

I AM FALLING *IN* LOVE, OUCH!: ONTOLOGICAL METAPHORS AT WORK

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ABSTRACT

The research aimed to track the distribution of in metaphors and explore their ontological function in the abstracts of English research articles in the sub-disciplines of theoretical linguistics and pragmatics. The lack of empirical evidence on the subject had become the inspiration to base the research on a corpus. The corpus consisted of 40 research article abstracts; 20 from Journal of Linguistics and another 20 from Journal of Pragmatics. By using a quantitative method, the results show that theoretical linguistics abstracts are more densely populated with 'in' metaphors. However, in terms of in-preposition phrase topic complement variations, they are less varied. Qualitatively, the results confirm a notion proposed by Conceptual Metaphor Theory (CMT) that 'in' metaphors function cognitively by providing ontological status to abstract objects. Their existence proves to play an important role in academic texts.

Keywords: *in- preposition, conceptual metaphor, ontological function, spatial preposition*

INTRODUCTION

Why do we say fall 'in love' instead of 'on love'? Lakoff and Johnson (2003) have stated that their early experiences with physical objects, especially with their own bodies, have conditioned how they conceptualize many of the natural phenomena that occur in lives. Lakoff and Johnson (2003) further explain that only a small number of concepts can be directly comprehended without the help of a metaphor. They are the simple spatial concepts like the concepts of 'in-out', 'up-down', 'center-peripheral', 'front-back', and 'near-far'. These concepts are learned through the positions, orientations, and movements of our bodies. However, the physiology is not the only factor that influences the emergence of the concepts, nor is it the most basic. Lakoff and Johnson (2003) have further stated that all their experiences are cultural through and through that people experience the world so that the culture is already present in the very experience itself. Thus, there is also the domain of social experience. Another similar basic concept is the emotional concept believed to emerge as early as the physical and cultural ones. These are the examples modified from Lakoff and Johnson (2003) for each

concept of the three different experiences; physical, social, and emotional.

- (1) Rose is *in her room*.
- (2) Rose is *in the school board meeting*.
- (3) Rose is falling *in love*.

In (1), the use of the preposition 'in' is stimulated by the spatial concept derived purely from physical experience and is more clearly delineated (Lakoff & Johnson, 2003). It is, therefore, obvious that it is not metaphorically used. On the other hand, 'meeting' and 'love' are abstract concepts that need to be given some sort of form to make handling possible. They tend to associate those not-clearly-delineated, vague, or abstract entities with physical entities like an object, a substance, or a container (Kövecses, 2010). In Lakoff and Johnson's term, this way of coping with vague concepts via ontological metaphors helps in assigning basic status to those concepts. As soon as an experience or abstract entity is rendered some new definable ontological status, it can easily be referred to, categorized, and quantified that in the end, we can reason about it (Lakoff & Johnson, 2003).

Therefore, the use of the preposition 'in' is a

sign of the tactical maneuver performed by humans. The metaphor found in (2) may be categorized into 'social gatherings are containers' metaphor, while in (3), it may be interpreted as being 'in love'. Although it is generally observed as a container metaphor, this metaphor can be more precisely interpreted as 'emotion is fluidly grounded on the human body as the container'. This is because being 'in love' is perceived as 'being inside of something' (a container or a fluid in a container), meaning that humans are aware when they are under a lot of pressure. In regard to 'love', people's experience of being trapped in a container prompts their imagination to reincarnate the experience to become some sort of generic structure in mind (Wintzer, 2019). This is evinced in the use of the collocated preposition 'in', thus, 'in love'. Starting from this very moment, the abstract entity 'love' enjoys a status as a physical object, and so it may be treated as one.

CMT believes that the human body is an ideal source domain since, for humans, it is clearly delineated, and they believe they know it well (Kövecses, 2010). Besides container metaphor, the ontological metaphor can also be revealed via the concepts of substance and physical objects in general. For example, the collocated word 'fall' completes the schematic image by emphasizing that being in love is somewhat accidental and physical, in a sense. People do not normally intend to either fall or fall in love. In terms of CMT, 'fall in love' emphasizing the action 'fall', maybe put under the metaphor 'falling in love is physical falling.'

