How fake is Fake Past?

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Abstract

Subjunctive conditionals in English and other languages are marked by Past morphology that does not seem to receive its usual temporal interpretation. Much recent work has focused on how this "fake" Past is interpreted and how conditionals with this marking are related to those without. Based in part on hitherto undiscussed data, this paper proposes a semantic account of indicative and subjunctive conditionals which gives them an essentially uniform analysis, distinguishing within subjunctive marking a mix of fake and not-so-fake elements.

1 Introduction

Conditionals have long been a topic of interest in the semantic literature. Kratzer's treatment of *'if'*-clauses as restrictors of modal operators is the dominant approach (Kratzer, 1977, 1979, 1981a,b, 1986, 1991a,b, 2012). It has its roots in philosophical logic (Goodman, 1947; Stalnaker, 1968; Lewis, 1973, 1975, among many others), and for much of its existence it shared with that tradition a view of modals and conditionals as propositional operators, with at best a nodding acknowledgement of the sub-clausal structure of their constituents – especially their temporal and aspectual makeup – as a critical factor in determining and constraining their interpretation. It was only around the turn of the millenium that semanticists working on conditionals began in earnest to pay attention to interactions between temporality and modality below the clause level. Since then, many open questions in this area have been addressed, but many still await conclusive answers.

This chapter addresses one such widely discussed but still unresolved issue: the interpretation of "fake Past" in subjunctive conditionals, is illustrated in (1).

(1) a. If the exam was tomorrow, Jill would be better prepared.
b. If the exam had been tomorrow, Jill would have been better prepared.

Both of (1a,b) are about future events but carry temporal morphology that is normally used for past reference. Iatridou (2000) observed that such a seemingly non-temporal use of Past or Perfect morphology for irrealis or counterfactual marking is rather widespread across languages. The term "fake Past" of "fake Tense" has since established itself for this use. It suggests that this temporal morphology does not have its usual temporal interpretation, but has been coopted as a mood marker of sorts. But there are competing views on the relationship between the ordinary meaning of Past and Perfect and their use in subjunctive marking.

In this chapter I aim to address this issue with an eye towards the ultimate goal of giving a unified theory of indicative and subjunctive conditionals. I start by (briefly and selectively)

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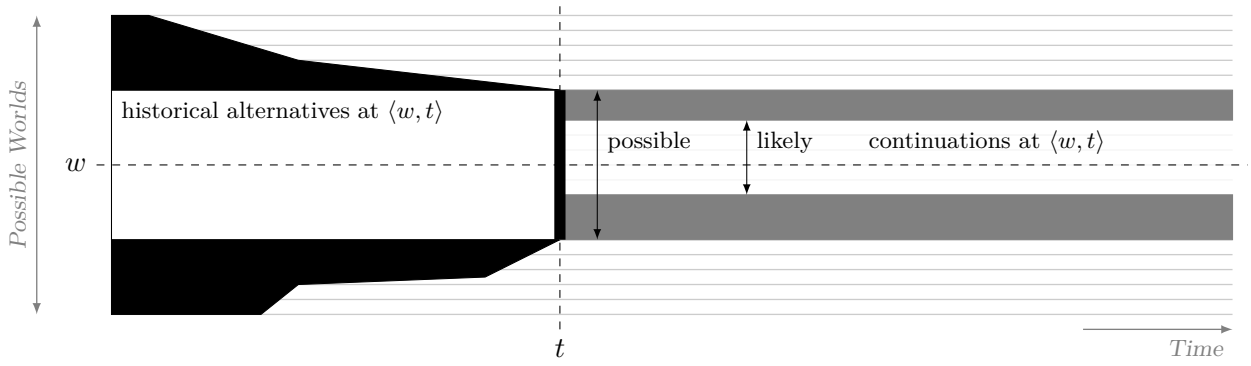

Figure 1: The filter-funnel model of time.

reviewing my views on non-conditional sentences in Section 2 and on indicative conditionals in Section 3. I then turn to subjunctives and the question of how to extend the anlysis to them in Section 4.

2 Preliminaries

I start by introducing some background about the interpretation of English tenses and the interplay between time and modality. Both topics are discussed more extensively elsewhere (Kaufmann, 2005b; Kaufmann et al., 2006). I will keep the discussion informal, emphasizing the data motivating the approach.

2.1 Time and modality

Semantic interactions between temporality and modality often reflect an underlying distinction between an *open* future and a *fixed* past and present. This asymmetry is an extralinguistic property of the world, or in any case of the way we think and talk about it (cf. Reichenbach's 1956 "most obvious properties of time"), but it has epistemic consequences: Although we may be ignorant about the past and present, that ignorance could be resolved at least in principle: the truth is "out there." In contrast, most of the future – except for the outcomes of (quasi-)deterministic processes like the movements of celestial bodies – is shrouded in uncertainty of a kind that cannot be resolved beforehand.

There are two ways to encode this formally: *branching-time* models and what I will call *filter-funnel* models (the "$T \times W$" models of Thomason, 1984). I adopt the latter, schematically shown in Figure 1. The horizontal lines stand for possible worlds, represented as linearly ordered, fully specified "snapshots". Each world is accompanied on its trajectory by a dwindling set of *historical alternatives* – worlds that share the same history up to a point but part ways thereafter. The idea is that the historical alternatives of world w at time t are indistinguishable (by the object language) at all points up to t, but may come apart at later times. In the figure, the white area encloses the worlds that are indistinguishable from each other and w at all times up to and including t. This uniformity is enforced semantically by a condition on admissible valuation of atomic sentences at world-time pairs. We say that a sentence is *settled* at $\langle w, t\rangle$ iff it is true at $\langle w', t\rangle$ for all historical alternatives w' of w at t. Thus sentences whose truth value is determined by facts no later than t, are true at $\langle w, t\rangle$ if and only if they are settled at $\langle w, t\rangle$. Not so for sentences whose truth depends on facts later than t: for those, settledness at $\langle w, t\rangle$ is a distinct and stronger notion than truth

at $\langle w, t\rangle$. Based on the course of history up to t, some continuations may be more likely than others, shown in the picture by the brighter beam into the future. The thick vertical line marks a metaphysical modal background – the set of world-time pairs at which a sentence must be true if it is to count as settled at $\langle w, t\rangle$.

Figure 1 shows a *metaphysical* picture. The model can be extended to also represent the changing belief state of an agent by adding, for each point in time, a set of *doxastic* alternatives – world-time pairs which, in view of the agent's beliefs at $\langle w, t\rangle$, may be the one she inhabits. The limitations on our ability to foresee the future are incorporated by requiring that the set of doxastic alternatives must never "cut across" sets of historical alternatives.[1] To model ignorance about the past and present, the set of doxastic alternatives will typically comprise multiple sets of historical ones.

2.2 Tense and the modal *'woll'*

English has two tenses, Past and Present, illustrated in (2) and (3). I spell out the temporal intepretation informally using the framework of Reichenbach (1947), in terms of the three parameters ***S***peech time, ***R***eference time, and ***E***vent time. For simplicity, I take them to range over instants rather than intervals. S is fixed by the utterance situation, whereas R can vary within a certain range that is subject to both pragmatic factors (contextually inherited restrictions on the time the sentence is *about*) and semantic ones (tense, aspectual properties, and adverbial modifiers). The location of E relative to R is constrained by the aspectual makeup of the sentence as well as pragmatic factors. I will have less to say about this relationship in this chapter, since my focus is on the reference time. Unless otherwise indicated, I assume that $E = R$.

