

The Role of the Imperfect in Romance Counterfactuals

Pranav Anand
Dept. of Linguistics
UCSC

panand@ucsc.edu

Valentine Hacquard
Dept. of Linguistics
UMD

hacquard@umd.edu

Abstract

The Imperfect in Romance is used in an array of constructions: progressives, habituais, generics and counterfactual conditionals. The first three share all hallmarks of the Romance Imperfect: they describe something ongoing, in the past, and which requires contextual framing. Counterfactual uses, however, do not, and thus present an important challenge for a unified semantics of the Imperfect. In this paper, we try to explain the presence of the Imperfect in counterfactuals. We take counterfactuals to involve both a Future and an Imperfect (Iatridou 2000), but with the modal contribution of the latter neutralized, such that counterfactuals amount to future conditionals. The Imperfect is not entirely vacuous, however: it contributes presuppositions of framing and anteriority, which lead to counterfactual interpretations.

1 The Puzzle

The Imperfect ('imparfait') of Romance is used in an array of constructions: progressives (1a), habituais (1b), and generics (1c), as the following French sentences illustrate.

- (1) a. Paul traversait la rue, quand il s'est fait écraser.
Paul cross-**impf** the street, when he got crushed.
'Paul was crossing the street, when he got run over.'
- b. Quand elle était jeune, Marie jouait du piano.
When she was-**impf** young, Marie play-**impf** the piano.
'When she was young, Mary used to play the piano.'
- c. A l'époque, les femmes portaient des corsets.
In those days, women wore-**impf** corsets
'In those days, women wore corsets.'

The Imperfect is also found systematically in counterfactual conditionals. Counterfactuals like (2), require Imperfect in their antecedent, and *conditionnel* mood in their consequent, which morphologically looks like the combination of the Future and the Imperfect (Iatridou 2000):

- (2) Si Paul venait, Marie serait heureuse.
 If Paul come-**impf**, Marie be-**COND** happy
'If Paul came, Mary would be happy.'

All of these uses of the Imperfect seem to require an intensional component, and one may thus want to postulate a single underspecified IMPF modal, able to yield these various interpretations by quantifying over different sets of worlds: inertia worlds, generic worlds or counterfactual worlds. A great challenge for such a unified account, however, is that while the progressive, generic, and habitual uses exhibit certain ‘hallmarks’ of the Romance Imperfect, the counterfactual construction doesn’t: Progressives, generics and habituales all describe something ongoing, in the past, and which requires contextual framing (Delfitto and Bertinetto 1995, Bonomi 1997), but counterfactuals have none of these requirements, thus complicating any attempt to unify these uses of the same morphological category.

Our goal in this paper is to attempt a unification of sorts – to explicate why the Imperfect is such a comfortable associate of counterfactual interpretation while being faithful to its lack of the peculiar use conditions of the other interpretations. And thus, despite a desirability of unification, we will propose two different semantic elements responsible for the progressive, habitual, and generic interpretations on the one hand, and counterfactual interpretations on the other: a modal IMPF (morphologically realized as the Imperfect) and a future modal FUT, respectively.

The key semantic assumption in our proposal is that counterfactuals fundamentally involve past metaphysical modality (Condoravdi 2001, Ippolito 2003). We argue that the anteriority and the modality arise from distinct sources. The anteriority we will propose is a consequence of the modal IMPF, which we take to *presuppose* the anteriority and framing hallmarks of the Imperfect (Giorgi and Pianesi 2004). However, counterfactuals additionally involve the future modal FUT, which is responsible for the metaphysical modality that separates counterfactuals from the other uses of the Imperfect. The technical ingredient allowing this chimerical transformation will be Hacquard’s (2006) event-relative modality, under which two stacked modals render the top one vacuous. Thus, IMPF+FUT will be interpreted as FUT, modulo the presuppositions of IMPF, which trigger the counterfactual interpretation (Iatridou 2000, Condoravdi 2001, Ippolito 2003, Arregui 2005).

After reviewing the Hallmarks of the Imperfect in Section 2, we discuss the semantics of the IMPF modal in Section 3. Section 4 demonstrates how this semantics coupled with a future modal and Hacquard’s event relativity leads to a counterfactual interpretation. Section 5 concludes.