These discussions may partly explain the complexity of metaphorical prepositions in general (Kumar, Rajendran, & Soman, 2015; Lee, Yoo, & Shin, 2020). The strong attraction appeals to researchers to research prepositions. However, it is the dilemmatic nature of prepositions in terms of semantics. There are always arguments about whether prepositions should be approached as lexical elements that have their own meanings or grammatical elements that practically have no meanings. There is even an approach to prepositions that considers them a non-uniform hybrid (Chanturidze, Carroll, & Ruigendijk, 2019). This dilemmatic view is shared by Saint-Dizier (2006), who believes that they are used metonymically and metaphorically. However, a few of the prepositions are used quite restrictedly.

Tyler and Evans (2003); and Hoang and Boers (2018), with a similar notion, offer an approach called the principled polysemy. This approach, they claim, may supply a framework that is more distinctly expressed on which a systematic and accessible account of English spatial particles is built. Principally, their research explains the wide array of non-spatial meanings originated by way of the extension of spatial concepts (Tyler & Evans, 2003; Zane & Shafer, 2018). Well-explained as it is, the research is acknowledged as having a weakness in that it is not corpus-based. They obtained the data mainly from numerous dictionaries, grammars, and histories of English and their intuitions

as native speakers (Tyler & Evans, 2003). They suggest that to inspect corpus-based data is crucial because its investigation also reveals additional uses and even seemingly anomalous uses, which would challenge our model in various ways (Tyler & Evans, 2003). Corpus-based research is definitely needed to examine prepositions and scrutinize many other aspects of a language and from many different perspectives (Cameron, 2003; Herrmann, 2013). Moreover, Chen and Xu (2019) agree that using quantitative linguistic methods will better display both universality and peculiarities of human language.

This present discussion about the 'in' metaphorical preposition is motivated by Lakoff and Johnson's seminal work published in 1980/2003 as well as by the many publications written by other scholars who are also inspired by it. Investigations on metaphors have been conducted in many different fields of research, such as in behavioral science (Pendrous et al., 2020), artificial intelligence (Carbonell, Sánchez-Esguevillas, & Carro, 2016), general science (Beger, 2016; Roberts et al., 2019; Roldán-Riejos & Cuadrado, 2015), psychotherapy (Killick, Curry, & Myles, 2016), psychology (Bultmann et al., 2019; Raja, 2019), biology (Castellane & Paternotte, 2018; Kashkan et al., 2015), news discourse (Mujagić, 2018), politics (Alousque, 2015; Chan & Yap, 2015; Filipczuk-Rosińska, 2016; Yi, Koenig, & Roland, 2019), demographics (Catalano & Musolf, 2019), translation studies (Egan, 2015), comics (Dominguez, 2015; Forceville & Paling, 2018; Szawerna, 2018; Tasić & Stamenković, 2015), television series (Izgarjan & Djurić, 2016; Terry, 2019), computer programming (Pérez-Marín et al., 2020), and music (Mishankina & Zheleznyakova, 2015; Pannese, Rappaz, & Grandjean, 2016).

Some accounts of the preposition 'in' have also been offered mostly in terms of its functions in English grammar by Huddleston and Pullum (2006) and Biber et al. (1999). Discussions about preposition 'in' from conceptual metaphor theory are conducted, for example, by Cameron (2003) and Herrmann (2013). It is quite fair to say that the research on conceptual metaphors in linguistics is in the minority as metaphor scholars seem to be more attracted to explore metaphors in science and other fields that do not make language their focal point. The lack of empirical evidence of the existence of 'in' metaphors has also motivated this current research to perform a corpus-based investigation.

Abstracts of research articles published in journals on linguistics are naturally occurred and most likely deal with abstract objects. The abstract of a research article has become an inseparable part of the research article since it is crucially important in the advancement of scientific knowledge (Hardjanto, 2017). It aims to show the researcher's perspective on the article (Omidian, Shahriari, & Siyanova-Chanturia, 2018). Jointly, the title of the article and its abstract are the first to allure its reader to continue reading it. In conclusion, abstracts deserve to be treated as

an independent class of discourse (Hardjanto, 2017). The research aims at attaining some information about the characteristics of ‘in’ metaphors. It includes their distribution across the two sub-disciplines of theoretical linguistics and pragmatics, and to learn whether their use shows any significant difference. Previous research about metaphors in linguistics is limited, including in its sub-disciplines. Another objective is to describe the capacity of ‘in’ prepositions in manifesting the ontological concept by transforming the abstract into physical entities.