In (2) and (3), the semantic constraints on the location of R relative to S are given on the right in terms of the *earlier than*-relation $<$.[2] R and E coincide because no aspectual operators are involved.

(2)	a.	Lisa was home yesterday.	$R < S$
	b.	Lisa is home now.	$S = R$
	c.	Lisa is home tomorrow.	$S < R$
(3)	a.	Joe cooked dinner yesterday.	$R < S$
	b.	Joe cooks dinner now.	$S < R$
	c.	Joe cooks dinner tomorrow.	$S < R$

The sentences in (2) and (3) are stative and non-stative, respectively. This difference is behind the contrast between (2b) and (3b): only with Present statives can R coincide with S; for Present non-statives, R must lie in the (near) future. Now, whenever this is the case, the sentence states not only that the eventuality in question occurs in the future, but also that this occurrence is already *determined* at S by "some kind of plan, schedule, control, or pattern of events" (Smith, 1991, p. 246). This special connotation has been called the *scheduling reading*; I call it the *Certainty Condition* (CC). It is present in (2c) and in (3b,c), and absent in (2a,b) and (3a).

[1] Formally: if $\langle v, t\rangle$ is a doxastic alternative of $\langle w, t\rangle$ and $\langle u, t\rangle$ is a historical alternative to $\langle v, t\rangle$, then $\langle u, t\rangle$ is also a doxastic alternative to $\langle v, t\rangle$. I assume that the doxastic alternatives of $\langle w, t\rangle$, like its historical ones, all share the same time parameter t.

[2] Here and throughout, the examples are to be read with an *episodic* interpretation in mind – that is, as referring to specific, singular instances of the eventualities in their denotation. This does not remove the habitual reading of (3b) from the purview of the account: Habitual sentences are statives, therefore on this reading (3b) lines up with (2b) in the relevant respects.

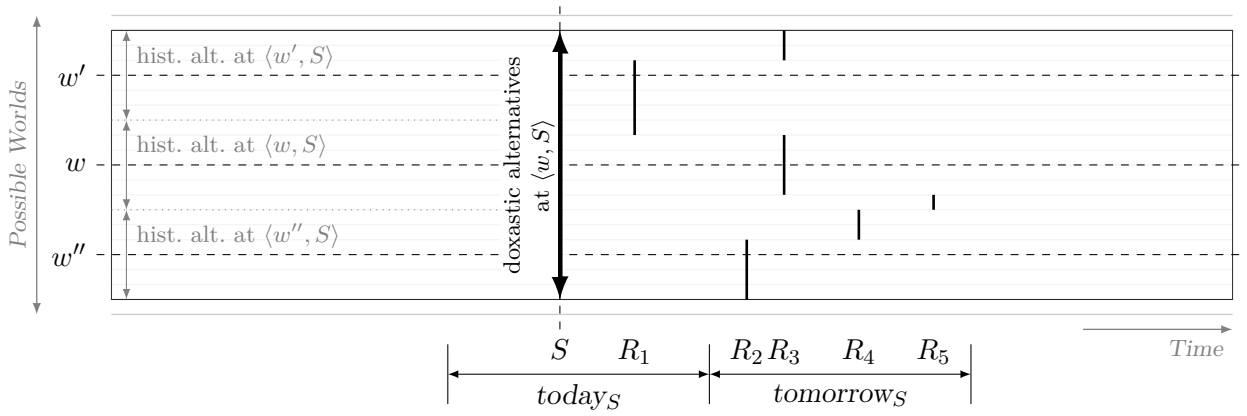

Figure 2: Interpretation of sentence (4): true at $\langle w, S\rangle$ and $\langle w'', S\rangle$; false at $\langle w', S\rangle$.

Thus the presence or absence of the *CC* is directy correlated with future vs. non-future reference. That difference in turn is *not* aligned with the morphological distinction between the tenses;[3] however, it does line up directly with the asymmetry between an open future and a fixed non-future encoded in the filter-funnel model. Kaufmann (2005b); Kaufmann et al. (2006) capitalized on this feature of the model in his semantic analysis: for a tensed clause to be true at $\langle w, t\rangle$, it must be *settled* (not merely true) that there is an eventuality of the right kind in the right temporal relation to t. Formally, this is achieved by assuming the presence of a covert necessity operator accompanying the tense.[4] To illustrate, consider sentence (4) and the model shown in Figure 2.

(4) Joe cooks lunch tomorrow.

The existence of a cooking event in the interval *'tomorrow'* is settled at $\langle w, S\rangle$ and $\langle w'', S\rangle$, thus (4) (at speech time S) is true at those worlds as well as all of their historical alternatives. But (4) is false at $\langle w', S\rangle$ and all of *its* historical alternatives. Thus it is also not *believed* relative to the doxastic modal background comprising those three classes of historical alternatives. However, this doxastic background models an interesting attitude between ignorance and (dis-)belief: the agent believes that the question of (4)'s truth is settled, but does not know which way. Given the way the modalities interact with each other and with time in the model, this attitude is frequently implicated when tensed clauses are interpreted at speech time.[5]

This explains why in English the bare Present with future reference typically gives rise to peculiar connotations.[6] What is not yet settled cannot already be known, so speakers cannot

[3]Some seek to account for the presence or absence of the CC by postulating a Future tense homonymous with the Present (Dowty, 1979; Steedman, 2002). But whatever the other merits of such a move may be, it would do nothing to *explain* the distribution of the CC: The choice between Present and Future would depend solely on the relation between S and R, and we will see that that relation alone is sufficient to account for the facts.

[4]See Kaufmann (2005b) for arguments that the Certainty Condition is part of semantics, not pragmatics.

[5]This last claim rests on certain assumptions between the relative scope of negation and tense, which may not be uniform across all sentences that entail (4)'s falsehood. This issue has not received much attention; but as a tentative observation, it seems that (ia) does and (ib) does not imply that the question of Joe's cooking is settled.

(i) a. Joe does not cook lunch tomorrow.
b. It is not the case that Joe cooks lunch tomorrow.

The attitude described in the text then is the belief that either (4) or (ia) is true. This is not tautological because the logical negation of (4) is (ib) rather than (ia). Thanks to Bridget Copley for raising this issue.

[6]Not all languages have a similar constraint, even when their tense system is otherwise similar to English. For

felicitously present themselves as knowing it. Kaufmann derives from this the ready availability of the "scheduling reading". Under this reading, a sentence like (4), for instance, makes an assertion about a plan at speech time, rather than about the next day's events. Formally, the content of such a plan is represented as a modal background which enters the interpretation of the tensed sentence instead of the set of set historical alternatives. The plan is settled at speech time, hence knowable, even if the events in question are not. See Kaufmann (2005b) for details.[7]

In English, the auxiliary *'will'* can be used for future reference without these connotations. I assume that *'will'* is the Present-tense form of an underlying modal stem *'woll'* whose Past tense form is *'would'* (Abusch, 1988, 1997, 1998; Ogihara, 1995b,a). The modal *'woll'* does not contribute any temporal meaning, but its tense does. The Present imposes the same constraints on S and R as we saw above (the Perfect in (5a) and (6a) adds the requirement that E precede R; elsewhere, E and R coincide as before).

