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TYPOLOGY OF CONDITIONALS AND PERCEPTION OF COUNTERFACTUAL CONDITIONALS

ABSTRACT
This paper reviews theoretical considerations and empirical evidence on the comprehension of counterfactuals. The author sheds light on the issue of fake past and dual meaning. The theories of counterfactuals comprehension are assessed in light of empirical findings. The author supports the view that people hold in mind two meanings of counterfactuals. Based on this account, it is highlighted to differentiate three types of conditionals: suppositional, factual and counterfactual.

KEYWORDS: counterfactuals, fake past, dual meaning, conditionals, typology

STRESZCZENIE
W artykule dokonano przeglądu rozważań teoretycznych i badań empirycznych dotyczących rozumienia trybu warunkowego kontrfaktycznego. Autorka porusza kwestię tzw. fałszywej przeszłości i podwójnego znaczenia. Teorie rozumienia zdań warunkowych kontrfaktycznych są oceniane w świetle ustaleń empirycznych. Autorka wyraża pogląd, że ludzie mają na myśli dwa znaczenia tego rodzaju zdań warunkowych. Na podstawie tego założenia powinny być wyróżniane trzy rodzaje tego typu warunków: domniemania, stanu faktycznego i scenariusza alternatywnego.

SŁOWA KLUCZOWE: tryb warunkowy kontrfaktyczny, fałszywy czas przeszły, podwójne znaczenie, tryby warunkowe, typologia

INTRODUCTION

Conditionals have been studied from different scientific disciplines including linguistics, philosophy, psychology. However, there is no universally accepted definition and typology of conditionals. On the one hand, some suggest that the notion of conditionals is too primitive to define it in terms of other concepts, and

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therefore they are readily accepted as obvious. On the other hand, the attitudes to conditionals still vary regarding their communicative function: whether they assert, imply or suppose the proposition. Thus, the conditionals are not as straightforward as they might seem from the first glance. Furthermore, the types of conditionals are not well-established in literature apart from the distinction between indicative and counterfactual conditionals. In addition, the counterfactual conditionals as the most complex type of conditionals pose an extra challenge. It is mostly connected with their verb morphology that is regarded as a fake past linguistic phenomenon. The interpretation of an additional past tense morphology differs among linguists: some propose to consider it from modal perspective ascribing specific function, while others suggest treating it as an usual past tense. Anyway, the use of an additional layer of past gives rise to the emergence of dual meaning (factual and suppositional). The dual meaning of counterfactuals has been a focus of debate among cognitive scientists: some assumed that counterfactuals convey only suppositional meaning, while others proposed that two meanings (suppositional and factual) is the essence of counterfactuals. According to the latest results of empirical studies on counterfactuals, we can see that counterfactuals activate two possibilities in mind: imaginary and factual possibilities.

In the scope of this article, I will consider conditionals and in particular counterfactual conditionals from linguistic and cognitive perspectives. I will also review the empirical research on counterfactuals. Although, the main contribution of the paper is the typology of conditionals based on the structural and semantic analysis of conditionals.

DEFINING CONDITIONALS AND THEIR TYPOLOGY

Conditionals can be defined from a truth perspective: we add the if-clause in our knowledge and assess whether or not the then-clause is true (Stalnaker 1968; Haiman 1978). Truth conditions account that have been so popular in literature interprets conditionals by truthfulness of if-clause and then-clause: (i) both clauses are true, (ii) both clauses are false, (iii) if-clause is false and then-clause is true (Wierzbicka 1997). However, the truth conditionals account has been under scrutiny due to the possibility of unrelated propositions to be combined in conditional structure (e.g., Comrie 1986). Two types of conditionals can be outlined: indicative conditionals and counterfactuals (or interchangeably subjunctive conditionals) (Eddington 1995). And the following examples show a clear difference between present indicative (1a) and present counterfactual (1b) conditionals (Eddington 1995: 236):

(1) a. If the gardener doesn't do it, the butler will.
b. If the gardener were not to do it, the butler would do it.

