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# Conditional Utterances and Conditional Thoughts: Towards a Pragmatic Category of Conditionals

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## 1. Rationale and objectives

The topic of this paper is the pragmatic and conceptual category of conditionality. Our primary interest is how speakers express conditional meanings in discourse and how this diversity of forms can be accounted for in a theory of discourse meaning. In other words, we are concerned not only with conditional sentences speakers utter in discourse (sentences of the form ‘if  $p$  (then)  $q$ ’), but predominantly with conditional thoughts, expressed in a variety of ways, by discourse participants.

The category of conditionality has given rise to many discussions and controversies in formal semantics, cognitive semantics and post-Gricean pragmatics. In formal semantics, pragmatic considerations have often been appealed to in order to demonstrate that conditionals in natural language do, or do not, essentially stem out of material conditionals on the level of their logical form. On the other hand, various classifications of conditional expressions have emphasised a battery of criteria by means of which, allegedly, one ought to distinguish qualitatively different categories of what superficially appears to be an instance of ‘if  $p$  (then)  $q$ ’. Our objective in this paper is a little different from just adding a voice to these disputes, and is, we think, more positive in its outlook. We attempt to offer an argument, as well as some supporting empirical evidence, for a unified pragmatic category that is based *not* on the syntactic form of the expression, the presence of a relevant connective, or even a

conditional meaning as it is understood in minimalist semantic accounts. Instead, we show that by accounting for the intended meaning of the speaker, and for that purpose by adopting a radical contextualist approach to natural language meaning, one can bring together various uses of conditional sentences on the one hand, and various (overt and covert) means of expressing conditional thought in natural language on the other and take on board a conceptual, cognitively plausible category of conditional meaning.

‘Radical contextualism’ has been defined in a variety of related ways. For the purpose of this paper we mean a view according to which (i) context plays an essential role in determining the truth-conditional content of an utterance (cf. Recanati 2004, 2010) and (ii) context has an additional role of helping to identify the main speech act intended by the speaker, irrespective of the logical form of the uttered sentence (Jaszczolt 2010). In itself it is not so surprising that we can include such a diverse use of conditionals in our account, insofar that contextualist accounts by definition make substantial use of information that is not encoded in the structure or the lexicon. The significant advantage of our outlook on the category of conditionals becomes apparent when it is supported with a possibility of a uniform representation. We propose such principles for a unified account in the final section of the paper, founded on corpus research conducted by one of the authors (Elder)<sup>1</sup>, and employing the notion of pragmatic compositionality.

## **2. Conditional sentences, conditional utterances, and conditional thoughts**

It is an interesting albeit unsurprising fact about the English language that there is no bi-unique relation between the form of a conditional expression and conditional meaning. ‘Unsurprising’ in that such bi-uniqueness is also pervasive in other domains, such as those of other sentential connectives, temporal reference, or of illocutionary forces and their realisations. With reference to conditionals, on the one hand, (i) conditional sentences are not the only way to express conditional thoughts, as (1) and (2) demonstrate, and on the other, (ii) conditional sentences can be put to a variety of uses other than expressing conditional

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<sup>1</sup> The corpus that we use is the International Corpus of English-GB (ICE-GB). Details of the corpus study are given in Section 4.

thoughts, as shown in (3) and (4).<sup>2,3</sup> Approximations at the main intended meaning are given in (1a)-(4a) respectively.

- (1) Say one word against Margaret Thatcher and David will be offended.
- (1a)  $\approx$  If you say one word against Margaret Thatcher, David will be offended.
- (2) Your money or your life.
- (2a)  $\approx$  If you don't give me your money I will take your life.
- (3) If you wouldn't mind, could you close the door?
- (3a)  $\approx$  Please close the door.
- (4) If that's a real diamond I'll eat my hat!
- (4a)  $\approx$  This is definitely not a real diamond.

This discrepancy in the primary intended meanings of conditional sentences provides the first warning sign for delimiting an object of study for a pragmatic and even semantic, analysis.

Perhaps, to make use of Kratzer's (2012: 106) famous dictum, "[t]he history of the conditional is the story of a syntactic mistake"<sup>4</sup>, but, what is of a greater interest to us is that it is also a story of a semantic and a pragmatic mistake, in that the assumption that conditional sentences delimit the object of semantic and pragmatic investigation has persisted to this day. Some breakthrough can be noticed in Horn's (2000: 292) critical discussion of Geis and Zwicky's (1971) proposal of conditional perfection (CP) in which he points out that the strengthening to 'if and only if' is neither limited to conditional structures, nor is the presence of a conditional structure sufficient for its occurrence. Moreover, rather than a brand new species, CP appears to be simply a case of Gricean strengthening, easily explicable through any of the post-Gricean principles such as Horn's (e.g. 1984, 1988, 2004) R- and Q-principles governing scalar implicatures. So, the exclusivity of 'if  $p$  (then)  $q$ ' and its status as an object of analysis in its own right appear to merit challenging.

In fact, the implications of the syntactic mistake appear to go much further. It appears to us that the most methodologically prudent way to delimit conditionality in a theory of

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<sup>2</sup> It has to be pointed out that the conditional meaning associated with the conjunction in (1) intuitively appears stronger than that associated with the disjunction in (2). However, this does not affect our argument. We thank Louis de Saussure for drawing our attention to this point.

<sup>3</sup> This is not to say that in (3) and (4) conditionality is absent altogether on the conceptual level. We return to this point in Section 5.

<sup>4</sup> We briefly discuss Kratzer's account of *if*-clauses as adverbial clauses restricting modal operators in Section 4.1.1 but it has to be remembered that our object of study as well as the research questions are tangential to the concerns of a formal semantic account of a particular sentence structure.

meaning is to break away from the ‘if  $p$  (then)  $q$ ’ requirement altogether. As we demonstrate with the help of a corpus-based study, there are various uses of conditional sentences that have a small or no claim to the conditionality of the corresponding thought and, on the other hand, there are various natural language expressions that strongly convey conditional thoughts as their primary intended meanings, despite being far removed from the syntactic form of a two-clause ‘if-then’ sentence.

If one adopts the requirement of cognitive plausibility, it is evident that the object of study of what counts as a conditional has to be extended. This move creates some methodological problems but we hope to show that the explanatory advantages outweigh the difficulties. First, conditionality of thought is a murky category as compared with the clear ‘if  $p$  (then)  $q$ ’ sentence structure. Second, and as a result, any data-based study will have to overcome the difficulties of automated search; in searching the corpus, one has to find a way of, so to speak, ‘searching for what is not there’: we will need to find the ‘if-thens’ on the level of primary thoughts even when they are not there in the corresponding sentences. On the side of the benefits, the main advantages are that we are able to (i) capture the variety of expression types that give rise to conditional thoughts as primary meanings, (ii) systematise the diversity of uses to which ‘if  $p$  (then)  $q$ ’ sentences can be put, as well as (iii) provide a uniform representation of conditionality that extends to these non-‘if  $p$  (then)  $q$ ’ sentences on the one hand, and differentiates between conditionality of ‘if  $p$  (then)  $q$ ’ sentences as primary or secondary meanings on the other.

Before we move on with the task, a terminological explanation is in order. We are taking on board an object of study that does not correspond to a unique syntactic structure. Henceforth, what we will be calling the ‘primary meaning’, that is, the primary speech act performed by the utterance of the sentence, may correspond to the explicit or implicit content. On our (standard) definition of what counts as a conditional sentence (Section 1), if the conditional meaning pertains to the non-‘if  $p$  (then)  $q$ ’ sentence such as (1) or (2) above, it would standardly have to be classified as implicit: as a strong implicature. Instead, in agreement with the distinctions drawn in Default Semantics that are discussed in Section 5, we propose to use the term ‘primary meaning’ that cuts across the explicit/implicit divide and corresponds to such main, intended content, where secondary intended meanings are also independent of the explicit/implicit boundary.<sup>5</sup>

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<sup>5</sup> For arguments and linguistic evidence in favour of the primary/secondary distinction that cuts across the explicit/implicit divide see especially Jaszczolt (2009).

A cross-linguistic perspective adds further support to the decision to delimit conditionality in this conceptual way. Guugu Yimithirr, an Australian Aboriginal language spoken in Queensland, has no overt conditionals. Instead, it uses irrealis markers resulting in a pair of modal statements with the antecedent-consequent relationship between eventualities as in (5) (from Evans & Levinson 2009: 443).

(5) The dog might bark. The postman might run away.

Mauri and van der Auwera (2012) also give examples from a Sino-Tibetan language Caodeng, spoken in China, in which the irrealis marker occurs only in the antecedent, and Hua, a language spoken in Papua New Guinea, in which the antecedent is formulated as a polar question as in (6) (from Mauri and van der Auwera 2012: 398).

(6) Will he come? I will stay.

This variety of means that languages use to express the antecedent-consequent relation provides a strong argument for reaching beyond sentence structures. At the same time, it constitutes no threat to the conceptual category of a conditional.<sup>6</sup> To quote von Stechow & Matthewson (2008: 170),

“...while perhaps none of the logical connectives are universally lexically expressed, there is no evidence that languages differ in whether or not logical connectives are present in their logical forms.”

As we demonstrate in Section 5, this diversity constitutes no threat to the semantic category either, in that our semantics subscribes to radical contextualism and therefore includes aspects of meaning that are pragmatically triggered.

With these initial assumptions in place, in what follows we discuss questions pertaining to the diversity of ways of expressing conditionality, the diversity of meanings of the conditional relation itself, as well as the possibility of a unary analysis. We demonstrate that such a unary analysis is possible when semantics is construed along radical contextualist

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<sup>6</sup> By ‘conceptual category’ we mean that conditionality can be either semantically realised via the expression used, or may require pragmatic modification. Utterances whose conditionality constitutes either primary or secondary meaning are all included.

principles, allowing for information from different sources in communication to contribute to the truth-conditional representation of meaning.<sup>7</sup> The structure of the remainder of the paper is as follows. In Section 3, we briefly address two seminal treatments of conditionals in pragmatic theory, bearing in mind the question of delimiting the object of study along the conceptual lines described above. In Section 4, we attend to the mismatches between forms and meanings in expressing conditionality in more detail, and to their theoretical consequences. We also discuss various uses of ‘if’ found in the database compiled from the British component of the International Corpus of English (ICE-GB), also remarking on other conditional expressions found in a sample search and other means of expressing conditionality. We include in the discussion indirect conditionals exemplified by Austin’s (1961) famous ‘biscuit conditional’ in (7)<sup>8</sup> and parenthetical expressions such as ‘if you like’ in (8).

