beba
Cute couple	Sladak par
Cute smile	Sladak osmijeh
Cute face	Slatko lice
Cute animals	Slatke životinje
Cute puppy	Sladak psić
Cute pony	Slatki poni
Cute pictures	Slatke slike
Cute idea	Slatka ideja
Cute story	Slatka priča
Cute outfit	Sladak *outfit*
Sweet summer	-
Sweet romance	Slatka romansa
Sweet adventure	-
Sweet story	Slatka priča
Short and sweet	**Bilo je kratko, ali slatko**
Sweet sound	Sladak zvuk
Sweet voice	Slatki glas

Sweet melodies	Slatke melodije
Sweet spot	-
Sweet victory	Slatka pobjeda
Sweet dreams	Slatki snovi
Sweet revenge	Slatka osveta
Sweet weekend	Slatki vikend
Sweet relief	-
Sweet sentiments	-
Sweet life	Slatki život
To have a sweet tooth	**Sladokusac**
Sweet nothings	**Slatkorječivost**

Table 6: Examples of the abstract usages of the English lexeme *sweet* and their Croatian equivalents

According to the Oxford Advanced Learner's Dictionary, the basic meaning of the adjective ***sweet*** is ''containing, or tasting as if it contains, a lot of sugar'' (ibid.). Although it is mostly used for describing food and beverages (*sweet potato, sweet bread, sweet wine, sweet alcohol, sweet peas, sweet rice,* etc.), there are a few interesting examples which refer to smell: *sweet fragrance, sweet-smelling rose, sweet smell of dew,* and *sweet smell of air*.

The examples of various abstract meanings can be classified into approximately five categories which are: the category of people, the category of animals, the category of short duration, the category of sound, and the category of pleasure. The first category contains syntagms such as *sweet companion, sweet lady, sweet girl, sweet children*, and other. The most frequent constitutive pattern is ADJ + N in which the adjective receives the function of an attribute. Depending on the syntactic construction, *sweet* can also hold the function of a subject complement or an object complement. The main obvious difference between English

and Croatian that should be mentioned at this point is the absence of a synonym for *sweet* in the latter. The English language, however, uses the adjective *cute* which is synonymous with *sweet* only when figuratively referring to characteristics or appearances of both animate and inanimate entities. It can be said that this lexeme was probably introduced out of the need for another adjective which would refer solely to physical appearance or specific traits. In addition, *cute* is most frequently found in the category of people as well as in the category of animals in examples such as *cute baby, cute couple, cute smile, cute face, cute animals, cute puppy, cute pony,* etc. Moreover, as stated above, there are instances in which *cute* denotes inanimate entities as in: *cute pictures* (*In the beginning, we shared cute pictures of kittens, and chain letters.*), *cute idea* (*And although the group photo is a cute idea, it's cluttered.*), *cute story* (*This is a pretty harmless and cute story.*), and *cute outfit* (*There are times when the cute outfit alone is enough motivation to get you working out for the day!*).

In the third category, *sweet* is used for describing occurrences which are pleasant but of short duration. The more frequent examples are *sweet summer, sweet romance, sweet adventure,* and *sweet story*. Also, the idiom *short and sweet*, which corresponds to the Croatian phrase '*bilo je kratko, ali slatko*'', can be found under this category.

The final two categories distinguished in this analysis are the category of sound (*sweet sound, sweet voice, sweet melodies*) and the category of pleasure (*sweet spot, sweet victory, sweet dreams, sweet revenge, sweet weekend, sweet relief, sweet sentiments, sweet life*). However, there are also two notable expressions that were not categorized in this analysis since they are overly specific. The most interesting one is the idiom *to have a sweet tooth* which signifies one's craving for sweet food, especially desserts or candy. On the other hand, Croatian has the compound noun *sladokusac* which carries the same meaning and expresses the extra-lingual thought well. The final figurative expression that will be mentioned in this paragraph is *sweet nothings*. This idiom refers to affectionate and romantic words spoken to a

loved one as it is shown in the following sentence: ''*She'll tell you I sprinkle her with imaginative 'sweet nothings' and expressions of love throughout the year.*'' Equivalently, Croatian uses the compound noun *slatkorječivost* but it is important to mention that it has exclusively negative connotations, which is not the case in English.

As far as the Croatian lexeme ***sladak*** is concerned, its primary definition on '*Hrvatski jezični portal*' is 'which has a taste of sugar or honey'. Its literal use corresponds with the use of the adjective *sweet* in English, so it generally appears in descriptions of food and beverages (*slatka voda, slatka hrana, slatko piće, slatki proizvodi, slatka juha,* etc.).