(5)	a.	Lisa will have been home yesterday.	$S = R$
	b.	Lisa will be home now.	$S = R$
	c.	Lisa will be home tomorrow.	$S < R$
(6)	a.	Joe will have cooked dinner yesterday.	$S = R$
	b.	Joe will cook dinner now.	$S < R$
	c.	Joe will cook dinner tomorrow.	$S < R$

In the modal dimension, *'woll'* is an overt counterpart of the covert necessity operator requiring settledness with bare tense. *'Woll'* differs from that operator in that it requires only *weak necessity* (Kratzer, 1981a; Kaufmann et al., 2006; Portner, 2009). The difference is, simply put, that for a sentence like (6c) to be true, *'Joe cook dinner tomorrow'* need be true only at the most normal or stereotypical alternatives.With this attenuated the modal force, statements about the future can more readily be felicitous.[8]

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instance, the bare Present can be used much more freely to talk about the future in German or Japanese, although this use is not altogether unconstrained in either of them. In the present framework, this can be accounted for by assuming that a modal (necessity) operator is always present, but that its strength may be modulated by an ordering source, depending on the language.

[7] Later, and apparently independently, Copley (2008) argued that futurate eventives are derived statives with no future orientation. This idea seems to me to be similar in spirit, if not in detail of implementation, to the one recounted here.

[8] Notice also that with reference to past and present and a metaphysical modal base, sentences with *'will'* are equivalent to their unmodalized counterparts, for in this case truth at the stereotypical alternatives implies truth at all alternatives. Kaufmann (2005b) argues that it is for this reason that (5a,b) and (6a) strongly favor a doxastic reading: Since the modalized form is semantically weaker and morphologically more complex than its non-modalized counterpart, its use is disfavored when both are true, therefore its use implicates that the non-modalized form is false, which (with reference to past or present) can only be the case in a doxastic modal base.

Condoravdi (2002) previously discussed similar cases of modals for which a metaphysical interpretation is only available with future reference. She accounts for this observation in terms of a "diversity condition" on the modal base, requiring that it contain worlds at which the prejacent is true as well as ones at which it is false. With past and present reference, this can only happen with doxastic modal bases. Condoravdi writes this requirement into the truth conditions, rather than treating it pragmatically as I do. The question of the status of the condition is an open one.

3 Indicative conditionals

The standard assumption in linguistics is that the *'if'*-clause restricts the modal background of an operator in the consequent (Lewis, 1975; Kratzer, 1981a).[9] Kratzer assumes that when no overt modal is present, a covert one is inserted for the *'if'*-clause to restrict. Unlike Kratzer, I assume that an operator is always present (either overtly, for instance *'woll'*, or covertly with bare tense). The characteristic semantic property of "indicative" conditionals is that they presuppose that it is possible for the antecedent to be true.[10]

None of this says anything about the *temporal* interpretation. Once this dimension is brought into the picture, new subtleties come into relief. Consider the following simplified paraphrase:

(7) *'If A, C'* is true if and only if *'C'* is true at all (relevant) points in the modal background at which *'A'* is true.

What exactly are *'A'* and *'C'*, and how are they interpreted? In the interest of compositionality it would be desirable to give them the same interpretation in conditionals as in isolation. With this in mind, challenges arise as soon as we apply the rule in (7) by interpreting *'A'* and *'C'* relative to a modal base of the kind outlined above.

3.1 Temporal perspective

In Section 2.1 I argued that the modal background at $\langle w, S\rangle$ consists of world-time pairs $\langle w', S\rangle$, where w' is a historical or doxastic alternative of w at S. All of these points have the same temporal coordinate S (hence it is a vertical line in the above figures). But if this is correct, then the well-formedness of conditionals like (8a,b) is surprising:

(8) a. If Lisa stays at home tomorrow, she met her students later today.
b. If Joe cooks dinner tomorrow, Lisa bought groceries later today.

If the tenses are to have their ordinary temporal meaning, the Past-tensed consequents in (8) cannot be interpreted relative to S. Doing so would result in contradictory constraints on their reference time: The tense would locate it earlier than S, while the adverb *'later today'* would place it later than S. But (8a,b) are consistent.

Intuitively, the consequent is interpreted as "past in the future," that is, by looking back from the (hypothetical) vantage point of *'tomorrow'*. The sentences in (8) show that the shift into the future does not require the auxiliary *'will'* or any other special marking. Instead, Kaufmann (2005b) argues, the shift is effected by the conditional construction itself. In terms of the Reichenbachian framework, we might say that the conditional introduces an additional parameter, a "hypothetical speech time" which I will refer to as S'. It enters the truth conditions not as a set parameter, but as a bound variable ranging over the modal background; see (12) below. The effect is that the background is extended from the vertical line $\langle w', S\rangle$ mentioned earlier to the rectangular area

[9] Like most contemporary approaches to conditionals, this is inspired by the *Ramsey Test* (Ramsey, 1929): a conditional *'if A, C'* is evaluated against a body of information by first updating with A, then evaluating C against the result of the update.

Since I am primarily concerned with temporal interpretation, I will have little to say about what Kratzer's account predicts about the logical properties of conditionals. See Kaufmann and Kaufmann (2015) and references therein.

[10] The label "indicative" is misleading as it stands, in that some conditionals with morphologically indicative antecedents are semantically counterfactual. One way to resolve this problem might be to adjust the morphological terminology. See Schulz (2007) for such a proposal.

$\langle w', S' \rangle$, where w' is a historical or doxastic alternative to w at S as before, and $S \leq S'$; see Figure 3 for a visual display. Thus the quantification is no longer purely modal, but modal-temporal.

A look at some more data shows that the introduction of S' explains not only the shift in temporal perspective for the interpretation of the tenses, but also the presence or absence of the Certainty Condition.

3.2 Scheduling antecedents

A uniform analysis of tensed clauses inside and outside of conditionals would have it that the antecedents of (9) and (10) are the sentences in (2) and (3), repeated on the right.

(9)	a.	If Lisa was home yesterday, Joe cooked dinner.	*[Lisa was home yesterday.]*
	b.	If Lisa is home now, Joe will cook dinner.	*[Lisa is home now.]*
	c.	If Lisa is home tomorrow, Joe will cook dinner.	*[Lisa is home tomorrow.]*
(10)	a.	If Joe cooked dinner yesterday, Lisa ate it.	*[Joe cooked dinner yesterday.]*
	b.	If Joe cooks dinner now, Lisa will eat it.	*[Joe cooks dinner now.]*
	c.	If Joe cooks dinner tomorrow, Lisa will eat it.	*[Joe cooks dinner tomorrow.]*

But there is a difference between, say, *'Joe cooks dinner tomorrow'* in its standalone form and as the antecedent of (10c): on its most natural reading the conditional does not mean "if it is settled (now) that Joe cooks dinner tomorrow …" but rather "if and when turns out true that Joe cooks dinner tomorrow …". The difference between "if …now" and "if and when" is taken care of by the shift of the temporal perspective into the future. But what about the additional change from "settled" to "true" – that is, the fact that the conditional antecedent does not carry the Certainty Condition, despite its future reference? In thinking about this, it is also important to note that the CC is not always absent in future-referring antecedents:

(11)	a.	If Lisa stays at home tomorrow, she will meet her students later today.
	b.	If Joe cooks dinner tomorrow, Lisa will buy groceries later today.