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Past indicative (2a) also differs from the past counterfactual (2b) (Eddington 1995: 236):

(2) a. If the gardener didn't do it, the butler did.
b. If the gardener had not done it, the butler would have.

Wierzbicka proposed to name indicative conditionals as "if-sentences" and counterfactuals as "if-would" sentences (see Wierzbicka 1997). The difference between the two is that using if-sentences we can imagine an event that we think can happen, and using if-would sentences we can imagine an event that we think cannot happen. She proposed five types of English if-sentences: negative counterfactuals (3a), inverse counterfactuals (3b), affirmative counterfactuals (3c), hypotheticals (3d), and conditionals (3e).

(3) a. If X had not happened, Y would not have happened.
b. Had X not happened Y would not have happened.
c. If X had happened, Y would have happened.
d. If X happened, Y would happen.
e. If X happens, Y will happen.

Wierzbicka (1997) proposed to interpret if-sentences using such semantic primitives as THINK, and NOT. If these semantic primitives are applied for differentiating counterfactuals (4a), hypotheticals (4b) and conditionals (4c), then it will look like the following way:

(4) a. If X had happened, Y would have happened. = I know X and Y did not happen + I think before now one could say if X happens, Y will happen.
b. If X happened, Y would happen. = if X happens, Y will happen + I don't say I think this will happen.
c. If X happens, Y will happen. = If X happens, Y will happen + I think this will happen.

Iatridou (2000) proposed to name hypotheticals (i.e., 3d) as future less vivid and conditionals (i.e., 3e) as future neutral vivid. Ippolito (2013) proposed to name present counterfactuals as simple past subjunctive conditionals and past counterfactuals as past perfect subjunctive conditionals in accordance with the verb morphology.

The above review of conditionals can be summarised as following by grouping conditionals according to whether they convey suppositional and/or factual meaning. According to this differentiation, there are three types of conditionals: suppositional, factual and counterfactual (suppositional + factual).

1. Suppositional:

- If X happens, Y will happen. (I suppose that Y will happen if X happens and I think it is likely to happen) – future reference
- If X happened, Y would happen (dynamic predicate). (I suppose that Y will happen if X happens but I don't think it is likely that X will happen) – future reference

2. Factual:

- If X happens, Y happens. – present reference (I know that Y usually happens when X happens)

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- If X happened, Y happened. – past reference (I know that Y usually happened when X happened)

3. Counterfactual:

- If X had happened, Y would have happened. (I suppose that Y happened if X happened but I know that Y didn't happen because X didn't happen) – past reference
- If X happened (stative predicate), Y would happen. (I suppose that Y happens if X happens but I know that Y doesn't happen because X doesn't happen) – present reference
- If X were Z, Y would happen (I suppose that Y happens if X is Z but I know that X is not Z) – present reference
- If X had happened, Y would happen. (I suppose that Y happens if X happened but I know that Y doesn't happen because X didn't happen) – past + present reference
- If X had happened tomorrow, Y would have happened. (I suppose that Y will happen if X happens but I know that X already happened and Y didn't happen) – future reference

Examples:

- If I study, I will pass. (I suppose that I will pass if I study and I think it is likely to happen)
- If I studied, I would pass. (I suppose that I will pass if I study but I don't think it is likely that I will study)
- If I study, I pass. (I know that I usually pass when I study)
- If I studied, I passed. (I know that I usually passed when I studied)
- If I had studied, I would have passed. (I suppose that I passed if I studied but I know that I didn't pass because I didn't study)
- If I knew the answer, I would tell you. (I suppose that I tell you if I know the answer but I know that I don't tell you because I don't know the answer)
- If I were queen, I would be powerful. (I suppose that I am powerful if I am queen but I know that I am not queen)
- If I had invested in Apple, I would be a millionaire now. (I suppose that I am a millionaire now if I invested in Apple but I know that I am not a millionaire now because I didn't invest in Apple)
- If I had taken the test tomorrow, I would have passed. (I suppose that I will pass if I take the test tomorrow but I know that I already took the test and didn't pass)