METHODS

The research’s corpus consists of 40 research article abstracts: 20 from Journal of Linguistics, and 20 from Journal of Pragmatics. The articles to which the abstracts are attached are all primary research articles published between 2015 and 2019. Both the journals and the articles are selected using the opportunity or convenience sampling procedure to carry out the selection based on some criteria such as availability and easy accessibility, among others. Both journals can be accessed via the internet freely, and are indexed in the web of Science Arts and Humanities Citation Index (http://ip-science.thomsonreuters.com/mjl/publist_sciex.pdf), and web of Science Citation Index (http://ip-science.thomsonreuters.com/mjl/publist_ssci.pdf).

The data gathered are phrases containing the prepositions ‘in’, ‘inside’, and ‘within’, and whenever necessary, the rest of the co-text will be retrieved to help with the discussion. ‘Within’ and ‘inside’ are included because their basic meanings are quite similar, if not the same with that of ‘in’. ‘Within’ is described in the dictionary as “If something is **within** a place, area, or object, it is inside it or surrounded by it” (Within, n.d.).

Next, the description given by the dictionary for ‘inside’ is “Something or someone that is **inside** a place, container, or object is in it or is surrounded by it” (Inside, n.d.). Meanwhile, for the preposition ‘in’, it says, “Someone or something that is **in** something else is enclosed by it or surrounded by it. If you put something **in** a container, you move it so that it is enclosed by the container” (In, n.d.). Even though, at a glance, the meanings of ‘in’, ‘within’, and ‘inside’ are quite similar. The three of them are not always interchangeable when used in sentences. It can be seen in these examples.

- (4) Guests are entertained within private dining rooms.
- (5) Guests are entertained in private dining rooms.
- (6) Guests are entertained inside private dining rooms.
- (7) in ruins
- (8) *within ruins
- (9) *inside ruins

The replacement of ‘within’ by ‘in’ or ‘inside’ in (4) is acceptable to some extent as shown in (5) and (6). On the contrary, the replacement of the preposition ‘in’ with ‘within’ or ‘inside’ in (7) will result in expressions foreign to the speakers of English like those in (8) and (9). The expression ‘in ruins’ is defined in the dictionary as “completely spoiled” or in terms of building, “destroyed” (Ruins, n.d.). This two-words expression is labeled polywords by Herrmann (2013) or multi-word lexical unit (Biber et al., 1999). These polywords will be treated as exceptions because they generate a single meaning. Expressions like ‘in that’ or ‘in which case’, or ‘in terms of’ are more examples of polywords, which are treated as single lexical units and therefore will not be discussed in the present report (Herrmann, 2013). The more detailed account of the corpus is presented in Table 1.

Table 1 Sub-disciplines and Total Number of Words

Sub-disciplines	Total no. of words
Theoretical Linguistics	3284
Pragmatics	3104
Total	6388

A normalization process is needed to achieve conformity between the two sub-fields because of the difference between the numbers of words in the two sub-disciplines. This process makes a comparison possible and the numbers meaningful. The data are retrieved from the data source with the assistance of a computer program WordSmith Tools version 7 (Scott, 2016). It helps produce concordances based on the data source and eases the process of identification of the ‘in’ metaphors. Examples of the concordance are provided in Figure 1.

Concordance

We show that the attested variation **in** the ordering between the cardinal and numerals and we provide evidence that **in** the younger generations of signers, between the cardinal and the noun is **in** part due to definiteness and by examining the compound marker **in** Turkish Noun-Noun compounds, as in aspect of word-formation paradigms **in** autonomous morphology by examining communication style, as defined **in** the introduction to this issue, we draw as used and spontaneously adapted **in** the flow of talk (Cameron, 2007), often metaphorical creativity manifests itself **in** how metaphors are used and (Cameron, 2007), often evoking humour **in** the process. Our second aim in the use overlaps with the use of humour **in** conversation. We suggest that humour **in** the process. Our second aim **in** the study has thus been to

Figure 1 Concordance Samples

Each thread of words in the concordances was checked to see if any of the ‘in’ prepositions is used metaphorically. Further analysis is done on the data qualitatively to investigate what kinds of experience motivate ‘in’ metaphors in both sub disciplines. To measure whether the ‘in’ metaphors retrieved from the data source are in fact not a matter of accident, Chi-squared test will be operated.

RESULTS AND DISCUSSIONS

'In' metaphors distribution is across the sub-disciplines of theoretical linguistics and pragmatics. The data analysis results show that all together, there is a difference of 180 words between the two sub-fields. Although the difference is relatively small, in fact, any degree of difference is valid to call for a normalization process since no comparison is possible without it. The constant that is chosen to operate in the research is 1.000 on the basis that the size of each group of the data source is in thousands. It is considered the most sensible seeing that is using a more significant constant, say 10.000, or smaller, 100 for example, will not result in proportional numbers, and may lead to a biased perception. The details of the data, including the normalized computational frequencies, are presented in Table 2.