(7) If you’re thirsty, there’s some beer in the fridge.

(8) I went in with a bone of complaint, if you like. *SIA-064 #142*<sup>9</sup>

In Section 5, we move to the justification of adopting a radical contextualist approach to representing conditional meaning, followed by representing conditional meanings by constructing merger representations in Default Semantics. Section 6 concludes and indicates possible further directions.

### **3. Conditionals in pragmatic theory: Delimiting the *explanandum* and the *explanans***

The starting point for any pragmatic analysis of conditional sentences is usually establishing the communicative reason for asserting a conditional thought. This is what Grice (1967/1989:

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<sup>7</sup> It is a matter of terminological decision as to whether to call this approach truth-conditional pragmatics and leave semantics as a more narrow enterprise, relying on the structure of the sentence and on indexicals (see Recanati 2010, 2012) or to give it a label of a truth-conditional, albeit radically contextualist, semantics. In agreement with Default Semantics (Jaszczolt, e.g. 2005, 2010, in progress), we opt for the latter alternative.

<sup>8</sup> Austin’s (1961) original example was “If you’re hungry there are some biscuits on the sideboard”, hence the term ‘biscuit conditional’. As Horn (2000: 317 fn) notes, the example has morphed, resulting in (7) as the locus classicus.

<sup>9</sup> Examples taken from the ICE-GB are referenced using the standard notation from the spoken portion of that corpus, namely of the form (S00-000 #000); examples from the written portion are referenced starting with ‘W’.

58) aptly captures as the Indirectness Condition: ‘ $p$  would, in the circumstances, be a good reason for  $q$ ’, where

“...in standard cases to say ‘if  $p$  then  $q$ ’ is to be conventionally committed to (to assert or imply in virtue of the meaning of ‘if’) both the proposition that  $p \rightarrow q$  and the Indirectness Condition.”

The Indirectness Condition functions as a generalized conversational implicature and, as such, a fairly strong, predictable, but at the same time not always present, aspect of meaning. In Grice’s (1967/1989: 62) example reproduced below as (9), the Indirectness Condition is clearly not present.<sup>10</sup>

(9) If he was surprised, he didn’t show it.

For Grice, the ‘if  $p$  (then)  $q$ ’ sentence indicates a “passage of thought” (p. 77) from the antecedent to the consequent. Next, Stalnaker (1975/1999) dubs the relation ‘reasonable inference’, a pragmatic relation between speech acts that is different from semantic entailment, where ‘reasonable’ means that if the premises can be accepted in a given context, then so must the conclusions. Acceptance relies on the common ground: the assumptions that the speaker takes for granted. Then,

“...a conditional statement, *if A, then B*, is an assertion that the consequent is true, not necessarily in the world as it is, but in the world as it would be if the antecedent were true”

(Stalnaker 1975/1999: 68). Both of these treatments of natural language conditionals have a strong pragmatic flavour. Grice adopts material implication, enriching it with the generalized implicature, while Stalnaker makes use of pragmatic presuppositions (‘common ground’) and pragmatic relations between speech acts (‘reasonable inference’) to move away from material implication. It is only when we make this pragmatic turn that we can explain the reasoning in

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<sup>10</sup> It is possible that the presence of negation in the consequent is responsible for (9)’s failure to adhere to the Indirectness Condition. We thank Louis de Saussure for pointing this out to us.

(10) where the speaker feels the need to deny a conditional even when he/she is not in a position to deny the corresponding material conditional.

(10) I know *I* didn't do it, so I know that it is false that if the butler didn't do it, I did.  
(from Stalnaker 1975/1999: 73).

It is not our aim to review the vast literature on conditionals in natural language.<sup>11</sup> But it seems important to point out that the relevant pragmatics- and cognition-oriented approaches seem to fall in four very broad categories as far as the adopted explanantia are concerned, where the explanandum is constant and is confined, rather traditionally from our proposed perspective, to what are standardly called 'ordinary conditional sentences'. The categories can be represented as in Table 1.<sup>12</sup> The first pertains to the Gricean account on which the explanatory power of material implication from propositional logic is recognised in the truth-conditional account but is supplemented with the account of a generalised conversational implicature. The second, Stalnakerian account is not very remote in spirit but focuses on the concept of acceptability instead of unintuitive truth values, and on the utility of possible worlds as a semantic tool.

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<sup>11</sup> The post-Gricean literature is vast and it is not our aim to discuss it here so we mention here only some seminal contributions by Geis and Zwicky (1971), van der Auwera (1997a, b) and Horn (e.g. 2000).

<sup>12</sup> We are not extending the present analysis to the discussions of indicative versus counterfactual conditionals presented by Lewis (e.g. 1973) or Edgington (e.g. 2008) among others (but see footnote 13 for further references), or Lycan's (2001) syntactic approach to the 'if...then' operator. To repeat, neither do we include, apart from cursory references, Kratzer's (1991/2012) proposal according to which the explanandum would have to be extended to adverbial clauses.

<b>Explanandum</b>	<b>Explanantia</b>	<b>Some representatives</b>
‘ordinary conditional sentences’	truth values, (scalar) implicature	Grice (1967), Horn (2000), van der Auwera (1997a)
‘ordinary conditional sentences’	possible worlds, acceptability, pragmatic presuppositions	Stalnaker (1975)
‘ordinary conditional sentences’	mental models, reasoning strategies	Byrne & Johnson-Laird (2010)
‘ordinary conditional sentences’	hypothetical thought, sequences of inferences	Over et al. (2010), Evans & Over (2004)

Table 1. Conditionals: Explanandum and explanantia

The third proposal comes from a very different tradition and is included here because it will prove useful in our broadening of the explanandum and the explanantia. In discussing conditionals, Byrne and Johnson-Laird (2010: 55) use the tool of mental models and exploit the idea that “human thinking rests on the ability to imagine possibilities”. As they argue, the meaning of conditionals cannot be explained in terms of truth conditions but instead requires an analysis in terms of various strategies that the interlocutors have at their disposal for processing conditional expressions. The fourth row of our table also comes from the cognitive science tradition. Dissociating themselves from mental models, Over et al. (2010) and Evans and Over (2004) focus on the psychology of processing of conditionals, and in particular on the principles of building inferential chains pertaining to hypothetical thought. These inferences can be of different provenance: they can be deductive, probabilistic or non-monotonic (‘pragmatic’). In this manner the authors revive Ramsey’s (1929) proposal to the effect that in processing a natural language sentence of the form ‘if  $p$  (then)  $q$ ’, people rely on their own probability judgements concerning  $q$ , assuming  $p$  as given. In other words, they

form a hypothesis that  $p$  is true and then add  $q$  to the set of their beliefs, with a qualifier that this belief is founded on such a hypothetical foundation.

In view of the facts discussed in Section 2, namely that (i) conditional expressions express a variety of different conditional links; (ii) conditionality is not necessarily their primary meaning; and (iii) a conditional sentence form is not necessary to express a conditional thought, we propose to extend the scope of analysis (the explanandum) in two directions: to ‘non-ordinary conditional sentences’ such as biscuit conditionals and the formulaic expression ‘if you like’, and to conditional thoughts in a non-conditional form. Concerning the explanans, the way we see it is this. In view of the lack of a uniform syntactic form, one has to rely on hypothetical thought. However, in view of the overall objective of providing a formal (or at least formalizable) representation of discourse meaning, we also need truth values applied to a unit understood in a contextualist way (hypothetical thought) and an analysis in terms of possible worlds. In short, the fifth preferred row of the table, represented by the current authors, will look as in Table 2.

<b>Explanandum</b>	<b>Explanantia</b>
conditional thought	hypothetical thought, truth conditions, possible worlds

Table 2: Explanandum and explanantia on our proposed account

This combination of tools will allow us to propose a pragmatics-based delimitation of the category of conditionality, paired with an analysis in terms of truth-conditional contextualist semantics.

## 4. Towards a pragmatic category of conditionals

### 4.1 Broadening the explanandum

#### 4.1.1 Extant typologies

There are many possible ways to classify conditionals. Extant classifications concentrate on dividing the category of conditional sentences by using various parameters. In addition to the standard distinction between indicatives and counterfactuals, conditionals also yield to a variety of more, or less, adequate typologies (see e.g. Sweetser 1990; Declerck & Reed 2001). The motivation behind such classifications might be to, for example, decide which types of conditional fit with particular semantic theories; Adams' (1970) examples (11) and (12), which have become the *loci classici* on the indicative versus counterfactual debate, show us that with the same background assumptions (in this case, that Kennedy died), the difference in mood of the two conditionals gives us intuitively different truth values.<sup>13</sup>

(11) If Oswald didn't kill Kennedy, somebody else did.

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<sup>13</sup> To give a very brief overview of the classic debate on the distinction between indicatives and counterfactuals, Lewis (1973) favours the truth-functional view for indicatives, but uses possible worlds to account for counterfactuals (see also Abbott 2010). Stalnaker (1975) takes the two types as semantically alike, accounting for both using possible worlds. In contrast, Edgington (2008) agrees with Adams (1970) in that both indicatives and subjunctives can be dealt with using conditional probabilities; Gibbard (1981) and, later, Bennett (2003) use probabilities for indicatives but reject extending the approach to subjunctives.

(12) If Oswald hadn't killed Kennedy, somebody else would have.

At this point we are not concerned with improving on the classifications of conditional sentences as such. Rather, once we broaden our attention to non-conditional sentences that express conditional meanings, the question becomes how to delineate the pragmatic category of conditionals as a whole. In view of this broadly conceived explanandum, we need to find a way to stop the category from over-generating, and to provide some rationale for inclusion in the class.

When devising the criteria for classifying conditional thoughts, some extant typologies may help our pursuit. Van der Auwera (1986: 199) for example advances the 'sufficiency hypothesis' where in all utterances 'if  $p$  then  $q$ '  $p$  is a sufficient condition for  $q$ . We might attempt to broaden this hypothesis as a general principle for all conditionals, extending beyond conditional sentences. However, as we know, many non-causal conditionals do not adhere to this condition; in (7) (repeated below)  $p$  is not typically sufficient for the truth of  $q$ .

(7) If you're thirsty, there's some beer in the fridge.