We can explain the outlined types of conditionals using semantic primitives in the spirit of Wierzbicka (1997). Conditionals can be explained by applying such semantic primitives as SUPPOSE and KNOW. For suppositional conditionals, we use SUPPOSE, whereas for factual conditionals we use KNOW. As for counterfactual conditionals, we apply both SUPPOSE and KNOW because they convey both suppositional and factual meaning. I will further consider mainly counterfactuals, in particular affirmative counterfactuals. I will differentiate between present (affirmative) and past (affirmative) counterfactuals.

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FAKE PAST AND DIFFERENT APPROACHES TO ITS INTERPRETATION

The term *fake past* or *fake tense* was introduced by Iatridou (2000). By *fake* she refers to the cases when the past morphology is not interpreted temporally. In English teaching materials, the term 'unreal past" is often used with the same meaning as "fake past". Fake past can occur in future less vivid (hypotheticals) and counterfactuals. In hypotheticals, fake past tense is used to show the unlikelihood of something happening. In counterfactuals, fake past tense is used to contribute to the counterfactuality. Compare the following example of present counterfactual (5a) and past counterfactual (5b):

(5) a. If I had a car, I would be fast. (I don't have a car and I am not fast now)
b. If I had had a car, I would have been fast. (I didn't have a car and I wasn't fast then)

The difference between present and past counterfactuals is that the former uses one layer of past (which is fake), whereas the latter uses two layers of past (one is fake and the another is real). Fake past tense can also occur in wish-sentences that can refer to present time (6a) and past time (6b) (Iatridou 2000: 231):

(6) a. I wish I had a car. (I don't have a car now)
b. I wish I had had a car when I was a student. (I didn't have a car then)

The fake past cannot be accepted as accidental homophony because this linguistic phenomenon has been attested across different languages including English, German, Russian and Kazakh (Kakimova 2021) among others. Another view is that the semantic of conditionals in combination with the past morphology contributes to counterfactuality. It is also possible that the past tense morpheme has the same meaning, however, the environment in which it appears influences the variation of the domain it operates (Iatridou 2000). Iatridou (2000) uses the term *exclusion feature* to refer to the past tense morphology that can range either over time or over worlds. When it ranges over time, then the topic time (i.e., the time interval that we are talking about) excludes the utterance time (i.e., the time of the speaker), and we receive the past tense that refers to the temporal past. When it ranges over worlds, then the topic worlds (i.e., the worlds we are talking about) exclude the actual world (i.e., the worlds of the speaker), and we receive the past tense of conditionals (both counterfactual and non-counterfactual). Such dual interpretation of the past tense of conditionals can be due to the fact that counterfactuality can be cancellable. It is possible to cancel counterfactuality while reasoning (mostly in the medical context). For example (Iatridou 2000: 232):

(7) If the patient had the measles, he would have exactly the symptoms he has now. We conclude, therefore, that the patient has the measles.

In the same vein, the counterfactuality of wish-sentences can be cancelled given that the speaker is not the subject (Iatridou 2000: 243):

(8) John wishes he were married to exactly the type of woman he is married to but he doesn't know about it.

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In regards to the interpretation of the fake past tense provided by Iatridou (2000), the past tense in conditionals is not fake but has a certain exclusion feature function. However, for convenience it can be used to distinguish between real past (i.e., temporal past) and fake past (i.e., non-temporal past).