Table 2 Frequency of 'in' Preposition

Preposition 'in'	Raw	Normalized
Non metaphorical 'in' prepositions	18	6
Metaphorical 'in' prepositions	181	56

Table 2 reveals the dominance of metaphorical 'in' prepositions in the corpus. There is a substantial discrepancy between the numbers of non-metaphorical and their metaphorical 'in' prepositions counterparts. However, the approximately nine-fold difference between the two categories of prepositions does not guarantee the significance of the existence of the 'in' metaphors in the corpus. To make sure whether they are indeed significant, the Chi-squared test are administered. The result of the test shows a tremendously significant difference between the occurrences of non-metaphorical and metaphorical 'in' prepositions in the corpus ($\chi^2_{(1)} = 40,3226$, $p = 0,000$). The statistics has provided the needed evidence to support 'in' metaphors to be regarded as one important characteristic of the academic texts under research. This has taken the discussion to the next level as to discuss whether the distribution of 'in' metaphors across the two sub-disciplines also signifies some meaningful peculiarity. Table 3 displays the distribution of 'in' metaphors across theoretical linguistics and pragmatics, both raw and normalized frequencies.

Table 3 'In' Metaphors Distribution

Sub-disciplines	'In' metaphors	
	Raw	Normalized
Theoretical Linguistics	106	32
Pragmatics	75	24

The number of 'in' metaphors occurring in the two sub-disciplines does not show a striking difference although the computation seems to provide the support that theoretical linguistics is slightly more densely populated with 'in' metaphors. Nevertheless, to ascertain whether this difference means anything, another Chi-squared test is carried out. The result confirms that there is no significant difference in the use of 'in' metaphors in the abstracts of the articles of the two sub-disciplines ($\chi^2_{(1)} = 1,14286$, $p = 0,285$). In other words, the difference of 'in' metaphor distribution across the two sub-disciplines is merely accidental in the present research.

The fact that 'in' metaphors are found to be significant with regard to the whole corpus is not really surprising. Both sub disciplines deal with relatively abstract concepts of language and language use. Via the usage of 'in', one big problem of handling abstract entities seems to have been solved. It is surprising, however, that in the abstracts of the pragmatics articles, all the 'in' prepositions are used metaphorically. Moreover pragmatics, that is judged to deal with more concrete objects in comparison with the objects dealt with by theoretical linguistics, shows a similar symptom. Only a single 'in' preposition that is found in theoretical linguistics is not metaphorically used. To observe the abstractness difference between the two sub disciplines, some of the topics are found in both of them that are given in Table 4.

Table 4 The Topics of Article Abstracts in the Corpus

Topics of discussions	
Theoretical linguistics	Pragmatics
fricative patterning	Twitter rape threats and group identity
usage probability and subject-object asymmetries	diachronic changes in news narratives
middle-passive voice	power distance and persuasion
negation through reduplication and tone	the vocabulary of manga
the 'believe' construction	co-construction of metaphors
exponents and morphosyntactically triggered phonologically process	emotional affects
polar answers	definition and application of discourse prominence
processing unambiguous verbal passives	enrichment, coherence, and quantifier properties

Looking at the list in Table 4, people might argue that both sub-fields handle similarly abstract entities. That opinion has some truth in it. Nevertheless, the small degree difference of concreteness has roughly

influenced the density of the sub-disciplines in the present research in terms of 'in' metaphors' existence. Pragmatics has topics that are comparatively more concrete so that its topics are relatively easier to imagine in the mind than those of theoretical linguistics because they are more clearly delineated.

The main result of the Chi-squared test presented has also proven that 'in' metaphors are prepositions that are indispensably important for the two sub-disciplines. With regard to what has been stated by Tyler and Evans (2003) about the extension of the spatial meanings of prepositions into different supply of non-spatial meanings, this finding strongly supports their claim. Most of the prepositions 'in' are not used spatially for concrete objects.