2 Hallmarks of the Imperfect in Romance

As discussed by Delfitto and Bertinetto (1995) and Bonomi (1997) among others, the Romance Imperfect has three characteristics (modulo counterfactual uses). First, it has a requirement that the event in question is anterior to the utterance time, as indicated in (1a-c). Second, it exhibits ongoingness or homogeneity, in that the event/habit described must go on in time. Thus, Paul’s piano playing is taken to last throughout an interval surrounding Marie’s arrival in (3a), and similarly his piano playing habit throughout an interval

surrounding ‘those days’ in (3b):

- (3) a. Quand Marie est arrivée, Paul jouait du piano.
When Marie arrived-pfv, Paul played-**impf** of the piano
‘When Marie came in, Paul was playing the piano’
- b. A l’époque, Paul jouait du piano.
In those days, Paul played-**impf** of the piano.
‘In those days, Paul played the piano’ (habitually)’

Finally, it is observed that sentences with the Imperfect are deviant without a salient temporal expression. Thus, (4a) is judged by speakers to be significantly worse than the remaining sentences in (4) which involve, respectively, (b) a temporal adverbial, (c) a *when*-clause, (d) a quantificational adverb, and (e) a contextually salient time interval:

- (4) a. ^{??}Paul jouait du piano.
Paul played-impf the piano
- b. A cinq heures, Paul jouait du piano.
At 5 o’clock, Paul played-impf the piano
- c. Quand Marie est arrivée, Paul jouait du piano.
When Marie arrived, Paul played-impf the piano
- d. A chaque fois que Marie arrivait, Paul jouait du piano.
Every time Marie arrived, Paul played-impf the piano
- e. A: Que faisait Paul à 5 heures? B: Il jouait du piano.
What was Paul doing at 5? B: He played-impf the piano

Of these characteristics, the one that has received the greatest attention in previous literature is the characterization of the ongoingness requirement, though this has often been at the level of the construction in question. Thus, progressives have been analyzed as involving the intellectual descendants of Dowty’s (1979) inertial worlds, continuation branches (Landman 1992) and non-interrupted circumstantial worlds (Portner 1998). This modal quantification yields an ongoing interpretation of the event in the actual world by removing the need for the culmination of the event in the actual world (in particular for accomplishments): what occurs in the actual world is an ongoing event, which is part of a larger completed event in modal worlds in which this event culminates. For instance, the sentence *John was crossing the street when he got hit by a car* describes a crossing in progress in the actual world, which culminates in John having crossed the street those uninterrupted worlds where he doesn’t get hit by a car.

Many accounts of generics and habituals also involve a modal component, for instance normal/ideal worlds (e.g., Krifka et al. 1995). What unifies these analyses is intensional quantification, but it is possible to unify further in the face of their morphological consonance in Romance. It has been argued that progressives and habituals in fact involve the *same* modal element (Cipria and Roberts 2000, Bonomi 1997, Lenci and Bertinetto 2000, Ferreira 2005) and that habituals are instances of generics, differing on requirements for verifying instances (Krifka et al 1995). Thus, there is reason to assume that the same modal element is in question for these three uses. The following section will make our proposal explicit in this regard. What is important, however, is that counterfactuals involve quite a different modal element, be it based on similarity (Lewis 1973, Stalnaker 1968, Arregui 2007) or metaphysical alternatives (Condoravdi 2001, Ippolito 2003).

Note that in both Portner’s original account and Ferreira’s extension, we have an event that occurs in the evaluation world, which we will call the *extensional event* (e_{Ext}), which is part of a larger, completed event or series of events in the modal worlds. This property is what underlies the ongoingness requirement of the Imperfect.

What about the other hallmarks? We will argue that the extensional event e_{Ext} , is in fact the event on which the framing and anteriority requirements of the Imperfect are imposed. In (7) and (8), the event e ’s runtime must both precede the utterance time and be framed by the temporal frame adverb in question. e_{Ext} is thus a (topical) event that needs to be made salient by the context (and can be viewed as a reformulation of an Austinian *topic*).