The morphosyntactic structure of the future less vivid (i.e., hypotheticals) resembles the morphosyntactic structure of present counterfactuals and only in the latter past tense morphology contributes to counterfactuality. However, the difference between the two is connected with the type of the predicate: telic (in hypotheticals) or (individual-level) stative (in present counterfactuals) (Iatridou 2000). A telic predicate refers to the actions that are dynamic (e.g., *drink, take, give*), whereas an individual-level stative predicate refers to the actions that are, as the name suggests, stative (e.g., *believe, have, know*). Stage-level predicate (e.g., *be*) can yield either future less vivid or present counterfactuals. This division can be explained through the utterance time perspective. Telic predicates can depict only events after the utterance time (future reference), individual-level stative can refer to the event occurring at the utterance time (present reference) and stage-level stative predicate can refer to future yielding hypotheticals (9a) or to present yielding present counterfactuals (9b). It is also worth noting that in the case of stage-level predicates used in hypotheticals, we need to use the adverb that refers to future. For example, compare the following example (Iatridou 2000: 250):

(9) a. If he were drunk at next week's meeting, the boss would be really angry.
b. If he were drunk, he would be louder.

Such interpretation of the fake past tense in counterfactuals put forward by Iatridou (2000) and supported by many others (Schulz 2017; Mackay 2019) is acknowledged as Past as Modal (or remoteness) approach. *Past as Modal* refers to past tense morphology that is interpreted not as usual temporal past but rather modally. The critiques of this approach expressed concerns about the unpredictability of the past tense morphology in the antecedent: when we get real past tense (with temporal meaning) and when we get fake past tense (with non-temporal meaning). However, this view is still prominent in the linguistic field and in the process of developing the theory of X-marking (von Fintel, Iatridou 2020). X stands for eXtra layer of past tense morphology (=fake past, additional layer of past).

On the other hand, there is a Past as Past (or backshifting) approach that treats past tense morphology of counterfactuals as a real past tense (with temporal meaning). The proponents of this view (Ippolito 2004; Arregui 2009; Ferreira 2011) proposed to interpret past tense through the branching time perspective. According to this approach, the past tense morphology is used to shift the point from the present to the past when the (non-conditional) proposition might be true. Using branching time the past tense morphology helps us to return to the point in time when different future possibilities were available. Whereas in the Past as Modal approach *would* is assumed to be *woll* + fake past, in the Past as Past approach *would* is an essential component of the counterfactuality and the past tense morphology in antecedent is used in correspondence with *would* in the consequent.

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According to Ippolito (2013), two past morphemes of past perfect subjunctive conditionals are interpreted differently: an usual past occurring in the simple past subjunctive conditional is treated as a temporal quantifier and an additional past is accepted as a referential variable. However, it is mostly criticised due to the fact that there are future counterfactuals (e.g., 10) and it is impossible to use past tense with its usual temporal reference.

(10) If Peter had taken the final test from Maths tomorrow, he would have passed. (future reference)

With the attempt to create a universal definition of English simple past tense, von Prince (2019) proposed three domains of modality: actual, possible and counterfactual. Actual domain includes past and present. Counterfactual domain consists of past, present and future. Possible domain includes future. According to this proposal, the future is treated as unpredictable. However, future counterfactuals convey some factual information that is expected to happen in the future provided it did not happen in the past.

DUAL MEANING OF COUNTERFACTUALS AND COGNITIVE PARADIGM

Counterfactual conditionals convey the dual meaning: factual and suppositional. The factual meaning is inferred from the sentence and also known as presupposition. According to Ippolito (2006), presupposition is presumed knowledge. The suppositional meaning is actualized when we suppose that the imaginary event or state of affairs holds true, and therefore the notion of imaginary meaning is interchangeably used to refer to the supposition. The following example illustrates the presupposition (i.e., factual meaning) (11a) and supposition (i.e., suppositional meaning) (11b) of counterfactual conditional sentence:

(11) If Jeremy had applied for a position, he would have got it.
a. Jeremy did not apply for a position and did not get it.
b. Jeremy applied for a position and got it.

Counterfactuals can be interpreted through cognitive theories of comprehension such as Conceptual Integration theory (Fauconnier 1994), Mental Model theory (Johnson-Laird 1980) and Suppositional theory (Evans 2004).

CONCEPTUAL INTEGRATION THEORY

In literature, known as Mental space or Blending or the Conceptual Integration, all refer to the same theory. Mental space was first put forward by Fauconnier (1994) and means the conceptual representation of people (Jacobsen 2018).