On the other hand, the metaphorical meaning of *sladak* was noticed in six categories. First, there is the category of people in the following examples: *sladak dečko, slatka ljepotica, slatka plavuša, sladak lik, slatka beba*. The constitutive pattern here is again simple- ADJ + N. It is important to mention that the adjective essentially refers to someone who is kind, pleasing, humble, gentle or nice. As it was seen in the analysis of *sweet*, English uses the lexeme *cute* for denoting such characteristics. Describing certain people as *cute* or *sweet* could be justified by the fact that they evoke feelings of contentment or joy in the same way that sweet food does, for instance. In the majority of cases, when referring to someone as *sladak* or *cute*, the possibility of any kind of lust or physical attractiveness towards them is intentionally excluded. Instead, the emphasis is put on their positive behavioral characteristics such as cordiality, courtesy, decency, and such.

The second category, which was also found in English, refers to animals. The most frequent syntagms are *slatko štene, sladak zeko* and *sladak mačić*. Furthermore, the following three categories include the description of clothes (*slatka haljinica, slatka košulja, slatka majica*), abstract nouns such as freedom or victory (*slatka sloboda, slatka pobjeda*), and space (*slatko mjesto, slatka soba, Dome, slatki dome!*). In English, however, we would use the

synonym *cute* for referring to animals and clothes, as it was already mentioned in the paragraphs above.

The final category found in this analysis was the category of feelings which seemed to be particularly interesting. Namely, it includes collocations of *sladak* with burdensome or negative feelings and situations as in *sladak teret, slatke brige, slatka trpljenja,* and *slatke muke*. In such expressions, negative connotations of the respective nouns transfer into positive in order to express the fact that people tend to worry or suffer for a greater aim which is yet to be achieved. English also contains similar syntagms that are used in same contexts as Croatian equivalents: *sweet sorrows, sweet burden, sweet misery,* and *sweet suffering*. From the perspective of syntax, it is evident that the expressions within this category appear in ADJ + N pattern in both languages.

CATEGORY	ENGLISH	CROATIAN
People	+	+
Animals	+/- (**cute**)	+
Short duration	+	+
Sound	+	-
Pleasure	+	-
Clothes	+/- (**cute**)	+
Feelings	+	+
Space	+	+
Abstract nouns (e.g. freedom, victory)	+	+

Table 7: Semantic categories of *sweet/sladak* in English and Croatian

3.4. Sour – Kiseo

ENGLISH	CROATIAN
(To be) sour	-
Sour mood	Kiselo raspoloženje
Sour-faced	-
Sour face	Kiselo lice
Sour relations	-
To go/turn sour	-
To strike/hit a sour note	-
Sour grapes	**Kiselo grožđe**

Table 8: Examples of the abstract usages of the English lexeme *sour* and their Croatian equivalents

The final two lexemes that will be analyzed in this thesis are *sour* and *kiseo*. To begin with, ***sour*** is defined as ‘’having a taste like that of a lemon or of fruit that is not ready to eat’’ (ibid.). The literal use of the lexeme is not particularly interesting since it refers to food and beverages, just as other taste adjectives do. Nevertheless, the most frequent examples are *sour cream, sour soup, sour dough, sour apple, sour cherries, sour cocktail,* and *sour wine*.

On the other hand, the abstract meaning of *sour* was found in the following four categories: the category of people, the category of relations, the category of unpleasantries and negative effects, and category of jealousy. Apart from referring to someone as *sour* (*He was an extremely sour man, but not entirely horrible to me*.), the first category also contains examples that describe people’s moods and facial expressions. The frequent syntagm is *sour mood* which signifies a sullen and depressed state of mind. In the descriptions of unpleasant and ill-tempered facial expressions, the compound adjective *sour-faced* was more frequently found in ’GloWbE’ than *sour face*, for instance.

Furthermore, the second category pertains to relations that were disturbed or broken. Although it might be expected that this category would exclusively refer to close or intimate human relations, it was commonly found in the domain of politics as in the following example: ‘’*However, it served to sour relations between President and Congress and Roosevelt compounded the situation in 1938 by campaigning in the congressional elections against members who had opposed his plans.*’’

The category of unpleasantries and negative effects is manifested in phrases *to go/turn sour* and *to strike/hit a sour note.* While the former usually describes something that becomes unexpectedly unfavorable (*Your life could turn sour at a flip of a dime*.), the latter is used to introduce or indicate especially unfortunate and unpleasant situations or events (*News of my father's passing hit quite a sour note before my graduation ceremony*.).

The final abstract meaning of *sour* was found in the syntagm *sour grapes* that refers to ‘’unfair criticism that comes from someone who is disappointed about not getting something’’.[8] As stated above, this category is related to the feeling of jealousy, which is evident in the following sentence: ‘’Any sour grapes over this should be directed at your own team who weren't smart enough to do this.’’