3.2 Anteriority and Framing Requirements as Presuppositions

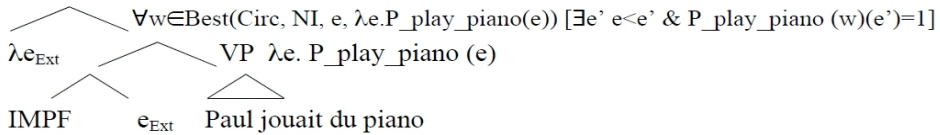
The denotation in (6), being that of progressive, does not yet capture the anteriority or framing requirements of the Imperfect. Following Giorgi and Pianesi (2004), we take those to be presuppositions concerning the extensional event:

- (9) $[[\text{IMPF}]]^{\text{c,g}}$ is defined iff :
- | | |
|----------------------------------------|-------------------------|
| a) $t(e) \subseteq \text{TOP-TIME}(c)$ | framing requirement |
| b) $\text{TOP-TIME}(c) < t_0$ | anteriority requirement |
- If defined, $[[\text{IMPF}]]^{\text{c,g}} = \lambda e \lambda P_{\text{et}} \forall w \in \text{Best}(\text{Circ}, \text{NI}, e, P) [\exists e' e < e' \ \& \ P(w)(e')=1]^2$

In practice, (9) presupposes that the extensional event’s runtime is within a topical interval provided by a context $\text{TOP-TIME}(c)$, which itself must be anterior to the local evaluation time. That the anteriority restriction holds for this interval, and not merely for the event time can be shown by considering intervals that overlap the local evaluation time (here, the utterance time). In the sentence below, *today* is infelicitous because it cannot precede the utterance time, while *this morning* can, and is thus felicitous:

- (10) {Ce matin, *Aujourd’hui}, Paul jouait du piano.
 {this morning, *today} Paul was playing the piano-impf
 ‘This morning/*Today, Paul was playing the piano.’

Given (9), we obtain the following compositional skeleton and denotation for (7):

- (11) 

- (12) $[[(7)]]$ ^{c,g} is **defined iff there is a topical event e contained in a past topical interval**.
 If so, it is true iff in all best circumstantial worlds with least interruptions, e is a subevent of an event e' of Paul playing piano.

Given the definedness conditions in (9), the oddness of (4a) out of the blue results from the topic time of the context not being set. This interval may be set overtly by temporal

2 ε is the type for eventualities.

adjuncts and adverbs of quantification, which serve as temporal topics or update of the topical interval for adverbs).³ However, as demonstrated in (4e) the framing adverb need not always be syntactically present. As it turns out, *nor*, *does in fact*, need to be mentioned in the discourse, so long as it can be retrieved as the lifetime of an entity in the sentence. Take the contrast in (13): (13a) seems felicitous, even in the absence in the discourse of a salient topic, because the extinction of dinosaurs seems to make their lifetime salient. In (13b), however, there is no clear lifetime of corsets or women that can be retrieved, leading to infelicity in the absence of a discourse salient topic time.

- (13) a. Les dinosaures mangiaient de la viande.
The dinosaurs eat-**impf** of the meat.
'*Dinosaurs ate meat.*'
b. ??Les femmes portaient des corsets.
Women wore-**impf** corsets.
'*Women wore corsets.*'

To sum up, we assume a unified account of IMPF, responsible for generic, habitual and progressive uses of the Imperfect. This operator combines with an event (e_{EXT}) and a property of events, and quantifies over uninterrupted circumstantial worlds, accessible from that event (Portner 1998): this derives the ongoingness and intensional nature of the Imperfect. IMPF further imposes felicity conditions on the event it combines with: a framing presupposition requires that the runtime of e be contained in a salient topic time; an anteriority presupposition requires that that this topic time precedes the time of utterance. These two presuppositions are responsible for the framing and past requirements of the Imperfect.

4 The Imperfect and Counterfactuality

Having considered the treatment of canonical uses of the Imperfect, we now move to a discussion of counterfactual uses. As we mentioned at the outset, empirically, counterfactuals show none of the requirements that drove us to the considerations in the previous section. They do not seem to describe past events, they may be said out of the blue, and there is no notion of ongoingness communicated. Thus, in (14) we are talking about possible *future* or *current* events of arriving and writing, not *past*. Furthermore, these events may be understood as completed: a completed (rather than ongoing) arrival would lead Paul to meeting Marie; a completed (rather than merely ongoing) writing event would lead to Marie's happiness:

- (14) a. Si Paul arrivait demain, il rencontrerait Marie.
If Paul arrive-**impf** tomorrow, he met-**COND(fut+impf)** Marie