From an entirely different view, the specific test result is also parallel with CMT's basic concept because most of our concepts in looking into the outside world are indeed metaphorical. The concept of a container that we have learned via our understanding of our body is so strongly established that it is effortlessly retrieved and comfortably manifested in language. The present test result also conforms to the outcome of corpus-based research conducted by Cameron (2003), revealing a quite intense activity of metaphor-related prepositions with an emphasis on 'in' prepositions. Herrmann's (2013) finding is quite similar to that of Cameron as among words in the whole corpus of academic English that she investigated, 18,5% are metaphorically related, and of that amount, 42,5% is metaphor-related prepositions, way surpassing other word classes. She does not, however, focus on a certain type of preposition.

Returning to Cameron's research concerning the dominant 'in' prepositional metaphors over other prepositions such as 'for', 'on', 'of', 'between', 'into', 'off', and 'under', she did not give any suggestion as to what the reason behind the phenomenon. It is possible, nevertheless, to speculate on the reasons underlying the dominance of 'in'. 'In' is a simple (consisting only a word) spatial preposition, monosyllabic (consisting of only a syllable) that shows most topic variation, in contrast with complex ones like 'instead of', 'in behalf of', 'with reference to' (Cameron, 2003).

There is another characteristic that can be attached to it. This preposition also seems to carry the most general meaning compared with the other two, 'within' and 'inside', and so is more widely applicable to different words and contexts. 'Within' is considered for formal usage, at least by Collins English Dictionary, a feature that definitely limits its usage.

Furthermore, among the 106 prepositional metaphors in theoretical linguistics, six of them are 'within' metaphors, and among the 75 found in the sub-field of pragmatics there are four 'within' metaphors. Not a single 'inside' is found in the corpus. These facts provide even more support for the dominance of 'in' metaphors in the discipline of linguistics.

In terms of metaphorical intensity, 'in' and other prepositions are generally deemed less recognizable as metaphors and less forceful than verbal and adjectival

V-terms (Goatly, 2005). Similar to Goatly, Cameron (2003) and Obert, Gierski, and Caillies (2018) also suggest that nominal linguistic metaphors are found to be the most powerful. However, prepositions' contributions to the sentence structure have earned them the nickname 'the biggest small words', implying their crucial role in the English language. They may not be as intense as some other metaphorical word classes, but because of its widespread occurrences, their usefulness has caused them impossible to be overlooked.

Since Herrmann's research covers a lot wider range of lexical items than those of Cameron or this present research, her research can also reveal that metaphor-related verbs that come second after prepositions with a total of 27,7% or around half the frequency of metaphorical prepositions. This information is important because it can support prepositional metaphors to claim their place to be a feature of academic texts with a possibility that 'in' metaphors lead. This may affect an English learners' strategy in dealing with prepositions since more attention has to be drawn to studying metaphorical prepositions.

The quantitative analysis concerning 'in' metaphors confirms the lack of attention paid to them in general and confirms their essential role in the corpus. More attention is paid to metaphors belonging to other word classes. Indeed, as discussed before, prepositions are not as intensively loaded with metaphoricity as the rest of them. However, the results of the investigations on those other metaphor-related word classes have somehow eased the efforts to inquire about prepositional metaphors. For example, another interesting result by Herrmann (2013) shows that metaphor-related nouns come fourth after adjectives. This does not synchronize with earlier corpus-based research on academic prose, showing that nouns (non-metaphorical) are in the lead followed by prepositions and adjectives, and then by the rest of the word-classes (Biber et al., 1999). The deviation is most likely caused by the different focuses of the researches. Biber et al. (1999) target is to expose the features of academic prose in terms of word-classes in general, disregarding their relations to linguistic metaphors.

What Biber et al. (1999) have found out about nouns discussed earlier may relate indirectly to what Goatly (2005); and Sato, Schafer, and Bergen (2015) say concerning prepositions that they represent the relationships between things. In turn, this relates to the statement put forward by Goatly (2005) and Cameron (2003) that metaphor-related nouns' robustness exceeds that of the rest of the word classes, and this stimulates language to use to make demands on nouns. The most probable reason is that nouns represent things. Hyland (2006), Vo (2019), and Wu, Mauranen, and Lei (2020) assert that characteristics peculiar to academic texts involve high lexical density. Hyland means by lexical density is the high proportion of content words related to grammar words such as prepositions, articles, and pronouns, which makes academic writing more tightly

packed with information (Hyland, 2006). This fits extremely well because prepositions connect things (referred to by nominals), as described previously by Goatly (2005).