Sweetser (1990) attempts to retain the sufficiency hypothesis by dividing conditionals into separate cognitive domains: the content (or causal) domain, where the event of  $p$  is sufficient for the event of  $q$ ; the epistemic domain, where knowing  $p$  is sufficient for knowing  $q$ ; and the speech-act domain, where the truth of  $p$  is sufficient for the speech act performed by the consequent  $q$ . While her classification may explain why different conditionals appear to behave differently vis-à-vis the sufficiency condition, it appears that we have to know which domain a particular expression falls in before we can judge whether it satisfies the sufficiency condition. As such this circular reasoning does not help with our pursuit of deciding which expressions count as conditionals; we have to know whether an expression is conditional before we can decide whether or not it satisfies the sufficiency condition, and hence decide whether or not it is conditional. Indeed, the sufficiency hypothesis is not even adequate for delimiting the class of conditionals. As Horn (2013) notes, only when the antecedent provides a sufficient pre-condition for the consequent is 'then' possible in 'if  $p$  then  $q$ '. 'Then' is ruled out in, for example, concessive conditionals ('even if  $p$ ,  $q$ ') and 'only if' conditionals where there is no sufficiency from  $p$  to  $q$ . However, it is possible for (7) to take 'then' as in (7a) even though  $p$  is not a sufficient condition for the truth of  $q$  when  $p$  is regarded as a sufficient

condition for the *relevance* or *felicity* of *q*, although acceptability judgements differ in this case.

(7a) ?If you're thirsty, then there's some beer in the fridge.

While discussing logical relations between clauses, it is necessary to mention Kratzer's (2012) argument from syntax that *if*-clauses restrict the domain of operators, leading to her claim that "[s]emantically, conditionals are no longer much of a topic in their own right" (p. 94) and "[t]he history of the conditional is the story of a syntactic mistake" (p. 106). She proposes that *if*-clauses be analysed as adverbial clauses, where in the logical form an *if*-clause takes the role of a quantifier restriction. For example, (13) only comes out true when we read it as (13a) (p. 90).

(13) Most of the time, if a man buys a horse, he pays cash for it.

(13a) (Most *e*: *e* is an event where a man buys a horse) (*e* is part of an event where the man in *e* pays cash for the horse in *e*)

On her analysis, 'bare conditionals', where the *if*-clause has no overt operator to restrict, are implicitly modal. Even if there is no overt modal specified in a sentence as in (14), there is an unpronounced modal which is restricted by the *if*-clause as in (14a).

(14) If the lights in his study are on, Roger is at home.

(14a) (MUST: the lights in his study are on) (Roger is at home)

The resultant truth conditions are parallel to a Stalnakerian semantics for conditionals: in all accessible worlds where the lights in his study are on, (14) is true if and only if Roger is at home. The importance of Kratzer's argument to our end is that it lends additional support to the plausibility of a pragmatic category of conditionals: by classifying *if*-clauses with other adverbial clauses that restrict operators, the view that 'if *p* (then) *q*' sentences form a distinct syntactic category has to be abandoned. We are thus given a licence to find suitable criteria for classifying conditionals that do away with the reliance on the 'if-then' sentence.

#### 4.1.2 Delineating the class of conditionals

As is evident by now, when we look at conditional meaning at the level of thoughts, there is no bi-unique correlation between form and content of conditionals. The upshot of this is that it no longer makes sense to talk of a category of conditionals in terms of syntactic structures. Without lexical or grammatical restrictions on the expressions to be labelled as conditional, we need some criteria for inclusion in the class of conditionals. At this point, we need to pin down exactly what we mean by ‘conditional meaning’. As we extend the explanandum beyond conditional sentences to both conditional sentences whose primary meaning is not conditional (‘non-standard conditionals’) on the one hand, and conditional thoughts expressed via non-conditional sentences on the other, we want to allow for the possibility that (i) an utterance may have a conditional sentence form, but that its primary meaning may or may not be its conditional meaning; and (ii) an utterance does not have a conditional surface form, but may have conditional meaning either as primary or secondary meaning (see Section 2). To repeat, we are not limited by grammatical forms or specific lexical items, and the class of conditionals will be delineated by pragmatic criteria.

The antecedent has to fulfil two criteria in order to count as contributing to a conditional thought. First, as detailed in Section 3 (and in Elder 2012), a conditional invokes a supposition that is accepted into the common ground as if it were given. This gives us the first criterion: the antecedent takes the responsibility of forming a supposition, thereby requiring that the consequent is restricted to those situations invoked by the antecedent. This criterion is reminiscent of Ramsey’s (1929) proposal that the consequent is judged based on the assumption of the antecedent. At this point, a terminological remark is in order. The ‘antecedent’ and ‘consequent’ of a conditional as we understand them may either be syntactically realised by the clausal structure of the utterance, or, at the level of thoughts, the extant logical form may be enriched to give a two-clause structure. This allows us to extend beyond conditional sentences to non-conditional sentences that express a conditional thought. Furthermore, the criterion of supposition may be realised in terms of truth and falsity, à la Stalnaker’s possible-worlds account. However, we also allow this criterion to extend beyond conditional assertion, to encompass in addition the notion of felicity with respect to the main clause. This allows us to include also non-standard conditionals that may have conditional secondary meaning. The potential drawbacks of this move are discussed in Section 4.2.

The criterion of supposition is not sufficient alone, in that it would make the category of conditionals over-generate. We want to prevent factual antecedents – ‘factual’ as far as the speaker is concerned – from entering the class of conditionals, for example those using ‘since’ or factual ‘when’. Such a move can be traced back to Grice’s acceptability criterion

which states that if a speaker deems the antecedent to be true, he/she should either have used ‘since’ instead of ‘if’, or asserted the consequent outright. The requirement can equally be explained in terms of Horn’s (e.g. 1984) scalar implicature.

The second criterion for inclusion in the class of conditionals appeals to the idea of ‘remoteness’, requiring that the antecedent be remote from the actual world as deemed by the speaker. We acknowledge that there are cases where an antecedent of an *if*-conditional appears to be true, either by echoing another utterance in the discourse, or because it is assumed to be true for the purpose of the discussion. For example, in (15), when the speaker tries to convince the addressee that his being in Paris necessarily means that he is in France, the antecedent is presupposed.

(15) If (as you say) you are in Paris, then you are in France.<sup>14</sup>

However, in these cases we do not assume that the speaker is *asserting* the antecedent as true, but that he/she is merely *presenting* the antecedent as true. This is similarly the case in so-called ‘counterfactuals with true antecedents’, such as Anderson’s (1951: 37) seminal example (16).

(16) If Jones had taken arsenic, he would have shown just exactly those symptoms which he does in fact show.

While the content of the conditional makes it clear that *p* is in fact true, we maintain that *p* is first presented as a hypothetical situation which, through conditional reasoning, allows us to infer that *p* represents the actual state of affairs.<sup>15</sup>

This discussion leads us to the next caveat: this criterion of remoteness from reality requires us to consider the speaker’s epistemic stance towards the truth of the antecedent in order to judge whether a given utterance counts as conditional. This moves us away from a

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<sup>14</sup> Example paraphrased from John Maier (p.c.). We thank John Maier and Joseph Tyler for discussing these cases with us.

<sup>15</sup> ‘Remoteness’ can either be understood in terms of possible worlds or in terms of circumstances of evaluation (Predelli 2005). (15) can be used in a situation where ‘since you are in Paris, you are in France’ is appropriate. In such cases *if* is used to show that the speaker is abstracting from his/her own assessment of the actual state of affairs. Stalnaker (2012) defends the analogous case for counterfactuals. See also de Saussure (2013) on discursive, pragmatically determined presuppositions.

grammatical definition of conditionals to a *pragmatic definition*, taking aspects of the context of utterance, including the speaker's epistemic state, into consideration.

To summarise, the class of conditionals is delineated by appealing to two roles of the antecedent: (i) the antecedent is a supposition, and thus restricts the situations in which the main clause holds, and, related to it, (ii) the antecedent indicates remoteness from the actual world, in that the speaker is not committed to its truth. Such criteria allow us to extend the explanandum beyond that of ordinary conditional sentences, as we are no longer held within the confines of the lexical item 'if', or the syntactic form 'if *p* (then) *q*'. Defining conditionals by such conceptual criteria allows us to appeal to the level of thoughts; both conditional sentences whose primary meaning is not conditional, as well as conditional thoughts expressed by non-conditional sentences, can now be included in the category.

#### 4.2.1. *The corpus data*

Having clarified the scope of the conceptual category of conditionality, we now turn to empirical evidence in support of the proposal that the class of conditionals should be extended beyond ordinary conditional sentences, in that, to repeat, (i) there are structurally different ways in which a conditional meaning can be conveyed, and (ii) we can apply the same criteria for conditionality to expressions outside of the structurally defined group of conditional sentences.

Elder (2012) details a pilot study conducted using the ICE-GB, in which five random conversations of 2000 words each were manually searched for conditionals using 'if', as well as for any other expressions that fulfil our criteria for conditionality. Within 61 conditionals found, 28 instances (46 percent) used 'if'. This result indicates that restricting the study of conditionals to utterances which use 'if' removes over half of the potential conditional expressions used in ordinary discourse, thus motivating the move to extend the object of study to conditionals in a non-conditional form.

It should be borne in mind that combining a corpus study with these pragmatic criteria for conditionality leads to problems when utilising automated search facilities. We are aware that searching for lexical items or even grammatical forms will not be sufficient to generate a full list of conditional expressions, and short of conducting a full manual search of the entire corpus we are unlikely to compile an exhaustive list of possible conditional expressions (although Declerck & Reed 2001 have attempted this). Moreover, even if such a study were undertaken, this in itself may not be comprehensive. This is for two reasons, namely that (i)

when we go beyond structures to thoughts, there is possibly an endless number of ways of expressing conditionals, and (ii) any morphosyntactic properties of a particular expression in the language system which may be used to express a conditional, may also be used to other ends. Therefore, we do not expect to be able to provide the totality of ways in which conditionals may be externalised in English. Rather, by providing criteria for inclusion in the class of conditionals, we provide the rationale for including a variety of utterance types that may express a conditional thought on a given occasion.

With these caveats in mind, the corpus study covers only conditional expressions using ‘if’, in the knowledge of how conditionals which do not use ‘if’ fit into the broader semantic category. Section 4.2 details some of the different ways in which conditionals using ‘if’ may adhere to the criteria for conditionality, and Section 4.3 provides a sample of the ways in which conditionals without ‘if’ may be expressed in English.

#### **4.2. Conditional structures with conditional (primary or secondary) meaning**

Conditional ‘if’ may fulfil the criterion of supposition either in terms of truth, or by restricting the situations where the main clause is felicitously uttered.<sup>16</sup> This distinction can be summed up using Quirk et al.’s (1985) traditional classification of (i) direct conditionals, where  $q$  is contingent on  $p$  being true, and hence there is a direct conditional relation between  $p$  and  $q$ , and (ii) indirect conditionals, where there is no direct conditional relation between  $p$  and  $q$ , but it is the felicity of  $q$  which is contingent on the truth of  $p$ . Some examples of direct conditionals are given in (17)-(19), and indirect conditionals in (20)-(21) and (7) repeated below.