³ Temporal adjuncts serve to set the topical temporal interval via a monstrous operator (cf. Bittner 2007):

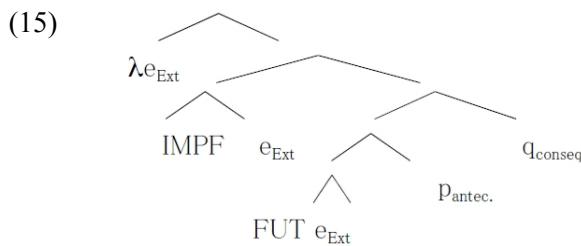
(i) $[[\text{T-Adv XP}]^{c,g}] = [[\text{XP}]^{c',g}]$, where $\text{time}(c') = [[\text{T-Adv}]]^{c,g}$.
 $[[\text{T-Adv}]]^{c,g} = \lambda P_{\chi'} . 1$ iff $P(\chi', t) = 1$
where $\text{TOP-TIME}(\chi')$ determined by T-Adv & χ' exactly χ on other coordinates.

Putting (i) together with (9) yields the presupposition that $t(e) \subseteq \text{TOP-TIME}(c)$, which is now set to the time interval provided by temporal adverb. This is not the only possibility. We could pursue a dynamic approach, wherein IMPF is anaphoric to a salient past interval, either supplied by discourse or sentence-internally.

- 'If Paul arrived tomorrow, he would meet Marie.'*
 b. Si Paul écrivait a Marie, elle serait contente.
 If Paul wrote-**impf** to Marie, she be happy-**COND(fut+impf)**
If Paul wrote to Marie, she would be happy.'

Of course, one explanation for this is that counterfactuals do not involve IMPF, and that the morphology is deceiving us. However, if we assume that the morphology is a manifestation of IMPF, it is unclear why counterfactuals should behave so differently from other uses of the Imperfect.

As mentioned at the outset, we will argue that the culprit in all of these differences is the future modal (FUT), whose morphological exponent is the future morphology lurking inside the conditionnel mood of the consequent (Iatridou 2000). Recall that when introducing IMPF, we made it relative to an event argument, whose position is saturated by the extensional event. We will pursue an account of FUT that treats it also as event relative, along the lines of the event relative modality in Hacquard (2006). It too will thus require an event argument, and we will likewise assume that this position is filled by e_{Ext} . The skeleton of this account is in (15):

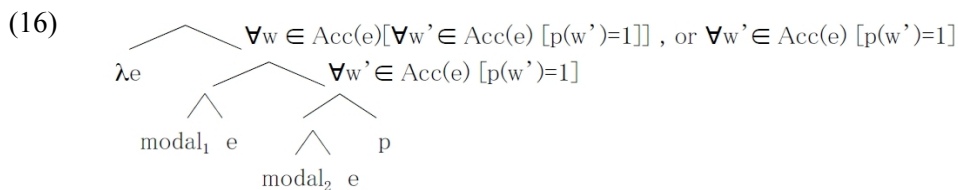


(15) is thus a future conditional, apart from the contribution of IMPF. In the event relative framework, IMPF's modal contribution will disappear under vacuous quantification, while its presuppositions on e_{Ext} will still remain. Thus, (15) will reduce to a future conditional with respect to a past, framed event, which we will show yields a counterfactual interpretation.

4.1 Event-relative modality

Under Hacquard's (2006) event-relative modality framework, modals uniformly select an event argument which serves to characterize the modal base quantified over. In Hintikkan systems, modal bases are determined with respect to individual, temporal, and intensional parameters; in the present system it is argued that all of this information is provided by a particular event. The system imposes the constraint that the event arguments of modals be constrained to be variables bound by the closest event binder (in the spirit of Farkas 1994, Percus 2000). This thus requires that two modals stacked without any intervening material will require their event variables to be co-bound, resulting in vacuous quantification of the higher modal.

To see this, consider (16), which schematizes the situation in question. Both modals uniformly quantify over worlds accessible from the event in question. But given that the lower modal is evaluated with respect to its event argument, not the worlds quantified over by the higher modal, the higher modal binds vacuously into its scope:



Hacquard (2006) argues for instance that this happens with epistemic modals under doxastic attitudes, yielding a quantificationally-variable doxastic attitude.