Two properties of (11a,b) conspire to force the CC. First, due to the temporal adverbs the reference time of the consequent must precede that of the antecedent: $R_C < R_A$; and since there is no additional aspectual morphology involved, their event times must stand in the same relation. Second, the consequent has Present tense, thus the temporal perspective cannot be later than R_C. Thus $S' < R_A$ by transitivity. This triggers the CC, just as $S < R$ would in standalone sentences.

In addition to cases like (11a,b), for many future-directed antecedents a scheduling reading is available, though usually not the most prominent one out of context. It can often be brought out by setting up the context in such a way that S' is restricted to the speech time. In (10c), for instance, this reading becomes available if we assume that Joe and Jim take turns with the dinner preparation according to a schedule and, for plausibility, that Lisa likes Joe's cuisine but detests Jim's. A good paraphrase for the intended interpretation in this case would be *'If it is Joe's turn to cook dinner tomorrow…'*. Kaufmann (2005b) calls indicative conditionals with $S = S'$ "non-predictive" and those with $S < S'$ "predictive".

While S' behaves like a speech time with regard to the CC, there are some differences. For instance, recall from Section 2.2 that in standalone sentences the reference time of a non-stative cannot be equal to S. This constraint seems to apply only to the actual speech time S, not to S': the reference time of conditional antecedents can coincide with the temporal perspective. Also, not all temporal expressions are sensitive to the shift in perspective. For instance, deictic temporal frame adverbials like *'today'* and *'tomorrow'* typically remain anchored to S even in conditionals.

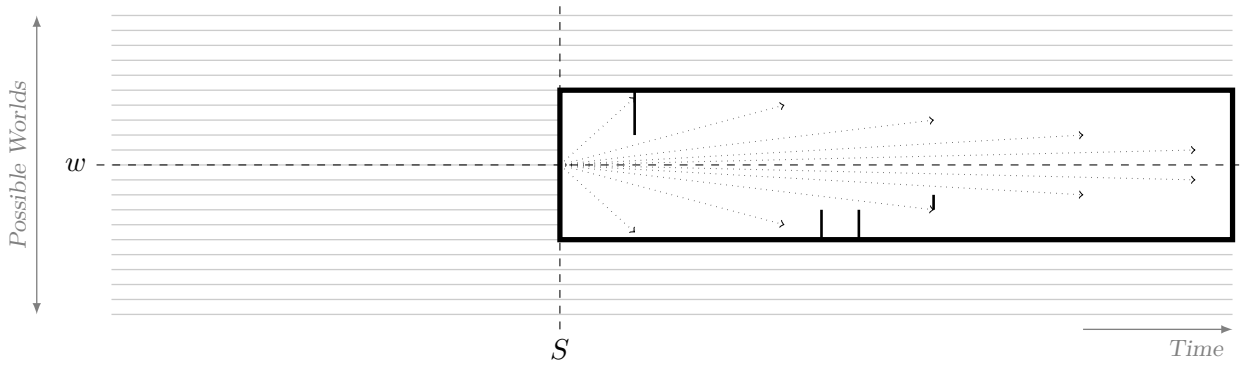

Figure 3: Forward-extended doxastic modal base at $\langle w, S\rangle$. The set of $\langle w', S'\rangle$ that forms the modal background in evaluating conditionals at $\langle w, S\rangle$ is a subset (subject to an ordering source and possibly further contextual parameters) of the rectangle extending to the right.

3.3 Truth conditions

Kaufmann (2005b) leaves the interpretation of the tenses and the schema for the truth conditions in (7) intact and implements the forward shift in temporal perspective by allowing the conditional marker *'if'* to expand the modal base into the future before restricting it. Formally, at $\langle w, S\rangle$ the modal background becomes the set of points $\langle w', S'\rangle$ such that w' is a (metaphysical or doxastic) alternative of w at S and $S \leq S'$. In the above figures the modal background was a vertical line through $\langle w, S\rangle$; now it is "stretched" into a rectangle as in Figure 3. The interpretation proceeds as before, by restricting this area to points at which the antecedent true and evaluating the modal claim relative to those. In this way, both constituents can be evaluated at points in the future of S. To illustrate, consider (10c), repeated here as (12).

(12) If Joe cooks dinner tomorrow, Lisa will eat it.
True at $\langle w, S\rangle$ iff for all stereotypical points $\langle w', S'\rangle$ among the ones at which:

i. w' is an alternative of w at S,

ii. $S \leq S'$, and

iii. it is settled at $\langle w', S'\rangle$ that *'Joe cook dinner'* is true at $\langle w', R_A\rangle$ for some R_A such that $S' \leq R_A$ and R_A is *'tomorrow'*,

there is a time R_C such that $S' \leq R_C$ and *'Lisa eat it'* is true at $\langle w', R_C\rangle$.

Table 1 shows how Kaufmann (2005b) classifies the readings of indicative conditionals. The major dividing line runs between *nonpredictive* and *predictive* conditionals, and the crucial criterion is whether or how far the range of S' extends into the future of S. This depends on contextual restrictions in addition to constraints imposed by the tenses and/or temporal adverbs.

Table 1 around here

3.4 Related work

The observation that indicative conditionals fall into two classes according to the interpretation of their antecedents is not new. Some argue that the most important dividing line through the class of all conditionals places counterfactuals together with predictive indicatives on one side and non-predictive indicatives on the other (Bennett, 1988; Dudman, 1984a,b, 1986, 1989, 1991, 1994, 1998,

		Nonpredictive $S = S'$		*Predictive* $S < S'$	
			$S' \neq R_A$ *Scheduling*		
(9b)	If Lisa is home now, Joe will cook dinner.	✓	*	*	*
(9c)	If Lisa is home tomorrow, Joe will cook dinner.	*	✓	✓	✓
(10b)	If Joe cooks dinner now, Lisa will eat it.	*	✓	?	✓
(10c)	If Joe cooks dinner tomorrow, Lisa will eat it.	*	✓	✓	✓
(8a)	If Lisa stays home tomorrow, she met her students later today.	*	*	✓	✓
(11a)	If Lisa stays home tomorrow, she will meet her students later today.	*	✓	✓	*

Table 1: Available readings for some Present antecedents from the text. The shaded area indicates where the Certainty Condition induces a scheduling reading; these cases comprise both non-predictive and predictive readings. Since *'now'* with non-statives locates the reference time in the *immediate* future, it is hard to tell whether an intermediate reading with $S < S' < R_A$ is available for (10b), hence the '?' in the corresponding cell.

2000; Funk, 1985; Dancygier, 1998). Others maintain that all indicatives are semantically more or less homogeneous and distinct from counterfactuals (Bennett, 1995, 2003; Lewis, 1973; Quirk et al., 1985). But there is little agreement in the formal semantic literature on how to characterize the difference.