- |      |   |                     |
|------|---|---------------------|
| (17) | If it’s a really nice day we could walk.                      | <i>SIA-006 #301</i> |
| (18) | She’d be terribly offended if we didn’t come and pick her up. | <i>SIA-006 #322</i> |
| (19) | If you hit me one more time I’ll kill you.                    | <i>SIA-073 #351</i> |
| (20) | We’ve got some ale in the cupboard if you fancy it.           | <i>SIA-047 #009</i> |
| (21) | If anyone asks, you’re four years old.                        |                     |

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<sup>16</sup> Two types of ‘if’ have been excluded from the corpus study. The first is ‘if’ used in an indirect question, analogous to ‘whether’, e.g. ‘I’ll see if he wants to go’ (but see Starr 2011 for a defence of including these ‘if’s in a study of conditionals). The second type is ‘if’ used in ‘as if’, which is used as a comparative, not a conditional.

(7) If you're thirsty, there's some beer in the fridge.

In an indirect conditional, the consequent is true regardless of the truth of the antecedent. Two standard tests to distinguish direct from indirect conditionals are the question and contraposition tests (DeRose & Grandy 1999), exemplified for (7) in (7b) and (7c) respectively.

(7b) ?And what if I don't want any?

(7c) ??If there is no beer in the fridge, you don't want any.

The discrepancy between these two types of conditional led Austin (1961) to remove indirect conditionals from the class of conditionals altogether. A less extreme view is held by Predelli (2009) who argues that the antecedent of an indirect conditional is 'truth-conditionally irrelevant'. Despite the fact that the consequent of an indirect conditional may be asserted without the antecedent without change to the conditions of applicability of the consequent, we maintain that indirect conditionals have a place in our object of study.

The reasons for this are three-fold. First, as will be shown through attested examples, when we take the speaker's intended meaning into consideration, there may not even be a clear-cut boundary between direct and indirect conditionals. This will also mean that the criteria for conditionality, pertaining to restriction and remoteness, will be preserved on some level of interpretation.<sup>17</sup> Second, rather than to provide a conditional relation between  $p$  and  $q$ , the conditional form of an indirect conditional may form a secondary meaning which provides part of the input to the primary, non-conditional meaning. Finally, the conditional relation between the clauses is a tangential issue to the question of primary meanings. There are indirect conditionals whose logical form can be enriched to give a conditional primary meaning, and on the other hand, there are direct conditionals whose primary meaning is not conditional. So, whether or not an *if*-sentence exhibits a conditional relation between the two clauses is a tangential issue to the question of what the primary meaning is. By including all these examples in our study we are able to afford a typology of conditionals which takes us from conditional sentences with a conditional meaning at one end, perhaps all the way to, as

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<sup>17</sup> Sentence (26) below gives an example of such a relevant level of interpretation.

we will tentatively claim, non-conditional expressions with conditional secondary meanings at the other.

Let us start by taking Austin's (1961) well-documented 'biscuit conditional' in (7). In a biscuit conditional, there is no direct relation between the antecedent and the consequent but the antecedent is typically described as indicating the relevance of the assertion in the main clause. Bonnefon & Politzer (2011: 153) suggest that some indirect conditionals may differ from biscuit conditionals in the way they fail the contraposition test. For example, in response to (22), (22a) would be an ill-formed question due to the impossibility of an informative answer, and similarly the failure of the contraposition test falls out of the semantic relation between playing a game and playing soccer; in order to play soccer one must be playing a game.

(22) If Viv played a game, she didn't play soccer.

(22a) ?And what if Viv didn't play a game?

(22b) ??If Viv did play soccer, she didn't play a game.

This contrasts with biscuit conditionals 'proper' where there is no comparable semantic relation between  $p$  and  $q$  in the contraposition test. Whether or not these conditionals form a class separate from 'standard' biscuit conditionals is not our concern here; when we look at the contingency relation between  $p$  and  $q$  in (22) we obtain the same result:  $q$  is true whether or not  $p$  is true. The more pertinent question is whether we should include any such indirect conditionals in the object of study.

We begin by looking at the role of the antecedent from the point of view of the illocutionary goal of indirect conditionals. In indirect conditionals, while  $p$  is said to indicate the relevance of  $q$ , the relevance of  $q$  may stem either from its practical utility to the hearer, or from its epistemic utility (Bonnefon & Politzer 2011: 145). For example, in (7)  $p$  indicates that the hearer's desire for beer, or his/her predicted thirst, make it relevant for the speaker to assert the location of the beer in  $q$ , while in (22)  $p$  makes manifest the topic of conversation, thereby providing the relevance of naming the sport that Viv played, and hence contributing to the hearer's knowledge. When we take a closer look at some of the different ways in which conditional sentences are used, we find examples, such as (23) below, whose illocutionary force appears to be that of a biscuit conditional in that  $p$  indicates the relevance of  $q$ , yet arguably there is a direct conditional relation between  $p$  and  $q$ , thus distinguishing them from

direct conditionals. All in all, this allows us to question the assumption that there is a clear-cut boundary between direct and indirect conditionals.

In (23), the illocutionary goal of the utterance is an invitation for the hearer to come round for a drink.

(23) Later, if you're awake, you can come round for a drink. *SIA-040 #384*

By removing  $p$ , neither the truth nor the illocutionary force of the utterance is affected, and thus, since  $q$  is true whether or not  $p$  is true, one could be tempted to class (23) as a biscuit conditional. However, applying the question and contraposition tests suggests the opposite result.

(23a) A: What if I'm not awake? B: Then you can't come round for a drink.

(23b) If you can't/don't come round for a drink, then (it means that) you're not awake.

Arguably, (23) passes both tests, because being awake is a prerequisite for coming round for a drink, and hence by the traditional classification should be classed as a direct conditional. But we know that as far as the speaker's intended meaning is concerned, the hearer is invited to do something without giving any consideration to the truth of the antecedent. Looked at in these terms, one must ask what the role of the antecedent is if not to provide a condition for  $q$ . In terms of Brown & Levinson's (1987) model of politeness, the speaker hedges the content of the main clause by assuming the hearer is unable to perform the action, thereby giving the hearer an 'out' should he not wish to take up the invitation. While there is arguably a conditional relation between  $p$  and  $q$  as far as logical relations go, from the point of view of the illocutionary goal of the utterance,  $p$  is used as a politeness device to hedge the primary meaning given solely by  $q$ . In this respect, we can say that the conditional sentence is used to express a secondary meaning of politeness, while the primary meaning is the invitation specified by  $q$ .

Such 'direct biscuit conditionals' are not limited to cases where the speaker invites the addressee to act. There are also cases where the speaker hedges her own action, as in (24).

(24) I'm just going to top up my tea again if you don't mind. *SIA-067 #169*

(24a) A: What if I do mind? B: I won't top up my tea.

(24b) If I don't top up my tea, (it means) you mind my doing so.

Again, there is here what looks like a weak conditional relationship between  $p$  and  $q$ , and applying the logical tests gives the impression that  $q$  should be contingent on the truth of  $p$ . Indeed, the *if*-clause does appear to provide the hearer with an opportunity to disagree with the action being proposed in the consequent, and as such, the utterance is used both as a conditional and as an assertion of  $q$ . As far as the primary meaning is concerned, however, the conditional aspect seems to be tangential to the assertion of  $q$ . Rather, the phrase ‘if you don’t mind’ is a conventionalised means to indicate that the speech act expressed by  $q$  is being hedged. But there is also a secondary meaning of politeness by which  $p$  implicitly calls for the hearer’s acquiescence to the speaker’s action. Thus, we have a sentence with a conditional form, with arguably a conditional relation between  $p$  and  $q$ , but whose conditional meaning is a secondary meaning in the same way as in the case of biscuit conditionals.

Returning to the direct/indirect conditional distinction, the question is this: since we can find direct conditionals whose antecedent does not seem to contribute to the primary meaning of the utterance, is there is any implicit conditional relation between the antecedent and the consequent? It appears that the illocutionary goal of an indirect conditional can be made explicit by enriching the consequent to show what the intended conditional relationship between  $p$  and  $q$  is. For example, in (7) (repeated below) the primary meaning is likely to be that of an offer, as exemplified in (25). If we enrich the consequent of (7), the primary meaning can be made overt, as in (26).

- (7) If you’re thirsty, there’s some beer in the fridge.  
 (25) Please help yourself to some beer.  
 (26) There is beer in the fridge *which you may have* if you want some.

While (7) has the logical form of an indirect conditional, it may be pragmatically interpreted as a direct conditional.<sup>18</sup> From a logical viewpoint, the line between indirect and direct conditionals thus seems rather blurry. The more interesting question from the point of view of conditional thoughts is how far the conditional meaning contributes to the speaker’s primary meaning. We have seen that even in cases where we could feasibly uncover a conditional relation between  $p$  and  $q$  insofar as they pass the logical tests for conditionality, this

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<sup>18</sup> It must be noted that we are not making claims about the psychology of processing of indirect conditionals, and are not proposing that (26) is a step in the inference from (7) to (25), but merely that we can re-evaluate (7) as a direct conditional in the form of (26).

conditional meaning may only be secondary to the primary meaning given by  $q$ . Indeed, in (7) we have the same phenomenon: regardless of whether  $q$  is contingent on  $p$ , the conditional aspect forms a secondary meaning showing the relevance of the consequent, which in turn allows the hearer to process the utterance as an offer that amounts to (25).

Now, although there may not be a clear dividing line between direct and indirect conditionals, and, more importantly, although conditional meaning in either a direct or an indirect conditional may not be the primary meaning of the utterance, one must not make the mistake of assuming that *all* indirect conditionals use the conditional aspect as a secondary meaning. Indeed, some indirect conditionals (on the sentence-based classification) take on a direct conditional meaning as their primary meaning. For example, (21) (repeated below) is an indirect conditional whose consequent can be enriched to make manifest the conditional relationship between the clauses shown in (21a).

(21) If anyone asks, you're four years old.

(21a) If anyone asks, *say* you're four years old.<sup>19</sup>

The critical point to note is that this enriched version is the main, intended, primary meaning, and indeed passes the logical tests for conditionality: the conditional sentence form provides the input to a process of enrichment which gives the primary conditional meaning. In this case, the role of  $p$  is not to hedge a speech act made by  $q$ , neither is it to indicate the relevance of asserting  $q$ , but to specify the situations in which (enriched)  $q$  is intended to hold. In terms of truth,  $q$  taken simpliciter is not expected by the speaker to be true, so it does not exhibit the same characteristics as other biscuit conditionals; one may assume that the hearer is not in fact four years old, but in any  $p$ -situation the hearer should assert it as true.