As expected, the last taste adjective in this analysis – ***kiseo*** – has the primary meaning which is equivalent to *sour* in English. The literal or concrete use again pertains to food and beverages in the examples such as *kiseli krastavci, kisela juha, kiseo kupus, kiselo vrhnje, kisela pića* etc.

However, the instances of metaphorical use can be classified into four interesting categories. The first one is the category referring to mood and feelings. It includes syntagms such as *kiselo raspoloženje* (*A ti reakcionari po svemu sjede u demokratskoj stranci, poput*

[8] Retrieved from: https://www.merriam-webster.com/dictionary/sour%20grapes

Nancy Pelosi, vođe demokrata u zastupničkome domu Kongresa, koja ni u svečanoj prigodi nije krila svoje kiselo raspoloženje.), and *kiseli osjećaj* (*Različita je od kiselog osjećaja laži koji nam u času zgrči mišiće i uvuče vrat među ramena*.). As it was shown in the analysis of *sour*, the English language also contains these meanings.

The following category denotes unpleasant and unwilling facial expressions. The most frequent and notable examples are *kiseli izraz lica* or a simpler version *kiselo lice*, and *kiseo osmijeh*. Although it was classified under the category of people, this usage was also recognized in English.

The final two categories are the category of humor (*kiseli humor, kisela šala*), and the category of jealousy (*kiselo grožđe*). It is important to mention that the category of humor was not found in the analysis of 'GloWbE', whereas *sour grapes* appeared in the same contexts as the Croatian equivalent which is the literal translation from English.

CATEGORY	ENGLISH	CROATIAN
People	+	+
Relations	+	-
Unpleasantries and negative effects	+	-
Jealousy	+	+
Moods and feelings	+	+
Humor	-	+

Table 9: Semantic categories of *sour/kiseo* in English and Croatian

4. DISCUSSION

We begin by noting that the use of lexemes coincides in both languages when it comes to their literal meanings. They frequently concern food and beverages and rarely smell. Considering that the primary meanings in the majority of languages are coinciding, especially when it comes to something as common as food and beverages, this high degree of congruence was expected. Furthermore, there are no significant differences between syntactic constructions. The frequentative pattern in Croatian is ADJ + N (Nom.) + N (Gen.), while in English it is ADJ + N (+NP).

As far as the abstract or metaphorical meanings are concerned, there are certain differences and variations between two languages. The first difference found in the analysis of *bitter/gorak* was the absence of the category of weather conditions in the Croatian language. Namely, English uses *bitter* for referring to extreme coldness, whereas Croatian uses the adjective *oštar* from the tactile domain and the adjective *ljut* in this context.[9] Another difference is noticed in syntactic constructions in the examples *to be bitter about* and *biti ogorčen čime*. While English uses prepositional phrases in the function of adjective complement, Croatian uses grammatical cases to denote the same meaning. Such syntactic differences are also evident in the examples *a bitter pill to swallow* and *gorka pilula/gorak zalogaj* in which English employs an infinitive complement (i.e. *to swallow*), and Croatian simply modifies the noun by using an attribute. The instances in which Croatian contained compound nouns (*slatkorječivost, sladokusac*) and English had syntagms (*sweet nothings*, *to have a sweet tooth*) were also common. Moreover, what seems to be the most notable difference on the lexical level is the existence of the adjective *cute* in the English language and the lack of its adequate synonym in Croatian. The reason for this phenomenon stems from the lexical richness of the English language which is mostly manifested by a great number of

[9] See Raffaelli (2009), sections 4.6.2.1 and 6.5.2 for a detailed diachronic analysis of lexemes 'oštar' and 'ljut'.

synonyms for a particular word. Another reason for the emergence of *cute* may be the need for a specific adjective which would denote psychophysical characteristics corresponding to the pleasant feeling of eating sweet food, as it was noted in section 3.3. of this work.

As for the analysis of *salty/slan*, it revealed several notable differences between the two languages. For instance, there is no category of referring to children which suffer from cystic fibrosis as *djeca slanog poljupca* in English. Although there are several sentences in 'GloWbE' that carry the same meaning (e.g. ''Parents sometimes notice this symptom of cystic fibrosis first, because they taste the salt when they kiss their child.''), a specific phrase which refers to CF children is non-existent in the English language. However, both languages contain the category of natural occurrences which is found in the examples *salty air/slani zrak,* and *salty wind/slani vjetar.* Finally, in the case of *sour/kiseo*, correspondences between the languages were found in the category of jealousy (*sour grapes/kiselo grožđe*) as well as in categories which refer to feelings, moods, and facial expressions.