Crouch (1993) introduces a distinction between the time at which a sentence is "asserted" and the time at which it is "verified"; the latter may lie in the future. In the logical form, Crouch stipulates that in nonpredictive conditionals both constituents are tensed, whereas in predictive condionals the consequent tense scopes over the antecedent, whose own tense is semantically vacuous. However, since the predictive/non-predictive distinction is not really tied to a difference in linguistic form, but rather to the largely pragmatically determined relationship between S and S', there seems to be no empirical foundation for postulating such a structural ambiguity. Garrett (2001) introduces the "time of enlightenment" as a parameter similar to Crouch's time of verification and my S'.

Schulz (2008) gives a temporal interpretation of predictive indicatives that involves a different allocation of labor between semantics and model theory. A statement about the future has no truth value until its truth value is settled. Thus Schulz's notion of "truth" corresponds to Kaufmann's settledness; in this sense, her account is in effect a supervaluationist version of Kaufmann's. This allows her to push one layer of modal quantification (the necessity operator Kaufmann assumes for all tensed sentences) into the metalanguage. In the interpretation of conditionals, antecedents shift the interpretation to the first time at which their truth value is defined. In terms of empirical predictions, Schulz's account is similar to Kaufmann's, but it has some shortcomings. For instance, the shift into the future invariably stops at the *first* time at which the antecedent is true, which is too restrictive.[11]

[11]Here is a case in point, due to Rumberg and Lauer (2018). Suppose Sue is considering taking the train home from work tomorrow. The train runs every hour on the hour and takes half an hour. Sue does not yet know whether, in the event that she does take the train, she will catch the one at 5pm or the one at 6pm. Then (i) is true, even if she is no more likely to take the earlier train than she is to take the later one.

Romero (2014) postulates the following skeletal meaning of the conditional construction, which contains future operators in both constituent positions:[12]

(13) MODAL [if FUT p] [then FUT q]

But this wrongly predicts that the reference times of the antecedent and consequent are independent of each other, as long as both follow the evaluation time of the modal operator. This is not right, as we saw in those cases lik (11), in which a scheduling reading was forced on a (Present) antecedent whose reference time was later than that of the (Present) consequent.

4 "Fake" Past and "Subjunctive" conditionals

On their typical uses, subjunctive conditionals presuppose that their antecedent is inconsistent with the modal base (i.e., metaphysically or doxastically impossible).[13] Grammatically, English subjunctives have a Past or Past Perfect form on the modal in the consequent, which is echoed in the temporal morphology of the antecedent. This was illustrated in (1) above, repeated here; the modal is *'would'*, the Past-tense form of *'woll'*.

(1) a. If the exam was tomorrow, Jill would be better prepared.
b. If the exam had been tomorrow, Jill would have been better prepared.

The last couple of decades saw significant advances in our understanding of the compositional semantics of subjunctives, at least in English. But open questions remain, and a unified theory of all conditionals is still out of reach. Building on the framework presented in the preceding sections, I am going to sketch what such a unified theory might look like.

4.1 Expanding the modal base

If the antecedent is only true at worlds outside the modal base, the modal base must be adjusted to make them accessible.[14] The Past or Perfect marking on subjunctives, in languages which employ this device, presumably plays a role in this operation. There are two major schools of thought on how this works and how to model it in a framework of modal-temporal interaction such as the filter-funnel model introduced above. On the *Past-as-Modal (PaM)* view, the Past is "redirected" from the *temporal* dimension in which it normally enables reference to different times, to the *modal* dimension, now enabling reference to different possible worlds (James, 1982; Fleischman, 1989; Dancygier, 1998; Iatridou, 2000; Schulz, 2007, 2014; Mackay, 2015). Thus it is non-temporal, hence "fake." On the *Past-as-Past (PaP)* view, antecedent-worlds are accessed from an *earlier* time at which they were still alternatives, in effect "re-running" history from that earlier time. Thus the Past is temporal, in a sense, after all. Variants of this view have supporters in philosophy (Dudman,

(i) If Sue takes the train, she will be home at 5:30.

[12] Romero (2014) is mostly concerned with counterfactual conditionals, to which I turn below; but she justifies the future operators for the constituents explicitly with the forward shifting observed in indicative conditionals (see her Footnote 3).

[13] It is well-known that this does not hold in full generality, but for now I focus on these cases. I briefly turn to "Anderson conditionals", the best-known class of exceptions, below.

[14] Notice that the adjustment at issue here is not the forward extension that was crucial in the analysis of predictive indicatives in the last section. That forward extension was not tied to subjunctive mood or counterfactuality. It is assumed to be available in all conditionals.

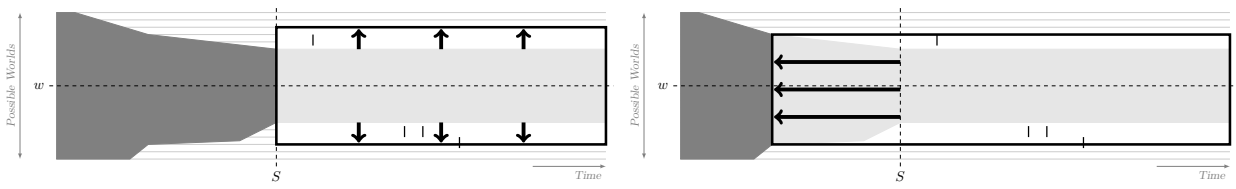

Figure 4: Past-as-Modal (left) and Past-as-Past (right) expansion of the modal base

1984a; Edgington, 1995, and many others), linguistics (Tedeschi, 1981; Kaufmann, 2005a; Ippolito, 2006, 2013; Arregui, 2007), and psychology (Over et al., 2007).[15]

The two options are depicted schematically in Figure 4. Two remarks are in order before we move on. First, while the pictures in Figure 4 resemble the portrayal of historical alternatives in Figure 1 more than that of doxastic one in Figure 2, the PaM/PaP distinction concerns both. Doxastic states have histories, too, and under the idealizing assumption that agents only ever accumulate information without forgetting or revising any (a highly simplistic assumption that is nonetheless commonly made in dynamic semantics, for instance), the temporal changes in doxastic alternatives resemble those in historical ones, the main difference being that information about events and states is not necessarily acquired in the order in which they occur. Moreover, subjunctive conditionals can have doxastic interpretations,[16] which I assume work quite similarly to the objective or metaphysical ones more widely discussed.

Secondly, while an expansion of the modal base is necessary when the antecedent is not true at any accessible worlds, there are uses of Fake Past in which this particular explanation is not (clearly) applicable. Lewis (1973, p. 4) noted that "there are subjunctives pertaining to the future, like [14] that appear to have the truth conditions of indicative conditionals".

(14) If our ground troops entered Laos next year, there would be trouble.

Lewis did not elaborate on the claim that (14) has the truth conditions of an indicative. Presumably he had in mind that its antecedent, while unlikely at the time, could not entirely be ruled out. This would be what has come to be called a *Future-Less-Vivid (FLV)* interpretation (Iatridou, 2000).[17] Assuming that fake Past is generally associated with an expansion of accessibility, it would seem that on this use the set that is being expanded does not include all (historical or doxastic) alternatives, but perhaps only the most prominent (e.g., stereotypical or likely) ones. This has in fact been proposed (Schulz, 2014). The two options schematized in Figure 4 would then apply to the smaller set of prominent worlds. This needs to be sorted out, but as far as the application of the formal mechanism is concerned, examples like (14) do not seem to pose special challenges.