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According to Fauconnier and Turner (1996), conceptual integration is made up from four mental spaces: two input spaces, generic space and the blended space. Two input spaces represent the meaning of two concepts. The generic space illustrates the shared schematic structure of these two input spaces. The two input spaces blend and create a new space named as blended space.

There have been some attempts for explaining counterfactuals through mental spaces (e.g., Allerdings 2004; Jacobsen 2018). The application of the theory is considered in the field of foreign language teaching. However, based on the blending theory, we need to blend both factual and suppositional meaning into one and receive a new meaning. But the comprehension of counterfactuals is the comparison of the suppositional meaning with the factual meaning and we do not receive a new emergent meaning. Alternatively, it is possible to consider counterfactuals though structural integration when we integrate the structure of affirmation and negation into one and receive implicit negation with pluperfect. Although, factual and suppositional meaning of counterfactuals might be represented in mental spaces, there have been some concerns about whether and when building of mental spaces requires processing cost and for how long such spaces are kept in mind (see Kulakova 2016). Mental space framework has been criticised because of the impracticability for empirical testing (e.g., see Gibbs, 2000).

MENTAL MODEL THEORY

Mental models were proposed by Johnson-Laird (1980) to interpret the word semantics. According to this framework, we create mental models in our mind to better understand the meaning of utterances. The notion of mental model is related to the image concept but the use of pictorial representations is not essential in the former (Johnson-Laird 1980).

It is also necessary to distinguish between the propositional representation and mental models. The propositional representation is created on the basis of shallow comprehension and it represents the speech in our mental language. To create mental models, we need to go further and fully comprehend the utterance. While creating mental models, the propositional representation is taken as the basis and additionally general knowledge and other essential representations are taken into account (Johnson-Laird 1980). Hence, the creation of mental models help us to understand implicit information resulting in a deeper processing. Furthermore, a deeper processing is followed by a better remembering, and therefore the mental models are better kept in mind than the propositional representation (Johnson-Laird 1980).

Mental models are closely related to the inference, the former contributes to the latter (Scribner, Orasanu 1979; Johnson-Laird 1980). Moreover, to be able

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to comprehend the discourse, we should be able to represent the possible worlds in our mind (Johnson-Laird 1980). According to Johnson-Laird and Byrne (2002), counterfactual conditionals can induce implicit and explicit models. In the example "if there had been a circle, there would have been a triangle" there are two explicit models: fact (¬ circle ¬ triangle) and the counterfactual possibility (circle, triangle).

SUPPOSITIONAL THEORY

Suppositional theory (Evans 2004) is based on the conditional probability hypothesis: the mental representation of antecedent and consequent is subjectively connected which denotes the level of belief in consequent given the antecedent. Evans (2004) scrutinised the Mental Model theory because of its vagueness and the limitations of working memory capacity to create more than one mental model.

Ramsey test, pragmatic inference and the dual process theory are related to the Suppositional theory. The Ramsey test is used in conditionals for reaching a level of belief. This is fulfilled by analysing the degree of our belief in consequence given the antecedent. Evans (2004) proposed the mental representation of conditionals: people have quick and automatic focus on the possibility expressed by the antecedent after the insert of 'if'. However, the next stage of processing is not clear. According to Evans (2004), it heavily rests on individuals' background beliefs and access to additional relevant information.

Suppositional theory proposes that the logic behind the conditional sentence is that we believe in consequent supposing the antecedent. It can be best exemplified by the uncertainty of the conditional judgement: "it is not uncertainty about the truthfulness of proposition but uncertainty about the consequent supposing the antecedent" (Edgington 2007: 2). Edgington (2007) made an attempt to extend the notion of conditional uncertainty to the counterfactual conditionals. According to Edgington (2007), the counterfactuals do not express propositions, more specifically, truth conditions. The semantic value of "if" is closely related to "suppose" and it holds both for indicatives as well as counterfactuals. Conditionals are regarded as suppositional statements also by Barnett (2010) that dismissed the categorical view. From a suppositional point of view, consequent is stated and antecedent is supposed by a conditional. Barnett (2010) proposed the analysis of conditionals using the word "supposing" instead of "if" but he went further introducing the notion of "zif" as a suitable alternative for "if" in counterfactuals. According to this framework, what is supposed cannot be accepted as neither true nor false.