Let us briefly look at some other roles of the antecedent in conditional sentences. We have seen that  $p$  may be restricted in its role to a condition, while in other cases  $p$  may have an additional role of indicating the relevance of an assertion made in  $q$  or of hedging the speech act – other than assertion – proposed in  $q$ . We briefly describe two types of conditional where  $p$  hedges an assertion made by  $q$ , but noting their difference vis-à-vis conditionality.

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<sup>19</sup> This is only one of possible enrichments, albeit the most salient one when (25) is uttered as discourse-initial. We thank Louis de Saussure for pointing this out.

First, in (27), we have a conventionalised way of hedging an assertion by means of ‘if I remember rightly’, indicating that the speaker is not completely committed to the truth of  $q$ .

(27) If I remember rightly you had jaundice, didn’t you? *SIA-028 #051*

Considering the fact that  $p$  is used to hedge  $q$ , it is not too surprising that when we apply the tests for conditionality the utterance seems to pass the tests in (27a) and (27b).

(27a) What if I don’t remember rightly? Then (it means that) you didn’t have jaundice.

(27b) If you didn’t have jaundice, then (it must be the case that) I don’t remember rightly.

Although as far as the speech act is concerned the antecedent is simply used to hedge the content of the consequent, the antecedent provides a restriction – albeit in a conventionalised way – to indicate that the assertion of  $q$  may not be correct. This way of hedging, i.e. hedging of the propositional content, is in contrast to that of metalinguistic conditionals, where the antecedent comments not on the content of the consequent, but on the appropriateness of the linguistic form of the utterance.

(28) It is still peanuts if you’ll pardon the expression. *S2B-021 #017*

(29) Very short skirt on if you don’t mind me saying. *SIA-040 #089*

In (28) and (29), the *if*-clause is used to hedge the illocutionary force, and in particular the appropriateness or felicity of making the utterance. Unlike ‘if I remember’ cases, these metalinguistic examples certainly fail the question and contraposition tests; the speaker cannot retract the assertion as it is already ‘out there’. If the hearer rejects the antecedent, for example by asking (30), the speaker is only able to retract the acceptability of her assertion, not the assertion itself.

(30) What if I do mind?

Rather than to hedge the speaker’s belief in  $q$ ,  $p$  softens the force of the assertion made by  $q$ . An analogous structure is that of the metalinguistic phrase ‘if you like’, given in (8).

(8) I went in with a bone of complaint, if you like. *SIA-064 #142*

As with other metalinguistic comments, ‘if you like’ comments on the appropriateness of the words uttered, not on the propositional content of the consequent. By hedging the non-propositional content via a conditional form, the hearer is provided with an opportunity not to accept the assertion into the discourse. This is in contrast to non-conditional metalinguistic phrases such as ‘so to speak’ and ‘as it were’ which do not allow the hearer an opening to reject the appropriateness of the words uttered.

Similarly, the antecedent may be used to advise the hearer to take some action. These may take the form of either direct conditionals (31)-(32), or indirect conditionals where there is no uttered consequent (33).

- |      |  |                     |
|------|--|---------------------|
| (31) | If you rang her now she’d say yes.       | <i>S1A-020 #138</i> |
| (32) | Be great if you would do that.           | <i>S1A-079 #252</i> |
| (33) | Now if you’d like to put on your helmet. | <i>S2A-054 #063</i> |

In each of these examples the main, primary meaning is that of a speech act of advising, recommending, ordering, or some other directive, leaving the conditional meaning as secondary. In (31) it is the positive consequence to the hearer that encourages the hearer to take the action described in *p*; in (32) it is the positive consequence to the speaker that indicates that *p* is a request asked of the hearer. In (33) there is no uttered consequent to indicate the speech-act type; if any consequent could be recovered it could either be for the benefit of the speaker (e.g. ‘...that’d be great’) or the hearer (e.g. ‘...you’ll be safer’) which could provide the rationale for the hearer taking the action *p*. In such cases we suggest that there may not be *one single* intended consequent which is recoverable from the context, and we can go further to say that at the level of thoughts, there may not even be an intended consequent. Whatever that consequent may be, we still get an implied positive consequence, which induces the hearer to take the action specified in the antecedent. That is, by using the conventionalised opening ‘if you’ in (33), the hearer understands the primary meaning to be (33a).

- (33a) Please put on your helmet.

To sum up, in this section we have detailed some of the ways in which conditional sentences may be used for various purposes. The classic ‘biscuit conditional’ is where *p*

indicates the relevance of asserting  $q$ ;  $p$  may also be used to hedge a speech act, propositional or metalinguistic content of  $q$ , or to convey a certain type of a speech act in itself. We include all these types in our object of study not only because there are different degrees of intentions associated with conditional meaning, but also because recoverability of the conditional relationship is independent of whether the conditional meaning is the primary meaning of the utterance. By identifying all these types one can put forward a pragmatic typology that includes a wide variety of sentence structures, as well as accounts for conditionality expressed as primary meaning or as secondary meaning. A preliminary attempt in terms of a contextualist theory is attempted in Section 5.

### **4.3. Non-conditional structures with conditional (primary or secondary) meaning**

#### *4.3.1. Conditional thought as primary meaning*

There seems to be no obvious restriction on the types of non-conditional expressions that express conditional thoughts. In an automated corpus search one could possibly start with a list of lexical items or grammatical forms that are likely to convey conditional meaning. On the other hand, conventional data collection allows one to embark on the task without such presumptions and therefore without the danger of circularity in methodology (see e.g. Declerck & Reed 2001). Be that as it may, it is not our purpose here to create a database but rather to exemplify the categories that will constitute the pragmatic and conceptual class of conditionality. In this section we provide some examples from the corpus that fit in the class of non-conditional structures expressing conditional thoughts.

First, there is the intermediate class with the lexical items that yield the so-called “sentences of implied condition” (Humberstone 2011: 948), such as ‘unless’, ‘provided’, ‘in case’, and so forth, as in examples (34)-(37) below. Similarly, ‘when’ (38), ‘given that’ (39), ‘supposing’ (40), ‘assuming’ (41) and their imperative or exhortative versions (42)-(43) may also express conditional thoughts.

- (34) You’re very unlikely to get someone to commission you to write something unless you’ve already written and published quite a lot. *SIA-066 #117*
- (35) The quickest way into the West End from there is Gospel Oak, provided you know the times of the trains. *SIA-023 #210*
- (36) In case you have any problems, your enumerator has been trained to help.

- S2B-044 #068*
- (37) In case you're wondering, that's not to the loo. *S1A-010 #057*
- (38) When you follow that through you've got the means to give rise to a change in the method. *S2A-037 #122*
- (39) Given that linguistics is not democratic, we can't necessarily accept that. *S1B-002 #215<sup>20</sup>*
- (40) Supposing she'd said that to a psychiatrist, what would they say? *S1A-031 #128*
- (41) That is correct assuming his face was pointing forwards. *S1B-068 #090*
- (42) Suppose you hadn't been able to raise finance at all. *S1B-061 #001*
- (43) Let's assume that was a noun phrase. *S1B-002 #131*

These examples bear different degrees of resemblance to the form of 'if-then' sentences, with some appearing obviously conditional by the subordinate-main clause structure, while the exhortative and imperative versions of 'suppose' and 'assume' in (42) and (43) form syntactically independent clauses, requiring two independent sentences to make up the conditional. What all of these examples have in common is that the two criteria for conditionality are satisfied; to repeat, these are (i) that  $p$  restricts the situations where  $q$  holds, and (ii) that  $p$  is not an assertion of fact. It goes without saying that for each lexical item listed, there are other non-conditional uses of that word. We will not detail them all here but, for example, it is only conjunctive 'when' that may introduce a conditional which is in contrast to 'when' signalling factuality, as in (44).

- (44) Of course everybody thought he was quite mad but when he lifted a huge block of stone and lifted it above his head then they realised that he was inspired by a great force. *S2B-027 #071*

Similarly, 'in case' does not always express a condition. Declerck & Reed (2001: 21-5) have attempted a classification of 'in case' by its discourse function; 'in case' may be classed as conditional either when 'in case' can be substituted for 'if it is the case that' as in (36), as the antecedent specifies the situation where the consequent may occur, or when 'in case' provides a felicity condition for the consequent as in (37), drawing a parallel with biscuit conditionals detailed in the previous section. However, 'in case' in its precautionary use, such

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<sup>20</sup> For 'since  $p$ ,  $q$ ' and, by analogy, 'given that  $p$ ,  $q$ ' see footnote 15.

as (45), does not restrict the situations where the main clause holds; instead, the ‘in case’ clause provides the justification for the action described in the main clause.

(45) I will take an umbrella in case it rains.

While each of these examples contains a particular lexical item that may invoke a conditional sense, the conditional meaning only arises when the pragmatic criteria are fulfilled by appealing to extra-linguistic information regarding the relation between eventualities described and the speaker’s epistemic stance towards the antecedent.

Moving to grammatical forms that do not resemble *if*-sentences, a well-known example is that of ‘conditional conjunction’ as in (46)-(47).

(46) Here on this dry desert it’s searing, but mix it with a little water and life flourishes.

*S2B-027 #003*

(47) You drink your tea and I’ll take you upstairs.

*W2F-007 #159*

The term ‘conditional conjunction’ is somewhat of a misnomer as the conditional reading is clearly not borne out of the conjunction ‘and’. Rather, they can be identified by applying the conditionality criteria: the first conjunct is not put forward as a statement of truth, and the situation described in the second conjunct is dependent on that of the first conjunct.

Klinedinst & Rothschild (2012) propose that ‘and’ is lexically ambiguous between the truth-tabular conjunctive use and its conditional use, where in a conditional use of ‘and’ there is a (possibly unpronounced) necessity modal present in the second conjunct which gives rise to the conditional reading (48).

(48)  $p \wedge \text{Necessarily } q \quad \gg \quad p \rightarrow \text{Necessarily } q$

We agree that such uses of ‘and’ do give rise to conditional readings, but in the same way as we do not restrict conditionality to ‘if’, we prefer not to put the onus on the lexical item ‘and’. Rather, once such expressions are thought of in terms of the primary meaning of the utterance, one can modify the extant logical form to account for this conditional meaning. But it has to be remembered that this conditional meaning pertains to the conditional thought, not to the syntactic form. We propose the procedure for modelling such discourse-driven

meanings in Section 5. Finally, it is worth mentioning that this analysis also applies to the so-called ‘enthymematic conditionals’ (cf. Horn 2013) where the conditional relation is not specified by any specific lexical item such as ‘and’ but instead the conditional sense must be extrapolated through pragmatic inference.