Communication is about things, both physical and non-physical. When the things being talked about are non-physical, which tend to be less delineated, the mind will first turn to what is available; the basic bodily experience that dominantly influences the way we conceptualize things. CMT proposes that the concepts retrieved, mainly from language, can be mapped into conceptual metaphors to investigate further. Some mnemonics to help remembering the conceptual metaphors that are related to the bodily experience taken from Kövecses (2010) are as follows.

THE STRUCTURE OF AN ABSTRACT COMPLEX SYSTEM IS THE PHYSICAL STRUCTURE OF THE HUMAN BODY

HUMAN PROPERTIES ARE THE PROPERTIES OF INANIMATE THINGS

AN ABSTRACT COMPLEX SYSTEM IS THE HUMAN BODY

FALLING IN LOVE IS PHYSICAL FALLING

EMOTION IS A FLUID IN A CONTAINER

HAPPINESS IS PHYSICAL FORCE
INVOLVEMENT IS CLOSENESS

These mnemonics show the importance of experience with the body to conceptualize the experience that people undergo later in their lives. To put it simply, the high frequency of prepositional metaphors under research is caused by the enormous number of nouns that refer to abstract entities existing in the English academic texts. These texts tend to focus on nonphysical objects. One way of how nouns can function perfectly in “representing things” as Goatly (2005) suggests there is the deployment of ‘in’ preposition that helps to give ontological physical status to nonphysical entities.

Furthermore, the roles of ‘in’ metaphors to connect a noun with another noun have been demonstrated in the introduction. In sentence sample (1), the ‘in’ preposition is used non-metaphorically, while in (2) and (3), the ‘in’ prepositions are used metaphorically, involving the domains of social and emotional experience. It is important to note that all the occurrences of the preposition in (1), (2), and (3), according to CMT, are of the same concept and word. With that being said, (1), (2) and (3) show that it may have the same basic spatial experience, but the way people conceptualize their experience is not always equal the same (Lakoff & Johnson, 2003). These three domains are not the only available domains as any different experience may be conceptualized into different ones. The data retrieved from the corpus in the present research prove the points mentioned.

Firstly, all the ‘in’ prepositions express the same concept of being in an area or container; an area is considered two dimensional and a container a three dimensional. In this respect, the different dimensions indicate the diversity of the experience that is conceptualized in various ways. The ‘in’ metaphor in vernaculars, for example, maybe conceptualized within the ‘language is a container’ metaphor. The knowledge about the concept of language in general is gained from the interaction with others through social contact. Another example, in conversation, maybe stimulated by another conceptual metaphor related to social experience, ‘Being in a conversation is being in a container’. In paradigm structure also shows a concept of being in a container, ‘Being in an abstract structure is being in a physical building’. Experiencing an action is also conceptualized as a container, like in the ordering, in shaping, in encoding, and in constructing. They may be placed under ‘Actions are objects’ conceptual metaphor.

The most obvious and ample evidence to prove that the way humans think and act are, for the most part, metaphorical is in the language. This has been the theme of this piece of writing. Therefore, it is obligatory to discuss the conceptual and linguistic side of the matter. The most important thing is to talk about the complements of the ‘in’ metaphorical prepositions of the data. A noun phrase is deemed the most archetypal complement in a preposition phrase (Biber et al., 1999). However, other types of complements are possible (Huddleston & Pullum, 2006).

In the research, only one noun clause and three verb phrases are found to be prepositional complements. The rest are all fulfilled by noun phrases. Examples from (10) to (13) are the exceptional four preposition phrases under discussion. The italicized parts are the preposition phrases.

- (10) ...metaphorical creativity manifests itself *in how metaphors are used...*
- (11) The goal of this paper is to verify whether causalness is a factor *in the encoding* and whether the two languages differ ...
- (12) Passivization played a central role *in shaping* both linguistic theory and psycholinguistic approaches ...
- (13) ... both superlative maximum and minimum constructions similarly serve speakers *in constructing* non-optimal arguments in their favor.

In connection with Cameron’s (2003) finding that preposition ‘in’ is proved to have considerable potential in conveying different varieties of topics, the data seem to show the same tendency. Cameron (2003) mentions time, feelings, writing and math as the topics that are taken by the complements of ‘in’ metaphors in her research. A table presenting the types of topics of the complements of ‘in’ prepositions found in the present research is presented in Table 5.

Table 5 Topic Classification of the Complements of ‘in’ Metaphors

Topics	Theoretical linguistics	Pragmatics
Language	63	22
General	28	39
Academic	15	9
The arts	0	4
Social Networking	0	1
TOTAL	106	75

For the sake of space efficiency, the topic variation is presented in five umbrella terms in Table 5. It can be learned from the table that the topics of the prepositional complements in theoretical linguistics are dominated by those under the category of language such as in Russian, in morphology, in clauses, in post-syntax, and in syllables that are very much relevant to the concentrated object of research of the sub field.