Another case in which Fake Past is not (obviously) justified by a lack of antecedent worlds in the modal base is illustrated by (15) from Anderson (1951).

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

[15] This "re-running" of history does not undo all facts after the relevant time, but only those that are causally affected by the antecedent (Kaufmann, 2005a, see also Over and Cruz, this volume). My description glosses over this important detail because I am mainly concerned with temporal reference.

[16] Although this has been disputed at times in the literature (Veltman, 2005, i.a.), it has been established repeatedly and conclusively (Veltman, 1985; Rott, 1999; Schulz, 2007, among others).

[17] Iatridou attributes the term to English-language grammars of Classical Greek (Fn. 5). She also notes that the form can be used to (emphatically) express ignorance regarding the event in question, a use which she argues is derived from the counterfactual meaning. I do not explore this matter further in this chapter.

This conditional can naturally be used to argue *for* the truth of the antecedent, thus it cannot be said to presuppose that its antecedent is false. However, an expansion of the modal base is nonetheless involved in its interpretation. Intuitively, (15) implies that the observed symptoms would be *explained* by John's having taken arsenic (if he did). Without going too far into how exactly this idea might be fleshed out, suffice it to say that theories of explanation generally assume that the explanandum is a *consequence* of the explanans, in some (specialized and restricted) sense of the term (Hempel and Oppenheim, 1948; Gärdenfors, 1988; Salmon, 1989; Halpern and Pearl, 2005; Halpern, 2016, among many others). To establish this relationship, the truth of the explanandum must, in some way or other, be ignored. This seems to be (at least part of) what drives the expansion of the modal base in cases like (15).

With these caveats in place, I turn to a question on which there is so far no consensus: Which of the two expansion operations is involved in the interpretation of subjunctives?

4.2 Two types of subjunctives

The literature on English recognizes two kinds of subjunctives, *Simple Past (SP)* and *Past Perfect (PP)*:

(16) a. If Lisa were home {now/tomorrow}, Joe would cook dinner. *[SP]*
b. If Lisa had been home {now/tomorrow}, Joe would have cooked dinner. *[PP]*

These terms are due to Ippolito (2003, 2006, 2013), who observed that while both imply that Lisa is not home at the relevant time (*'now'* or *'tomorrow'*), (16a) also implies that her being home is nonetheless "possible" in a certain sense: that Lisa is alive and therefore *could be* home tomorrow. If Lisa is (known to be) dead, (16a) is odd but (16b) is fine. Under Ippolito's analysis, the contrast has to do with the antecedent's *presuppositions* and the time at which they must be or must have been satisfied: at speech time in SP conditionals and at an earlier time in PP conditionals. For examples like (16), Ippolito assumes that *'Lisa is home'* presupposes that Lisa is alive.

Ippolito's observation shed new light to the finer semantic details of conditionals, but I believe her conclusions from contrasts like (16) are not quite correct. The presuppositions of the antecedent surely play a role, but they do not determine the judgments.

4.3 Time of intervention

There are two kinds of counterexamples to Ippolito's account, one of which seems to me to pose a serious challenge. To see this, consider one of her own examples. Her account correctly predicts that (17a) is infelicitous in the given context, whereas (17b) is fine.

(17) *John was training for the Boston Marathon last summer when he unexpectedly died.*
a. #If John ran the Boston Marathon next spring, he would win.[18]
b. If John had run the Boston Marathon next spring, he would have won.

However, the same antecedent, in the same context, gives rise to different judgments when paired with a different consequent:

(18) a. If John ran the Boston Marathon next spring, that would be a miracle.
b. #If John had run the Boston Marathon next spring, that would have been a miracle.

[18]The hash marks ('#') indicate infelicity. The sentences thus marked are neither grammatically ill-formed nor semantically deviant in any way, and they may well be true in the given story (when interpreted at an appropriate time). However, they are ill-fitting within their immediate linguistic context (given above).

Perhaps the felicity of (18a) could be explained away in terms of local accommodation of the presupposition that John is alive, or some such mechanism. However, no such story would suffice to explain the oddness of (18b), as far as I can see.

The explanation I would like to propose can be spelled out formally in a couple of different ways, but the basic intuition is simple. John is dead. His running the marathon next spring requires a departure from reality. Exactly how this departure is to be made is not fully specified: the antecedent can be true for different reasons, in different ways. There are worlds at which John did not die last year, and there are others at which he did die but returns to life miraculously in time to run the marathon. The antecedent is true at all of these worlds (and more). Which ones are more similar to ours? That question may be impossible to answer, but fortunately progress does not depend on having the answer, as Stalnaker (1968) and Lewis (1973, 1979) have long since argued. World similarity is vague and context-dependent, yet there is no problem in pairing a precise semantic theory with this murky parameter. Once the vagueness is resolved (or sufficiently reduced), we can get clear judgments about truth and entailment. Naturally, we would expect those judgments to depend on *how* the vagueness is resolved.

What the above sentences show is that judgments about which form is most suitable to express a counterfactual claim can also depend on how the vagueness is resolved. All antecedent worlds differ from ours. The more similar ones have a great deal of overlap with ours and depart from it only in a minimal way, in some sense of "minimal". One can think of this departure as a *miracle* in the sense of Lewis (1979), or as an *intervention* in the sense of Pearl (2000), and the details of the implementation will depend on this choice. I am partial to the interventionist stance (Kaufmann, 2001, 2005a, 2013, i.a.) and will use that terminology in the following, although I will not introduce more formal apparatus. The idea is simple. The truth or falsehood of the antecedent is jointly determined by a set of causally relevant variables and causal laws regulating the (in)dependencies between them. Reasoning about what would be if the antecedent were true involves a disturbance in this ensemble of relevant facts – suspending causal laws, changing or un-setting the values of variables. In most cases the variables are tied to the goings-on at specific times (exceptions are timeless truths like those of mathematics); given the asymmetry of causal dependence, those times generally precede the antecedent's reference time.[19] But its relation to the speech time can vary freely, and different interventions before or after the speech time may constitute alternative ways to make the required change. The SP/PP distinction depends on the location of the time of departure relative to the speech time.

As additional evidence for this view, consider again the same sentences, this time in a slightly different context.

John was training for the Boston Marathon last summer when he suddenly fell ill. His health deteriorated gradually, as did his prognosis. Finally no hope was left, and he passed away.

(18) a. If John ran the Boston Marathon next spring, that would be a miracle.
b. If John had run the Boston Marathon next spring, that would have been a miracle.

Now (18b) is much improved. The reason is, I submit, that the kind of departure most naturally associated with this context would be a miraculous recovery before his (actual) death, rather than resurrection after death. The crucial difference from the above instance is that this hypothetical

[19] Pearl's (2000) *'do'* operator involves cutting a variable off from all its parents, then setting it to the desired value. In linguistic and cognitive reality, counterfactual hypotheses often do affect the values of the parents (Sloman and Lagnado, 2005; Dehghani et al., 2012); cf. also the notion of "causal ramp" in the philosophical literature (Lewis, 1979; Mårtensson, 1999; Bennett, 2003).

recovery lies in the past. (18a), meanwhile, is also felicitous but invokes a different type of departure, *viz.* resurrection after death and, more pertinently, after the speech time.