(49) You call the cops, I break her legs.

(50) No pain, no gain.

(51) You like it? It’s yours.

In this section we have discussed a sample of the ways in which conditionality may be expressed through non-conditional sentences. Needless to say, there are many other ways in which conditional thoughts may arise out of different syntactic forms. For example, relative or infinitival clauses may signal conditionality (see Wen-Li (1983) for a longer list). However, since such grammatical forms can also express non-conditional thoughts, and, moreover, conditionality is not limited to particular structures, it seems futile to attempt a full list. To repeat, once we classify conditionals using conceptual opposed to lexical or grammatical criteria, there is no restriction on the types of sentence form in which conditionality may arise. This section has focussed on cases where the uttered sentence provides some condition  $p$  for a (overt or covertly expressed) consequent  $q$ . It is possible that once we go further into the level of conditional thoughts, we need not even restrict our search of conditionality to uttered content; by taking the process of pragmatic modification a step further, we can see how conditional thoughts arise as secondary meanings without being overtly expressed in the sentence. This is the category to which we now turn.

#### *4.3.2. Conditional thought as secondary meaning*

The final class we tentatively propose is included principally for the sake of completeness as a logically possible, and at the same time empirically attestable, option. This is a category of non-conditional sentences with conditional thoughts as their secondary meanings. This category is of a lesser interest in the analysis of discourse (at the same time, possibly of a greater interest to a psycholinguist or a philosopher of action) but ought to be included in that assumptions pertaining to such hypothetical thoughts can be present in our reasoning patterns even when they are not expressed either in the sentence structure or as primary meaning.

For example, the conditional conjunction (52) can be enriched to reveal the associated conditional meaning as in (52a). However, arguably, the primary intended meaning is normally that of (52b), directing the hearer not to take a particular course of action.

- (52) Take one more step and I'll shoot.  
 (52a) If you take one more step, I'll shoot.  
 (52b) Don't move.

In this case, the non-conditional expression has the conditional thought (52a) as its secondary meaning. The negative outcome of the hearer's potential action described in *p* discourages the hearer from taking that action, thus providing the cognitive input to the primary meaning in (52b).

We can go further. Once we look at non-conditional primary meanings of conditional sentences, we can work backwards to suggest that if it were the case that the primary meaning *had* been uttered, the conditional thought would nevertheless have been present; it is this conditional thought that provides the rationale for the assertion of that primary meaning. Example (33) and its primary meaning (33a) are repeated below.

- (33) Now if you'd like to put on your helmet.  
 (33a) Please put on your helmet.

Let us assume that (33a) was the uttered material. It has the primary meaning that the hearer should put on his/her helmet. However, implicit in such an utterance might be, in some contexts and for some addressees, the associated context-dependent conditional thought of the form as in (33b).

- (33b) If you put on your helmet, you'll be safer.

To emphasise our disclaimer at this point, we do not endeavour to assess the cognitive reality of such a category of conditionals: conditional secondary meanings such as (33b) will be activated in some contexts but not in others, and for some addressees but not for others. We merely conjecture that when we go this far into pragmatic inference, hypothetical thought is present in our everyday reasoning patterns, and thus has a place in a full spectrum of conditional thoughts. But not including the category of non-conditional utterances with

secondary conditional meanings would have no repercussions on the remainder of the proposal.

#### **4.4. The pragmatic category of conditionals: An interim summary**

To recapitulate, by acknowledging the plethora of ways in which conditional thoughts may be expressed in natural language, we are justified in extending our explanandum beyond conditional *sentences*. Indeed, having adopted conceptual criteria for conditionality, we cannot limit the object of study to particular words or structures but instead must allow for the possibility of a pragmatic category of conditionals.

We have seen through a variety of naturally occurring examples of *if*-conditionals that the role that conditional thought plays varies from explicit to implicit, where conditional thought may be present as the primary meaning of the utterance, or it may play a role of secondary meaning that contributes to the inferential output of the non-conditional primary meaning. We extended this reasoning beyond conditional sentences to non-conditional sentences, affording a full scale of conditional thought from conditional sentences with conditional primary meaning at one end, to non-conditional sentences with either conditional primary meaning or even conditional secondary meaning at the other, in that all these varieties of conditional meanings arise from a common ground.<sup>21</sup> Such a broadly conceived explanandum does not lend itself well to minimalist truth-conditional semantics in that the logical form of the sentence no longer has a key role to play in determining the representation of conditional meaning. Section 5 offers a proposal of how to represent such a variety of meanings in a uniform manner.

### **5. Conditionals in radical contextualism**

Following our aim to provide a uniform representation of the meaning of utterances whose primary role is to express a conditional thought, we now turn to contextualism about meaning. Contextualism comes in many different strengths and flavours (see e.g. Recanati 2012; Jaszczolt 2012 for up-to-date introductions) but the general assumptions uniting this group of approaches are that (i) semantics and pragmatics both contribute to the truth-conditional content; and (ii) context-sensitivity is not reduced to a basic set of expressions

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<sup>21</sup> See de Saussure (2013) on ‘background relevance’.

(indexicals) and is unpredictable: in different contexts, different expressions may require contextual modification. This view is to be contrasted with the so-called semantic minimalism (Borg 2004, 2012; Cappelen and Lepore 2005) according to which there is only a very limited set of expressions that require contextual resolution.

Next, some contextualists claim that all pragmatic effects that contribute to the truth-conditional content have to be attributable to context-sensitive elements in the logical form of the sentence. This variant is called indexicalism (e.g. Stanley 2000). A more radical variant claims that pragmatic contribution to the truth-conditional content can be not only ‘bottom-up’ as Recanati (2010) calls it, but also ‘top-down’, not requiring a ‘go-ahead’ from a respective slot in the logical form. The next question that radical contextualism has to address is where to place the cut-off point for this contextual resolution of meaning. For some theorists, the logical form of the uttered sentence can be developed freely (‘top-down’) until it reaches the stage at which it represents the meaning intended by the speaker and/or recovered by the addressee. Here relevance theorists (see e.g. Carston 2002) and truth-conditional pragmaticists (see e.g. Recanati 2010) vary in the adopted perspective but the issue is tangential to our current concern. In the most radical version, the logical form of the uttered sentence can not only be modified but on some occasions can also be overridden by a different logical form. In the terminology of Speech Act Theory, this is the case when the message is communicated indirectly and the indirect speech act is the main intended meaning. There is nothing to stop a radical contextualist from adopting this indirect but primary, main message as the object of a truth-conditional representation. In fact, this strategy seems the most satisfactory one in that it allows us to formally represent the main meaning intended by the speaker and recovered by the addressee. This line of argument is pursued in Default Semantics (Jaszczolt, e.g. 2005, 2010) and its successor Interactive Semantics (Jaszczolt, in progress) which aim at modelling the primary meaning intended by the Model Speaker (‘model’ in that the procedures have to be generalizable) *and* recovered by the Model Addressee (‘and’ in that it is not concerned with communication breakdown, leaving that problem to psycholinguistic research). Such primary meanings are then represented in truth-conditional *merger representations* that we use below to represent the meaning of overt and covert conditionals.<sup>22</sup>

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<sup>22</sup> A question arises at this point as to whether such a radically contextualist approach to truth-conditional content still falls in the domain of semantics or is better situated in pragmatics. Recanati (2012: 148) tries to salvage grammar-controlled semantics while advocating contextualist truth-conditional content:

It should be immediately diaphanous that a radical contextualist account of this kind is an appropriate framework for handling the broad class of conditionals we opted for in the previous sections. We will be able to represent conditional sentences that exhibit different kinds of relations between the antecedent and the consequent, including ‘biscuit’ conditionals and other non-standard conditionals, in that information that contributes to the truth conditions can come from a variety of sources that can be jointly called ‘pragmatic’, and as such are external to the structure and the lexicon. We will also be able to represent the conditional meaning of sentences whose form is not conditional in that, as was mentioned in the previous paragraph, the primary meaning that is represented in the merger representation need not rely on the logical form of the uttered sentence. To repeat, in the case of indirect communication, the logical form of the sentence can be overridden and the merger representation of the primary (indirect) meaning can be constructed, relying on various extralinguistic sources of information. So, in addition to standard cases of conditionals, we can represent for example (31) and (33) where the primary meaning is not conditional (as in (31a) and (33a) respectively), as well as the primary meaning of utterances that do not have a conditional form but do strongly convey a conditional thought such as (53).

- (31) Be great if you would do that.  
 (31a) ≈ Please do that.  
 (33) Now if you’d like to put on your helmet.  
 (33a) ≈ Please put on your helmet.  
 (53) Touch his iPad and he will scream.  
 (53a) ≈ If you touch his iPad, he will scream.

Equally, a radical contextualist account, coupled with the explanandum delimited in our broad way, will allow us to represent conditionals in languages that do not have an

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“Is semantic interpretation a matter of holistic guesswork (like the interpretation of kicks under the table), rather than an algorithmic, grammar-driven process as formal semanticists have claimed?  
 Contextualism: Yes. Literalism: No. (...) Like Stanley and the formal semanticists, I maintain that the semantic interpretation is grammar-driven.”

However, this seems to create an unnecessary complication. ‘Unnecessary’, because the rationale for maintaining indexicalist, logical-form-driven semantics alongside radical truth-conditional pragmatics is the pessimistic assumption that the contextualist truth-conditional content cannot be algorithmically computed. However, merger representations of Default Semantics utilised here demonstrate that linguists may not be far away from such an algorithmic treatment of the contextualist content.

equivalent of the two-place ‘if...then’ connective such as the pair of irrealis statements in Guugu Yimithirr in (5) repeated below.

(5) The dog might bark. The postman might run away.

Analogously, ‘enthymematic conditionals’ as in (54) pose no problem for this account.

(54) Snowing? Let’s go skiing.

In short, we propose to view the conditional as a semantic and cognitive universal that is operative in human thought and is present in the semantic representation of natural language sentences as they are used in communication. Suppositions, changing mental states of the interlocutors, are pervasive across different (conditional or non-conditional) uses of ‘if’ on the one hand, as exemplified in (11)-(12) and (55)<sup>23</sup>, as well as in the covert conditionals on the other, exemplified above in (53) or (54).