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COGNITIVE PROCESSES INVOLVED IN MAKING COUNTERFACTUALS

It is supposed that the same cognitive processes are involved in making counterfactual and factual conditionals (Walsh, Byrne 2007). However, counterfactuals invoke two possibilities (supposition and presupposed fact) and it is necessary to identify whether the possibility corresponds to the supposition or the presupposed fact. Counterfactuals are remembered by their pressupposed facts (Fillenbaum's 1974; Thompson, Byrne 2002).

The ability of making inferences is the paramount cognitive process for conditionals. If indicative conditionals are followed by the contradicting fact, then it is harder to make inference (Evans *et al*. 1993). However, if counterfactuals conditionals are followed by the contradicting fact, then it is easier to make inference (Walsh, Byrne 2005). It is in line with the idea that for indicative conditionals one possibility is represented and for counterfactuals two possibilities. Furthermore, two possibilities of counterfactuals are more often activated for causal counterfactuals rather than counterfactuals with arbitrary content (Thompson, Byrne 2002). The representation of possibilities might depend on the cognitive capacity of individuals (Byrne 1997). The mental representation of the facts might be influenced by the ability to change facts (Byrne 1997; Legrenzi *et al*. 1993; Walsh, Byrne 2007). People can make only slight changes if they have limited working memory (Byrne 1997; Walsh, Byrne 2007). The working memory capacity also plays a role in constructing complex mental models (Budd *et al.* 1995) and therefore people with low working memory capacity might fail in constructing the full representation of counterfactuals. It was indeed shown that people with low working memory capacity are unable to generate counterfactual inferences (Ferguson 2015). If people already have in mind two options such as to buy rice or buckwheat, then it is much easier to represent a counterfactual possibility (Byrne 2007; Walsh, Byrne 2007). People also focus on actions more than inactions while representing possibilities in mind (Kahneman, Tversky 1982).

People might apply automatic or controlled processing depending on the working memory capacity: lower capacity results in automatic processing, higher capacity in controlled processing (Barrett *et al.* 2004). Whereas automatic processing is quicker but shallower, the controlled processing is slower but deeper.

EMPIRICAL STUDIES ON COUNTERFACTUALS: WHAT DO WE KNOW SO FAR?

Counterfactuals have been a major interest of different fields including psychology, philosophy and linguistics among others. However, the studies on counterfactuals have been purely theoretical in the disciplines of philosophy and

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linguistics. Although, many empirical studies on counterfactuals have been carried out in the domain of psychology and cognitive science.

According to literature, it is revealed that human beings of 5–6 years can think counterfactually (e.g., Beck *et al.* 2006). However, the acquisition of counterfactuals is not universal at the age around 5 years because some children reason counterfactually only at the age of 12 years old (e.g., Rafetseder *et al.* 2013).

While people read counterfactuals, they keep in mind counterfactual events for some time and then focus on the previous events (De Vega *et al.* 2007). Counterfactual information is rapidly integrated into the counterfactual world (Ferguson and Sanford, 2008; Kulakova and Nieuwland, 2016; Ferguson, Jayes 2018). Whereas the processing of counterfactual conditionals is modulated by the preceding sentence, indicative conditionals are processed the same way notwithstanding the variation of the preceding sentence (Stewart *et al.* 2009).