Given the different cultural backgrounds of the two languages in question, the level of correspondence between the analyzed idioms is significantly high. As it is shown in tables 2, 6 and 8, English idioms (*a bitter pill to swallow, to/until the bitter end, short and sweet, to have a sweet tooth, sweet nothings* and *sour grapes*) are most often literally translated into Croatian (*gorka pilula/gorki zalogaj, do gorkog kraja, sladokusac, slatkorječivost* and *kiselo grožđe*). This comes as no surprise if we consider Globalization and the rapid digital development that caused the increase of Croatian borrowing of English words and expressions. On the other hand, there are no specific Croatian equivalents of the following English idioms: *salty dog, salty language, to go/turn sour,* and *to strike/hit a sour note*. The theoretical postulation that seems to be the most appropriate for the explanation of this 'phenomenon' is the so-called experiential synthesis of objectivism and subjectivism proposed by Lakoff and Johnson (2003) who argue that ''though there is no absolute

objectivity, there can be a kind of objectivity relative to the conceptual system of a culture'' (p. 193). One of the main findings of their discussion on the essential value of truth (i.e. meaning transferred by a language) is the existence of a certain way of understanding the world through our interactions with it (Lakoff & Johnson, 2003). Within the context of this analysis, these implications could mean that the absence of a Croatian equivalent for *salty dog* in the domain of taste stems from the fact that either Croats do not have as developed or as valued maritime traditions as Americans/British do, or that their understanding of such an experience occurs within a different conceptual domain. Considering that Croatian contains a syntagm '*morski vuk'* (i.e. sea dog in English) which denotes an experienced sailor, it can be concluded that the Croatian language system employs domains other than the domain of taste when conceptualizing such phenomena. However, the speakers of English also use *sea dog* when referring to sailors, which could imply that '*morski vuk'* simply appeared as a result of phraseological borrowing.

To continue, the main reason for lexical and syntactic differences seems to be grounded in the fact that English is exceptionally lexically rich, whereas Croatian has developed a rich morphology. The morphological differences, however, are grounded in the cultural specificities of languages which are closely related to their typological features. Namely, according to the field of morphological typology, English is, in general, the analytic type, while Croatian is classified under the group of synthetic languages (Marković, 2013). The grammatical functions in analytic languages are mostly manifested by using fixed word order and function words due to the lack of bound morphemes (in comparison with synthetic languages) (Moravcsik, 2013). The synthetic languages, on the other hand, are morphologically rich and they tend to express syntactic relations by changing the internal structure of words, i.e. by inflection (ibid.). However, it is important to mention that ''languages are labeled as analytic or synthetic not because they have exclusively one or the

other word structure but because one or the other is predominant'' (ibid.: 112). Thus, we can conclude that most of the world languages should be defined as being a 'mixed' type. As for the present analysis, the aforementioned difference between English and Croatian is evident in several examples. For instance, *bitter about* is expressed by the inflection of *gorak* into *ogorčen* in Croatian. Another example is the English idiom *to have a sweet tooth* which becomes a compound noun *sladokusac* in Croatian.

With respect to everything argued until this point, it can be concluded that there are differences at the lexical, syntactic and semantic levels between English and Croatian usage of taste adjectives. Nevertheless, it is also important to note that these two languages are generally compatible in the majority of usages, which was shown in the analysis.

5. CONCLUSION

The aim of this M.A. thesis was to investigate the similarities and differences between the usage of the selected group of English and Croatian lexemes for taste. The respective lexemes correspond to four basic tastes which are as follows: *bitter/gorak, salty/slan, sweet/sladak, sour/kiseo*. As for the general structure of the thesis, it was divided into two parts, the theoretical background composed of recent cognitive linguistic and cognitive semantic findings, and the analysis.

The primary method used in this work was the contrastive analysis (CA) based on two web corpora, the Corpus of Global Web-Based English (GloWbE) and the Croatian Web Corpus (hrWaC). The basic meanings of the lexemes were taken from the '*Hrvatski jezični portal*' and the monolingual Oxford Advanced Learner's Dictionary of Current English. As far as the limitations of the study are concerned, it is possible that the size of corpora in question is inadequate for making generalizations. The potential solution that could be implemented in future research is creating a specific English-Croatian parallel corpus composed of written and spoken texts that exclusively contain language of taste, i.e. taste adjectives.

As expected, the results of the analysis showed that there were no significant differences between the languages in question when considering the literal usage of lexemes. The level of congruence between the two languages regarding the figurative or abstract meanings of the analyzed lexemes and expressions was also significantly high. However, it should be noted that there were several interesting exceptions such as *'djeca slanog poljupca', salty dog* and other. To conclude, although there were noticeable differences at the syntactic, lexical and semantic levels between the two analyzed languages, they are generally compatible in most of the usages.

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