In pragmatics, the topic includes in the same type comes second. None of them is as technical as the ones that are found in theoretical linguistics. They are for example in conversation, in dialogues, in discourse, and in narratives. The category general is for the complements that are quite neutral in terms of their relatedness to linguistics or language as a whole, but at the same time are also more topic-bound (with regard to the articles’ topics) like in comics, in generations, in situation, in calls, in interaction, and in percentage.

As for the academic category, the in metaphors in both sub-disciplines take words with meanings that can be associated with academic sphere like in paper, in paradigm structure, in analysis, and in research. The ‘in’ metaphors in the sub-field of theoretical linguistics do not contain anyone that can be included in the categories of the arts and the social networking. The occurrence of these two categories in the sub-field of pragmatics is caused by the related topics of the articles where the abstracts are affixed to, i.e., Japanese manga (in manga, in genres) and Twitter (in hashtag). These metaphors help “give a new ontological status to general categories of abstract target concepts and to bring about new abstract entities” (Kövecses, 2010).

On the contrary, originally used as a spatial preposition, ‘in’ indicating such function is found only one time in the research. It is detected from the complement following the preposition as found in this example “In Guébie, a Kru language spoken *in Côte d’Ivoire...*”. *Côte d’Ivoire* is a name of a country (a piece of land, an area, a physical entity) also called Ivory Coast in English. It is acceptable to view it as a physical entity because proper names are labeled as ‘mere identification marks’ (O’Rourke & de Diego Balaguer, 2020; Sulpizio & Job, 2018) or things or beings that are unique (Killick, Curry, & Myles, 2016). A country has boundaries that separate it from other countries, so it can be considered a two-dimensional object in which other objects can reside. In the context

given previously, the people who speak Guébie language are the residents who live in a country named *Côte d’Ivoire*.

Most of the ‘in’ metaphors are motivated by our experience in connection with spatial entity, especially three-dimensional containers. It tends to consider language and its smaller parts as containers. It can be noticed from the domination of languages in the data that are preceded by the preposition ‘in’ such as (in) Old Occitan, Albanian, Korean, Greek, Eleme, Standard Arabic, French, Spanish, and German. By tagging those languages as containers, all the noun phrases before the preposition phrases are treated as if they are concrete and relatively smaller objects that can be placed inside the containers. See the list of phrases as examples.

	Small physical objects	in	Containers
(14)	the analysis of fricatives	in	Russian
(15)	case ellipsis for subjects and objects	in	Korean
(16)	auxilliary <i>jam</i> 'be'	in	Albanian
(17)	other facts	in	Tamil

In cases (14) to (17), the parts before and after ‘in’ prepositions are all abstract entities. They are given a general physical status via ontological metaphor. That way, the ideas about these abstract objects can be imagined and be talked about a lot more easily. The following list shows a similar phenomenon, but with the prepositional complements having a competing more basic meaning of physical entities.

	Small physical objects	in	Containers
(18)	one topic chain	in	the local <i>domain</i>
(19)	vowel alternation	in	the <i>roots</i> (of Russian verbs)
(20)	alternative paths	in	(a dynamic paradigm) <i>structures</i>
(21)	the hidden nuances	in	(their discursive) <i>devices</i>

Domain, roots, structures, and devices have their own basic meanings of physical entities and can be treated as concrete objects. However, in the contexts given, they do not bear the basic meanings that are supposed to be attached to them as physical entities. They are used in the contexts to help those abstract entities have forms or status of physical objects, so they are more easily handled. The parts presented before the ‘in’ prepositions are for the readers to be alert that the words under discussion (domain) are used metaphorically. In addition, the abstract entities of domain, roots, structures, and devices are understood partially through the concrete objects of domain, roots, structures, and devices since not all aspects of the concrete entity are transferred and applicable to the abstract entity.

From (18) – (21), some other information about the concepts underlying the deployment of certain terms can be acquired. For example, in (19) the word ‘roots’ that is related to the word ‘verbs’ may suggest the existence of the conceptual metaphor ‘Complex abstract systems are plants’ (Kövecses, 2010). Next, a conceptual metaphor ‘Theories are buildings’ (Kövecses, 2010) can be retrieved from (20). These so-called structural metaphors may provide a lot more detailed information about the abstract and physical domains, but the one that can make the abstract domains manageable is the ontological metaphor (Kövecses, 2010; Moore et al., 2015).