Factual conditionals are interpreted as actual/real possibilities, whilst counterfactual conditionals are interpreted as counterfactual possibilities that were once possible but did not happen (Quelhas *et al.* 2018). The results of the empirical studies on counterfactuals support the mental model framework (e.g., Gomez-Veiga *et al.* 2010; De Vega, Urrutia 2012; Espino *et al.* 2015; Ferguson *et al.* 2015; Espino, Sanchez-Curbelo 2016; Quelhas *et al.* 2018; Macbeth, Razumiejczyk 2019; Orenes *et al.* 2019; Orenes *et al.* 2022). According to the mental model theory, people represent in mind two possibilities (dual meaning) for counterfactual conditionals and only one possibility for indicative conditionals. Even if two possibilities (factual and suppositional) are kept in mind, individuals can still make factual inferences followed by both consistent and inconsistent context (Ferguson 2012). The mental representation of presupposed fact is favoured over supposition and when people were primed with the suppositional world, they still hold both presumed fact and supposition active (Espino, Byrne 2020). It has been also revealed that counterfactual actions are simulated in people's mind (De Vega and Urrutia 2011). According to the fMRI study, the processing of counterfactuals requires actual world information and supposition unlike hypotheticals in which processing the former is not involved. The processing of counterfactuals is also associated with an increased mental imagery and cognitive efforts to integrate information (Kulakova *et al.* 2013). An ERP study on German counterfactuals showed that the processing of the dual meaning is cognitively demanding, although it is processed as soon as the subjunctive mood appears (Kulakova *et al.* 2014). Another ERP study revealed that when there was sentence after counterfactuals matching the counterfactual context, individuals could correctly interpret events in accordance with the counterfactual world scenario. However, when the sentence following counterfactuals matched with the factual context, the information was assessed in regard to both factual and counterfactual worlds simultaneously (Ferguson, Cane 2015). Moreover, the importance of linguistic cues in selecting the world model was highlighted.

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The study on causal indicatives and counterfactuals showed that temporal and causal connectives are used for paraphrasing the former and subjunctive construction for the latter (Frosch, Byrne 2012). The same study illustrated that less inferences are made from counterfactuals in the context rather than in isolation. The results of the study rejects the probabilistic theory that is based on the assumption that the antecedent is added to people's beliefs and the consequent is assessed. The plausibility of counterfactuals is modulated by the similarity between the suppositional world and the real world: the differences between two worlds make counterfactuals less plausible and similarities make counterfactuals more plausible (de Brigard *et al.* 2021).

CONCLUSION

This paper is written to enlighten the topic of conditionals with a particular emphasis on counterfactuals in the view of linguistic assumptions and latest empirical findings from cognitive science. First, conditionals were defined and the issue of the fake past of counterfactuals was discussed. The typology of conditionals provided in the literature does not account for the meaning that those types of conditionals convey. The division into indicative and counterfactual conditionals does not take into account the factual and suppositional meaning. This paper is an attempt to contribute to the connection between structural and semantic components of conditionals in dividing them into distinct types. The division of conditionals into suppositional, factual and counterfactual is also in line with the empirical evidence from cognitive paradigm: one possibility is activated for indicatives and two possibilities for counterfactuals. The division of conditionals into suppositional and factual allows us to make distinctions based on such semantic primitives as SUPPOSE and KNOW. Suppositional conditionals are used when we suppose the consequent given the antecedent, whereas factual conditionals are applied when we know that the consequent holds given the antecedent. Suppositional conditionals have only future reference because the future is unknown and we can only suppose or hypothesise about it. In contrast, factual conditionals have present and past tense reference because we can refer to only two tenses when we express that something is certain to happen. In comparison with factual and suppositional types of conditionals, counterfactuals can have more references and combinations of tenses. It is due to the fact that we already know the factual scenario and we suppose/hypothesise based on the known information. It is believed that the clear division of conditionals based on the meaning that they convey can simplify the understanding of conditionals and better shape the existing empirical evidence.

The further directions in the study of counterfactuals as the most complex type of conditionals would be the clarification of universality of empirical evidence on their comprehension across different languages, specifically given the language as

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the first and second language. The extension of the empirical study on second language psycholinguistics is believed to bear fruitful results on specificity of second language processing and acquisition because the complexity of the structure and meaning makes it challenging to process and acquire in the second language.

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