Still further evidence for the proposal comes from "ahistorical" counterfactuals whose antecedents are not clearly associated with any particular past time. Consider (19) from Mizuno and Kaufmann (2018).[20]

(19) a. If 9 were even, it would be divisible by 2.
b. #If 9 had been even, it would have been divisible by 2.

Under Ippolito's account, it is not clear what the relevant presuppositions of the antecedent would be, or why those presuppositions should be satisfied at present but not in the past. Moreover, the infelicity of (19b) is of a peculiar sort: the sentence strongly suggests that there is a past time at which the number 9 *became* odd. The sentence feels odd because such an assumption conflicts with what we believe about mathematics. Note, however, that in the right context such a historical reading becomes available and improves the felicity of (19b): just consider a doxastic reading, speculating on what the speaker – a child, say – would have believed if she had learned that Nine was even. Again, it is unclear how these data could be explained in terms of presuppositions and when they are satisfied.

The upshot is that the time of the intervention is the crucial factor in choosing between the SP and PP forms of counterfactuals. Ippolito was right in observing that PP subjunctives do and SP subjunctives do not call for revisiting the past. But what drives this revisit is not the need to check the antecedent's presuppositions. Rather, it is the need to intervene on the actual history at the right time to make room for the truth of the antecedent. This is always the case when the antecedent's reference time lies in the past, so it is not surprising that subjunctives about the past always are PP. But future subjunctives may also require a PP form, namely when the intended intervention lies in the past.

4.4 Time of intervention and temporal perspective

Stepping back to look at the bigger picture, the next question is how the time of intervention is related to the other temporal parameters. This also requires getting clear on the location of S'. Consider the following context.

> **Context.** *John is supposed to attend a conference this weekend. He has been trying to decide on a travel plan. He likes long road trips, so driving across the country is tempting. Today is Wednesday. The conference starts on Friday.*

Recall that indicatives were subject to the constraint that $S \leq S'$ – that is, the temporal perspective must not precede the actual speech time. We will see that this also holds for SP subjunctives. Notice first that the indicatives in (20) are both felicitous, with the (temporal) Past in (20b) enabling reference to the past from the non-past perspective S'.

(20) a. If John leaves on Thursday, he will arrive on Sunday. $S \leq S'; S' \leq R_A; S' \leq R_C$
b. If John left on Tuesday, he will arrive on Friday. $S \leq S'; R_A < S'; S' \leq R_C$

[20] Mizuno and Kaufmann are mainly concerned with the Japanese counterparts of (19a,b). Those data are beyond the scope of this paper; I claim without proof that the Japanese patterns of Past marking on counterfactuals fit into the overall framework proposed here.

The SP counterpart of (20a) is (21a), formed by adding a layer of Past morphology to both constituents. Under a Fake-Past analysis of this element, it marks an intervention. I assume that for SP subjunctives this intervention occurs at speech time S.

(21) a. If John left on Thursday, he would arrive on Sunday. $S = S_I \leq S'; S' \leq R_A; S' \leq R_C$
b. #If John left on Tuesday, he would arrive on Friday.
c. If John had left on Tuesday, he would arrive on Friday. $S = S_I \leq S'; R_A < S'; S' \leq R_C$

The competing hypothesis that the Past is temporal could be spelled out in two ways. One is that it scopes over the entire conditional construction, which then receives a forward-looking interpretation relative to some past time, call it $S_C < S$. This is, roughly, Ippolito's (2013) account (modulo the checking of presuppositions at speech time, which in terms of its role in the theory corresponds to my intervention no earlier than the speech time). Under this assumption, one could maintain that the relevant constraint on temporal perspective was $S_C < S'$ (the SP counterpart to $S \leq S'$ for indicatives). The other way to implement a temporal Past would embed it in the conditional construction, resulting in a past-in-the-future reference to Thursday from a forward-shifted S'. But both of these ideas face a challenge from (21b), which without further stipulations would be expected to be felicitous. The stipulation could, for instance, be that the reference time of the antecedent must not precede the speech time. This is in fact spelled out in terms of "double access" by Romero (2014). But that proposal has related difficulties with PP subjunctives (see below).

In fact, the SP counterpart of (20b) is (21c), whose antecedent has two layers of Past morphology: a temporal past in addition to (and embedded under) its SP marking; this temporal past, just like the one in (20b), is interpreted relative to S', which in turn does not precede the speech time. That such a temporal Past is needed to realize reference to the past indicates that S' cannot precede S.

Thus the SP subjunctives in (21a,c) are interpreted exactly like the indicatives in (20a,b), modulo the Past marking an intervention at S'. But this intervention-marking Past does not have any temporal import. It is fake.

Incidentally, it is possible, though perhaps somewhat marginal, to have a temporal Perfect in the consequent of a conditional like those in (22).[21] They are interpreted as indicated on the right: the relationships between the speech and reference times are the same as those in (20); the only difference is the additional constraint that the event time of the consequent must precede its reference time, yielding a result-state interpretation for the consequent.

(22) a. If John leaves on Thursday, he will have arrived on Sunday.
$S \leq S'; S' \leq R_A; S' \leq R_C; E_C < R_C$
b. If John left on Tuesday, he will have arrived on Friday.
$S \leq S'; R_A < S'; S' \leq R_C; E_C < R_C$

These examples and their SP counterparts do not pose any special challenges. The conditionals in (23a,c) are the SP counterparts of (22a,b), just as (21a,c) were to (20a,b); here as there, the difference is a layer of fake Past.

(23) a. If John left on Thursday, he would have arrived on Sunday.
c. If John had left on Tuesday, he would have arrived on Friday.

PP subjunctives differ from their SP counterparts in having one more layer of Past/Perfect mor-

[21] It would be preferable in this case to change the temporal adverb to *'by Sunday'/'by Friday'*. I refrain from making this change to keep minimal pairs.

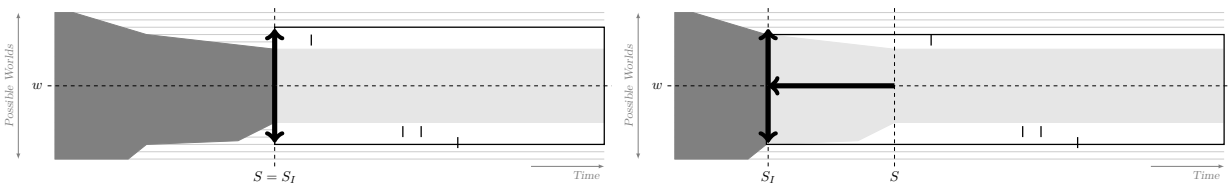

Figure 5: SP (left) and PP (right) expansion of the modal base

phology. This raises anew the question of PaM vs. PaP, for there is no reason to assume *a priori* that this question gets the same answer for both layers of Past. We saw above that PP subjunctives are felicitous whenever the relevant intervention targets eventualities in the past; if there is no such construal, the PP form is infelicitous, as in the "timeless" conditional in (19). This indicates that the second layer of Past is not fake, calling for a Past-as-Past analysis.