(11) If Oswald didn’t kill Kennedy, somebody else did. (indicative use of ‘if’)

(12) If Oswald hadn’t killed Kennedy, somebody else would have. (subjunctive use of ‘if’)

(55) Everyone wondered if Jim had cheated. (interrogative use of ‘if’)

In addition, we can also represent conditionals intended as secondary meanings as in (33b) below.

(33) Now if you’d like to put on your helmet.

(33a) Please put on your helmet.

(33b) If you put on your helmet, you’ll be safer.

All in all, the diversity of ways of expressing conditional meaning, as well as the diversity of uses to which conditional ‘if’ can be put, are not a problem for a radical contextualist theory. Below we construct the representations for various types of overt and

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<sup>23</sup> See also Byrne & Johnson-Laird (2010); Starr (2011).

covert conditionals using the framework of Default Semantics (henceforth DS). DS is a compositional approach to natural language meaning but it assumes that compositionality is to be predicated not of the natural language sentences like a minimalist semantic account would, but rather of the level at which information coming from different sources in conversation interacts. We can call this an assumption of *interactive compositionality*. The idea of interactive, or ‘Gestaltist’ compositionality is adapted from Recanati (2004) and is further modified (in order to accommodate indirect primary meanings) to apply to the level of merger representations. In this respect, it departs from the original Fregean compositionality used in standard Montagovian formal semantics. It also comes partway towards the cognitive-semantic idea that compositionality of language strongly relies on the compositionality of thought as developed for example in Embodied Construction Grammar (see e.g. Feldman 2010). Unlike cognitivists, however, we adhere to truth conditions as our explanatory tool and, so to speak, ‘kick’ the truth-conditional analysis higher up to the level of primary intended meanings.

The sources of meaning identified in DS are presented diagrammatically in Fig. 1. For readers who are not familiar with the framework, the description of the sources can either be regarded as tangential to our main concern, or alternatively the reader is referred to a range of publications on DS (especially Jaszczolt 2005, 2010 for a comprehensive account).  $\Sigma$  is a symbol used for merger representation and it stands for the summation of information coming from the identified sources.

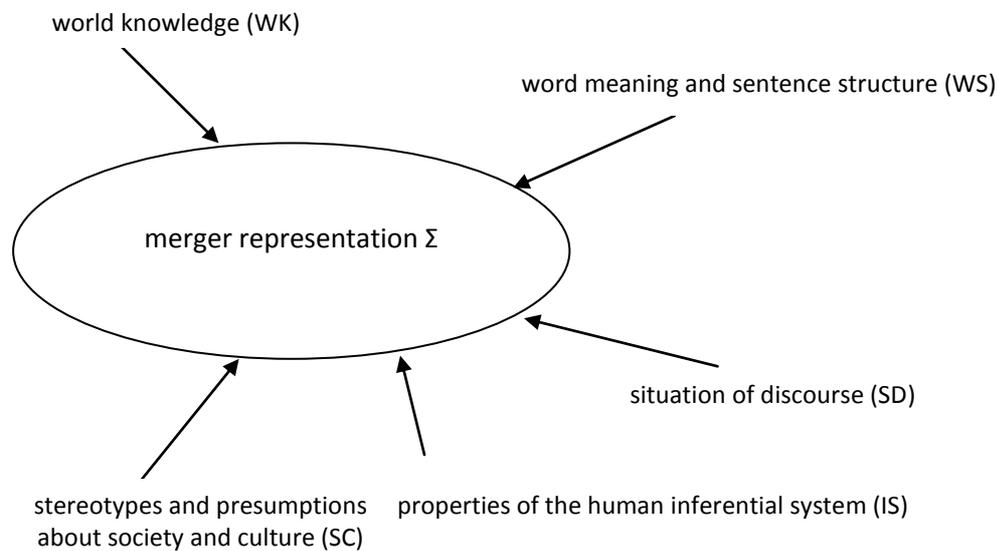


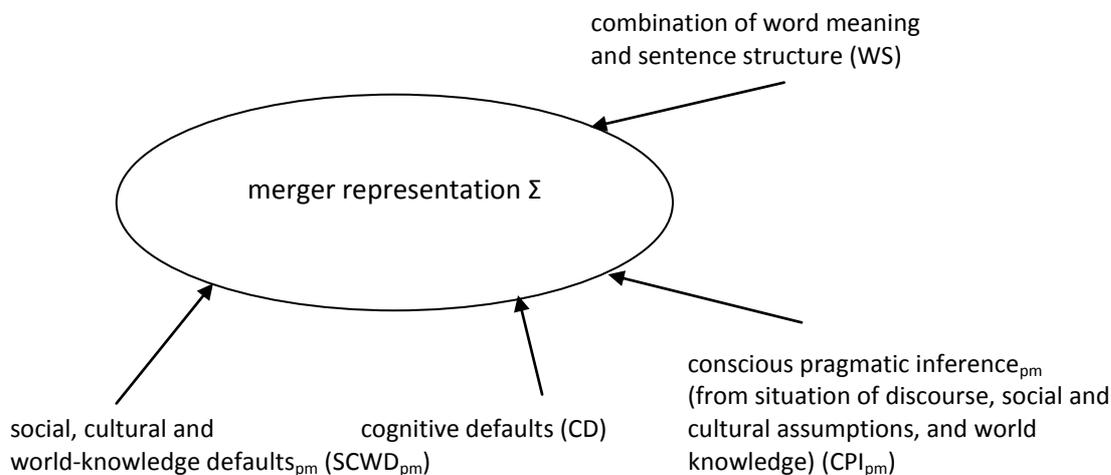
Fig. 1: Sources of information contributing to a merger representation  $\Sigma$

Next, DS identifies a range of processes that contribute to the formation of a merger representation. These are given diagrammatically in Fig. 2 (the same disclaimers apply).<sup>24</sup> The subscripts 'pm' and 'sm' stand for primary and secondary meanings respectively.

<sup>24</sup> For readers more interested in the details of the approach, it may be pointed out that one can identify a mapping, albeit not a bi-unique one, between the sources and the processes:

WK	→	SCWD or CPI
SC	→	SCWD or CPI
WS	→	WS (logical form)
SD	→	CPI
IS	→	CD

*Primary meaning:*



*Secondary meanings:*

- Social, cultural and world-knowledge defaults<sub>sm</sub> (SCWD<sub>sm</sub>)
- conscious pragmatic inference<sub>sm</sub> (CPI<sub>sm</sub>)

Fig. 2: Utterance interpretation according to the *processing model* of DS

DS makes use of the processing model and in the representations of conditionals below we will index the components of  $\Sigma$  with a subscript standing for the type of processing. We are now in a position to construct merger representations for conditionals. Conditional perfection from ‘if’ to ‘iff’ (Geis and Zwicky 1971; see also Horn 2000) in the seminal sentence (56) would be represented in DS as in Fig. 3.

(56) If you mow the lawn, I will give you five dollars.

The language of the representations is an adapted and extended version of that used in Discourse Representation Theory (Kamp and Reyle 1993):  $x$ ,  $y$ ,  $z$ ,  $e_1$  and  $e_2$  stand for discourse referents, the formulae below them are discourse conditions, the square brackets encase the material on which a given DS-process operates, and the type of the process is indicated in the subscript (see Fig. 2). ACC stands for the modal operator of acceptability with which temporality of events is represented, the subscript  $\Delta$  for the degree of epistemic

commitment to the truth of the eventuality, and the superscripts ‘tf’ and ‘rf’ for tenseless future and regular future respectively.<sup>25</sup>

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<sup>25</sup> The representation of the temporal reference is included in the  $\Sigma$ s for the sake of completeness but it is not relevant for the present considerations. The theory of temporality as modality has been developed by one of the authors elsewhere (Jaszczolt 2009) and interested readers are referred there for a detailed account.

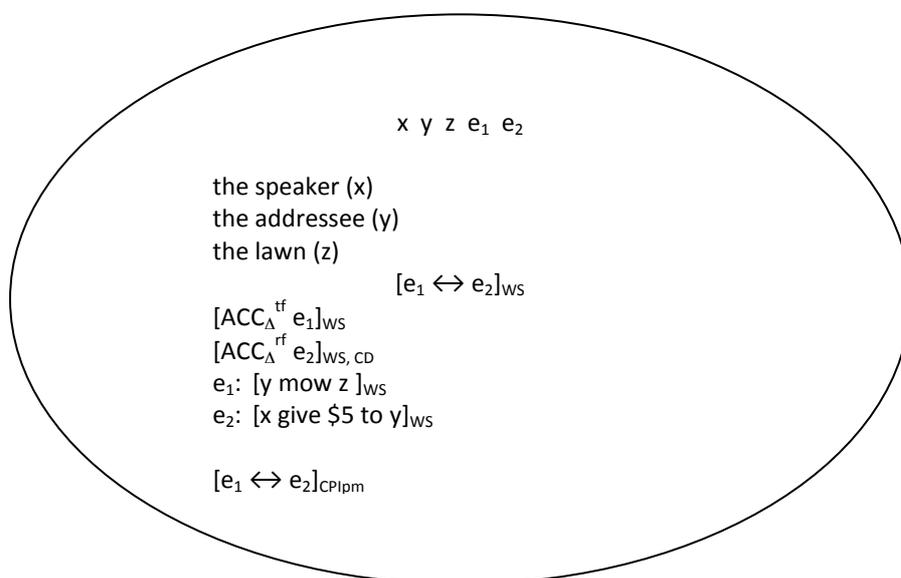


Fig. 3.  $\Sigma$  for the ‘perfected’ reading of ‘If you mow the lawn, I will give you five dollars.’

We now move to representing a wider range of expressions that fall into our class of conditionals, pragmatically defined as expressions that are used for representing conditional thought. We consider six different types of examples: (C1) is a typical case: a standard, overt conditional with strong, primary conditional meaning; (C2) is a conditional sentence with primary meaning that is not conditional; (C3) is an example of a sentence that does not have a conditional form but whose primary meaning is conditional; (C4) is again an example of a sentence that does not have a conditional form but whose primary meaning is not conditional either; instead, it has a weak, secondary conditional meaning; (C5) is an instance of an incomplete conditional sentence where the conditional meaning is primary; and finally (C6) is an instance of an incomplete conditional sentence where the conditional meaning is secondary. To repeat, (C4) could have easily been excluded from this analysis but since we opted for an explanans that is based on a hypothetical thought and this hypothetical thought is weakly communicated as SM, we decided to include it for the sake of completeness.