There is one ‘in’ preposition phrase that can be described as spatiotemporal metaphor instead of merely spatial.

- (22) The present analysis draws on claims about the left periphery *in medieval Romance* ...

The ‘in’ preposition in (22) shows a sign of the spatial experience that helps giving the abstract entity romance, or medieval romance to be precise, a status of a container. This is parallel to when talking about time, for example, “In the days ahead of us ...”, “She hasn’t sung in years”, and “They are getting married in 2020”. To sum up, the spatial prepositions in found in the contexts above are used to refer to time instead of places/areas. The same is true with in the pre-history of Yaghnobi that also combines a spatial preposition with an experience of time. In terms of conceptual metaphor, the concept of spatiotemporal maybe mapped onto ‘Time is a container’ metaphor.

Unlike romance, a complication arises when deciding on the status of comics in “The visual representations of non-iconic elements in comics of the world often take diverse and interesting forms”. Comics here can be defined as a magazine that contains stories told in pictures, while magazine is a periodical paperback publication containing articles, fiction, photographs, etc. The head of the noun phrase that comes before the preposition phrase, representations, is described as a picture, model, or statue of a person or thing as a representation of them. It is preceded by visual, which makes representations a semi-physical entity.

This label is given to it because even though the drawing/picture can be sensed through our sight, what we can touch is only the media where the picture is projected i.e. the paper. Nevertheless, the word ‘representations’ is then completely shifted to abstract entity category because the objects that it represents definitely denotes abstract entities. i.e., non-iconic elements. The concept expressed in representations of non-iconic elements is very hard to imagine. The in preposition ‘reshapes’ them into physical entities so that it can be easily comprehended. What comes after the preposition ‘in’ is comics. The word ‘comics’ also is of a similar case with the word representations in that a dilemma lies between considering comics as a physical (a comic book) or abstract entity (a genre).

Here, the preposition in forms comics into some kind of containers for the representations to settle.

CONCLUSIONS

The inquiry into the ‘in’ metaphors in the corpus of research articles’ abstracts of theoretical linguistics and pragmatics has resulted in their invaluable existence as proven by the Chi-squared test result. Therefore, it strengthens the claim that language is the right place to prove that the conceptual system is indeed metaphorically structured and defined. Although as ontological metaphors, the ‘in’ metaphors’ main task merely provide the ontological status for the abstract entities, they are invaluable since ontological status is basic, without which, talking about abstract objects would have been almost impossible.

In the research, the sub-discipline of theoretical linguistics is slightly more densely populated with the ‘in’ metaphors than the pragmatics sub-field. This may occur due to the comparatively more abstract object of research of theoretical linguistics. The number of words denoting abstract objects is supposedly parallel to the number of demands for devices to handle them.

However, the theoretical linguistics’ dominance over pragmatics in terms of ‘in’ metaphors density has been deemed insignificant after being tested using the Chi-squared test. The subtle difference between the two sub-disciplines is suspected as the cause of the insignificance. This situation implies the need for further research. Similar research using a larger corpus is suggested to provide evidence to support or reject the significant difference between theoretical linguistics and pragmatics about ‘in’ metaphors density.

Almost all of the ‘in’ metaphors in the data exhibit strong hints of physical experience based on their metaphorical uses. This phenomenon emphasizes the suggestion that bodily experience from our early time indeed cling onto our mind firmly that it is ready to be retrieved and manipulated every time needed.

The ‘in’ preposition will surely be combined with unlimited other abstract objects as it has proven itself to be extremely handy. However, it is worth noted that ‘in’ is not the only preposition that can show the indelible trace of our early physical experience. Other prepositions like ‘on’ and ‘at’ that are metaphorically used can be seen as the closest competitors for ‘in’ metaphors in some situations. Comparative research of different kinds of prepositional metaphors will bring great benefits to broaden our knowledge of prepositional metaphors’ behavior. Studying their existence in linguistics, especially, would greatly benefit this field of rare interest.

Even though the present research does not make any attempt to compare ‘in’ with other prepositions nor the two sub-disciplines of linguistics with others, at the very least, the result supports the previous research conducted that ‘in’ metaphors have proven to be indispensable in academic texts. It may be true that nominal linguistic metaphors are considered the most powerful about frequency, prepositions lead.

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