So if the PP Past shifts a temporal parameter back, which parameter is it? It could be S', resulting in the condition that $S' < S$. But this is unlikely in view of the fact that PP subjunctives about the future do not get a scheduling reading: the antecedent of (24a) is not correctly paraphrased as *'if it had been settled (in the past) that John leaves on Thursday, …'*. Rather, a better paraphrase is *'if John's leaving on Thursday had not been prevented (by past events) and he had left on Thursday, …'*.

Following this intuition, I assume that what lies in the past is the time of intervention, as shown in (24a). I also assume that (24b) is interpreted in the same way. Thus unlike (20b) and (21c), (24b) does not have a temporal Past in the antecedent.

(24) a. If John had left on Thursday, he would have arrived on Sunday.
$S_I < S; S_I \leq S'; S' \leq R_A; S' \leq R_C$

b. If John had left on Tuesday, he would have arrived on Friday.
$S_I < S; S_I \leq S'; S' \leq R_A; S' \leq R_C$

On this account, the second layer of Past is temporal, although it is not interpreted like the other tenses in the sentence, for it regulates the relationship between S and S_I, not between either of those and the reference times of the constituents. This is in line with the commonly made assumption that this Past takes scope outside of the conditional operator (Ippolito, 2013; Romero, 2014).[22]

In the wider context of recent research on fake Past, the present proposal is aligned with an overall view according to which the PaM/PaP distinction does not distinguish between classes of sentences – that is, neither are all subjunctives summarily PaM or PaP, nor does the distinction track the SP/PP distinction. Instead, the PaM/PaP distinction draws the line between the different layers of Past morphology used to mark English subjunctives: all subjunctives have a layer of fake Past, and PP subjunctives have an additional layer of temporal Past. These layers lend themselves to a PaM analysis and a PaP analysis, respectively. The first part of this view, a PaM analysis for the layer common to SP and PP subjunctives, has been argued for by Schulz (2014) and Mackay (2019). A PaP analysis for the second layer was tentatively suggested by Mackay (2019).[23]

[22]The assumption is that there is only one Past operator, even though in English it is expressed on both constituents. This morphological reflex is ensured via feature-passing mechanisms in the syntax. I am not going to go into the details here. In languages which do not mark tense on the antecedent, such as Japanese, there is only one Past marking in PP subjunctives (Mizuno and Kaufmann, 2018).

[23]This view is is also consistent with cross-linguistic evidence: for instance, Mizuno and Kaufmann (2018) show that the Japanese counterparts of PP subjunctives are marked with a Past for which a PaP analysis is called for, whereas the Japanese counterparts of English subjunctives have no Past marking.

Singling out a Time of Intervention as an additional temporal parameter departs from earlier proposals about the SP/PP distinction. I already discussed Ippolito's in introducing my proposal. I should also mention a refinement of Ippolito's account which seeks to correct some of its problematic predictions. Romero (2014) argues, based on ideas found in Iatridou (2000) and Arregui (2009), that both the future SP (21a) and the past PP (24b) have essentially the same Past-as-Past interpretation, as forward-looking conditionals from the perspective of a past time at which modal accessibility is determined. The difference between them lies solely in the reference times of the constituents relative to the speech time: PP and SP subjunctives are about past and non-past times, respectively. One prediction of this approach is that PP is required when the antecedent refers to the past. This is also predicted by my account, since an antecedent in the past entails a departure in the (still earlier) past. Another prediction of Romero's account is that SP is required when the antecedent does not refer to the past. We already saw in connection with Ippolito's examples that this is incorrect.

4.5 Temporal Past without intervention

I argued above that PP subjunctives involve a layer of temporal Past atop a layer of fake Past; the latter is shared with SP subjunctives. One might wonder whether the outer temporal Past is somehow dependent on there being a modal Past in its scope, or whether it can embed indicatives as well. Pursuing this question pushes against the page limit, but I do want to at least mention one class of examples which suggest that embedding indicatives is an option.

Consider the following series of sentences in the given context, which is a slight modification of the earlier one.

> ***Context.*** *John has been agonizing over his conference travel plans this week. Today is Wednesday. On Monday he was pondering his options.*

(25) a. If he left on Tuesday, he would arrive on Friday.
b. #If he had left on Tuesday, he would { arrive / have arrived } on Friday.

This pattern does not seem to fit well with the earlier discussion: (25a,b) were listed as (21b,c) above but with the opposite felicity judgments. (25a) has the form of an SP subjunctive, similar to (21a), but such a reading cannot be straightforwardly attributed to it as uttered on Wednesday. Moreover, in contrast to typical SPs, nothing is implied about the truth or likelihood of the antecedent, on either Monday or Wednesday. Instead, intuitively (25) relates John's deliberations (on Monday) from the perspective of his inner monologue. Linguistically, this is known as *Free Indirect Speech* (FIS; Eckardt, 2014). (26) lists simple sentences for which an FIS interpretation is either the only option or strongly preferred out of context, due to their peculiar combinations of tenses and temporal adverbs.

(26) a. Tomorrow was Tuesday.
b. He realized now that he would leave on Tuesday.

It is characteristic of FIS that it involves a "local" context whose temporal perspective (also called *origo*) coincides with the time at which the thought or speech in question occurred (here: Monday, the time of the "pondering"). In FIS, certain indexical expressions (e.g., adverbs like *'now'* and *'tomorrow'*) are shifted to the local context, while others remain anchored to the actual context (e.g., the pronoun *'I'*). Crucially, tenses are interpreted relative to the actual speech time, not the

time of the pondering. This makes (25a) a special kind of Past-tense indicative, true (as FIS) on Wednesday if (27) was what John thought on Monday.[24]

(27) If I leave on Tuesday, I will arrive on Friday.

The infelicty of the PP subjunctive (25b) is also peculiar. Speakers agree that it is odd in the given context, but also that it would be the preferred way to state the facts from the speaker's perspective at the speech time (Wednesday), as in (24b).

Usages like (25) have not been discussed widely in the literature on conditionals (however, they are taken up by John Mackay in this volume). I set them aside here because they are not directly relevant: their tense marking is peculiar, but it is not fake Past. Still, discussing it here was helpful, I hope, because it shows that non-SP conditionals can be embedded under a temporal Past, and the result is not a PP conditional.

5 Conclusions

Current work in the semantics of conditionals seeks to ground their considerable interpretational versatility in their morphosyntactic makeup in unified and compositional ways. This goal is still some ways off, but much progress has been made towards a better understanding of their temporal interpretation. This paper offered a unified account of indicative and subjunctive conditionals which captures their semantic variability in terms of a few simple parameters. Further work will have to establish whether and to what extent this approach generalizes to other uses of Fake Past in English and to conditionals across languages.

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[24] It should be noted that speakers find the variant in (ia), with Perfect in the consequent, also acceptable. This looks like a "mixed" form in which an SP antecedent is paired with a PP consequent. However, that is not necessarily the right analysis: the Perfect in the consequent may simply have its ordinary temporal interpretation. On this analysis, just as (25a) is the Past-tense counterpart of (27a), so too is (ia) the Past counterpart of (ib).

(i) a. If he left on Tuesday, he would have arrived on Friday.
b. If he leaves on Tuesday, he will have arrived on Friday.

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