We use two dimensions for identifying these six categories. First, there are conditional meanings that arise out of the structure of the sentence alone (WS), as in (C1) and (C2) and conditional meanings the computation of which requires merger representations ( $\Sigma$ )

as in (C3)-(C6), where (C4) corresponds to the tentatively included category of secondary hypothetical assumptions, and (C5)-(C6) represent incomplete sentences where the antecedent is missing and has to be recovered. Next, the conditional meanings can be main, primary meanings of the utterances (PM) as in (C1), (C3) and (C5), or additional, secondary meanings as in (C2), (C4) and (C6). These dimensions are indicated by subscripts.

(C1)  $(p \rightarrow q)_{WS, PM}$

‘If it rains, we will stay at home.’

=PM

(C2)  $(p \rightarrow q)_{WS, SM}$

‘If you are hungry, there is food in the fridge.’

=SM

(PM: ‘Help yourself to food from the fridge.’)

(C3)  $(p \rightarrow q)_{\varepsilon, PM}$

‘Touch his iPad and he will scream.’

PM: ‘If you touch his iPad, he will scream.’

?(C4)  $(p \rightarrow q)_{\varepsilon, SM}$

‘Please put on your helmet.’

SM: ‘If you put on your helmet, you will be safer.’

(PM: ‘Please put on your helmet.’)

(C5)  $(p \rightarrow ?)_{\varepsilon, PM}$

‘If you leave the tea on a wobbly table...’

PM: e.g. ‘If you leave the tea on a wobbly table, you will spill it.’<sup>26</sup>

(C6)  $(p \rightarrow ?)_{\varepsilon, SM}$

‘If you’d like to put on your helmet.’

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<sup>26</sup> It is also possible for this sentence to have the primary meaning to the effect ‘Don’t leave your tea on the wobbly table’, depending on the scenario.

SM: 'If you put on your helmet you will be safer.'

(PM: 'Please put your helmet on.')

Let us consider an example of ' $\Sigma + PM$ ', that is (C5). The merger representation for (C5) can now be constructed as in Fig. 4.

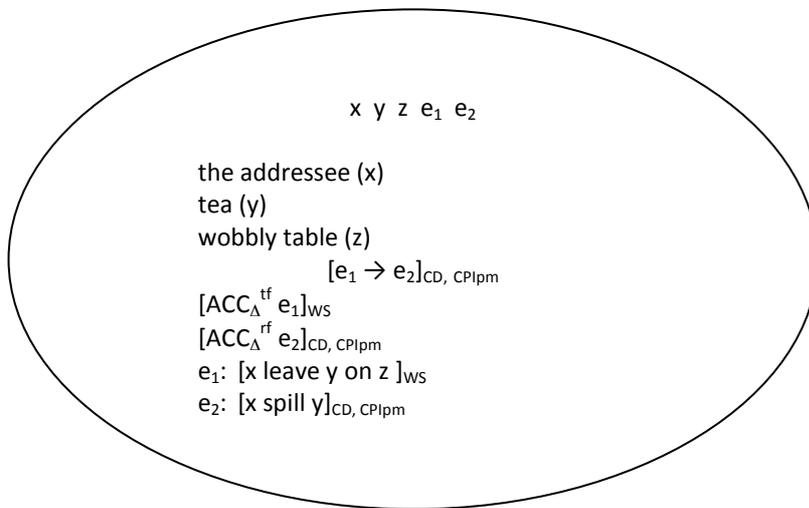


Fig. 4.  $\Sigma$  for (C5):  $p \rightarrow ?_{PM}$  'If you leave the tea on a wobbly table...'

Fig. 5 represents the primary, non-conditional meaning of (C6). The secondary, conditional meaning would be represented in a standard way.

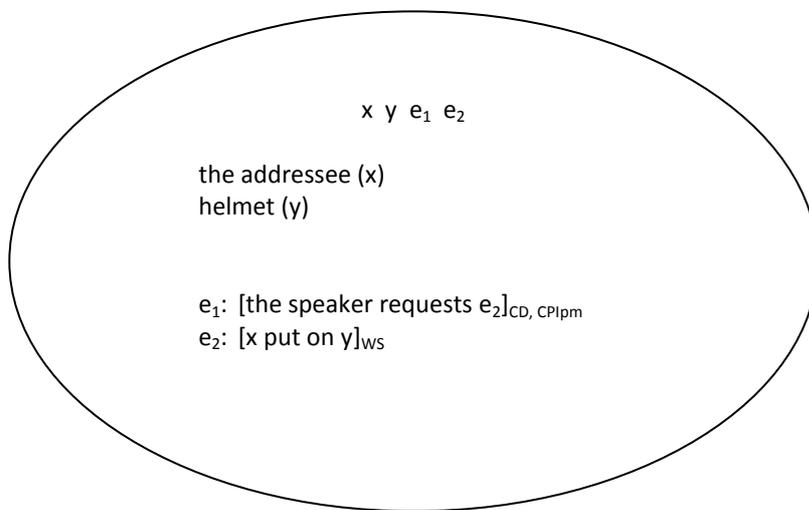


Fig. 5.  $\Sigma$  for the PM of (C6):  $p \rightarrow ?_{SM}$  ‘If you’d like to put on your helmet.’ (PM: ‘Please put on your helmet.’)

Finally, Fig. 6 represents the primary conditional meaning of the non-conditional sentence (C3).

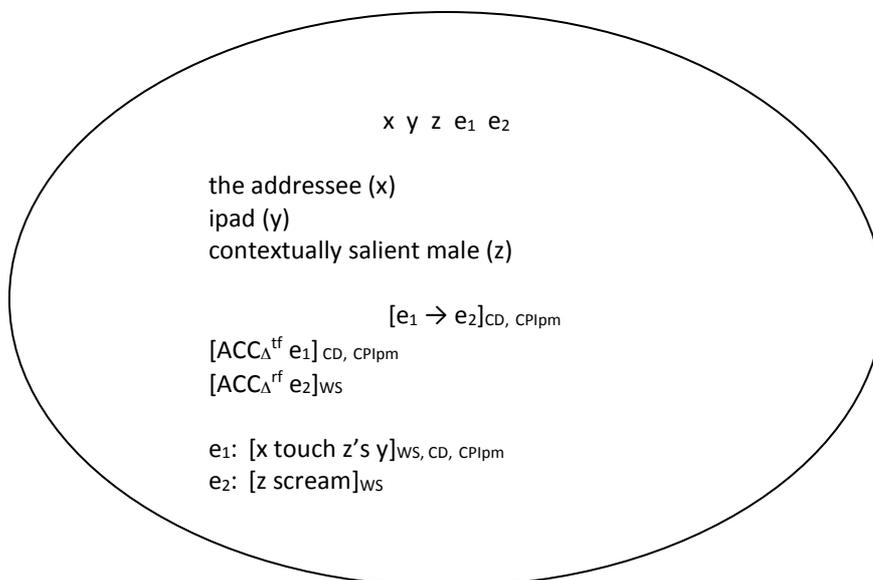


Fig. 6.  $\Sigma$  for the PM of (C3):  $p \rightarrow q$  <sub>s, PM</sub> ‘Touch his iPad and he will scream.’ (PM: ‘If you touch his iPad, he will scream.’)

Other categories are represented in an analogous way.

Finally, in the corpus-based analysis discussed in Section 4 we have also identified various categories of conditionals depending on the semantic properties of the link between the antecedent and the consequent, for example sentences in which the antecedent is used to hedge the propositional content, as in (27), or to hedge the illocutionary force, as in (29), both repeated below.

- (27) If I remember rightly you had jaundice, didn't you? *SIA-028 #051*
- (29) Very short skirt on if you don't mind me saying. *SIA-040 #089*

The next step will be to test DS as regards its ability to represent the semantic (in the sense of the contextualist semantics adopted here) properties of this link. In some cases, the task will be to represent the primary meaning that is not itself conditional but instead, for example, pertains to a speech act of reproaching or reprimanding; in others the primary meaning will

pertain to a conditional structure but the representation of the antecedent will have to reflect its hedging role. But this is a task for a separate project.

## 6. Concluding remarks

We hope to have demonstrated that in order to properly comprehend and properly represent the pragmatic category of conditionals one has to keep one's eyes open for cases where conditional sentences represent non-conditional thoughts, as well as cases where non-conditional sentences have strong, primary conditional meanings. Only when the object of study is conceived broadly and includes various ways of externalizing conditional thought, can we be hopeful of arriving at a comprehensive, explanatorily successful account. We have demonstrated here that adopting a radical contextualist approach to meaning allows one to formally represent conditionality, conceived here as a universal cognitive category. This radical contextualist outlook comes with a rethinking of the principle of compositionality of meaning and reallocating it to an interaction of information about meaning that comes from different aspects of the situation of discourse. In this way we are able to go beyond the syntactic category of conditionals to talk about a conceptual representation of conditionality, which allows us to propose what we call a 'pragmatic category of conditionals': 'pragmatic' in the sense that pragmatics plays a core role in arriving at the truth-conditional representation. We have demonstrated how this composition works in merger representations of the radically contextualist approach of DS for different ways of expressing conditional thought in natural language. In other words, this allows us to hypothesise that the semantics of conditionals is best pursued when conditional thought is adopted as the object of study, where such conditional thoughts constitute the primary or secondary meaning of an utterance that is expressed by a conditional or other sentence form. In short, we hope to have provided arguments for a uniform treatment of conditional thought, irrespective of whether it is expressed overtly or covertly in communication.

Representing conditional meaning of utterances in preference to conditional structures alone comes with some negative consequences in that although the phenomenon appears unified, cognitively plausible and justified to a pragmaticist, it may not appear so to linguists who prefer to divide the subject matter by grammatical structures. But the advantages outweigh the shortcomings in that we are investigating the conceptual category that, as we discussed earlier, has a strong claim to the status of a semantic universal. In this way we are able to include constructions from languages in which conditionality does not correspond to a

syntactic category but instead is realised as an irrealis marker or a polar question. And, as this paper has demonstrated, there are also significant advantages for the analysis of languages that do have a designated conditional structure but in addition use a variety of different means to convey conditional meaning in discourse. Moreover, since formal analyses have demonstrated that the conditional is not a syntactic category in its own right but instead *if*-clauses are adverbial clauses and “[t]he history of the conditional is the story of a syntactic mistake” (Kratzer’s 2012: 106), it is prudent to take this finding further into the pragmatic and cognitive domain and investigate whether the cognitive counterpart of this claim would not simply be a conceptual category of supposition that one has to accept before assessing the proposition dependent on it. And this conceptual link, as we have seen in the pragmatic categories we propose, is best approached from the pragmatic perspective, taking the discourse realization of the conditional thought as the object to be represented. In short, conditional thoughts seem to give rise to a clearly delineable, pragmatic phenomenon that yields to a uniform contextualist semantic analysis.

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