- (17) Asp λe [dox-att e] [_{CP} ... [modal e] ...]
- John believes that it might be raining.
 - [John believe(e) [_{CP} that [_{ModP} might (e) [_{TP} it is raining]]]]
 - $\exists e[e \text{ in } w \ \& \ \text{Exp}(e,J.) \ \& \ \text{belief}'(e) \ \& \ \forall w' \in \text{DOX}(e):$
 $\exists w'' \in \text{DOX}(e): \exists e'[e' \text{ in } w' \ \& \ \text{rain}(e',w'')]$
 - $\exists e[e \text{ in } w \ \& \ \text{Exp}(e,J.) \ \& \ \text{belief}'(e) \ \& \ \exists w' \in \text{DOX}(e): \exists e'[e' \text{ in } w' \ \& \ \text{rain}(e',w'')]$
 - There is a past belief state of John s.t. it is raining in some world compatible with this belief state.*

As (15) is another instance of this pattern, the modal contribution of IMPF will also be nullified. What differentiates (15) from (16), however, is that, because of its presuppositions, the higher modal IMPF, despite having its modal contribution neutralized, can still impose restrictions on the event argument of the lower modal. We will now investigate the consequences of these restrictions.

4.2 Recipe for Counterfactuality

First, we should specify our assumptions about the future modal FUT and the structure in (15). Following Condoravdi (2001) and Copley (2003), we will assume FUT is a metaphysical modal, which combines with two properties of times. In order to make metaphysical modality event-relative, we construct metaphysical alternatives with respect to an event argument of the modal (we assume future shifting of the temporal *now* following Abusch 1998):

$$(18) \quad [[\text{FUT}]]^{\text{c.g}} = \lambda e \lambda p_{\text{ist}} \lambda q_{\text{ist}}. \forall w \in \text{Best}(\text{Meta}(e) \text{ where } p([t_0, \infty))(w)) [q([t_0, \infty))(w) = 1].$$

As Iatridou (2000) demonstrated, the conditionnel mood displayed in Romance counterfactuals is the morphological spellout of IMPF above FUT. Given (18), we assume that FUT takes two properties of times. These structures we assume have aspectual elements, whose presence is diagnosed by the availability of ongoing interpretations with counterfactuals:

- (19) Si Jean courrait régulièrement, il serait en pleine forme.
 If Jean run-**impf** regularly, he be-**COND** in good form
 ‘If Jean ran regularly, he would be healthy.’

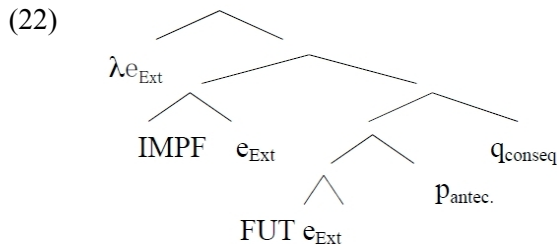
Both antecedent and consequent have obligatory imperfective morphology in counterfactuals:

- (20) a. Si Jean arrivait demain, il rencontrerait Jane.
If Jean arrive-**impf** tomorrow, he met-**COND** Jane
- b. *Si Jean arrivera demain, il rencontrerait Jane.
If Jean arrive-**fut** tomorrow, he met-**COND** Jane
- c. *Si Jean arrivait demain, il rencontrera Jane.
If Jean arrive-**impf** tomorrow, he met-**fut** Jane

Given that IMPF scopes above FUT and its two arguments, we assume that the obligatory presence of Imperfect morphology is the results of a morphological rule which blocks the appearance of the aspect of the embedded clauses (comparable to sequence of tense rules in terms of morphological agreement). Thus, despite appearances, we assume that the antecedent is type-theoretically equivalent to the consequent (i.e., properties of times), and that the mandatory appearance of the Imperfect in the antecedent is mere agreement. While we leave the precise specification of the morphological realization principles to future research, we note that for counterfactuals in Quebecois French the agreement is complete – both antecedent and consequent show conditionnel morphology – suggesting that we are indeed dealing with a morphological issue:

- (21) Si Jean serait là, marie serait heureuse.
if Jean be-**COND** there, Marie be-**COND** happy
'If Jean were there, Marie would be happy.' (Michael Gagnon, p.c.)

These assumptions serve to provide the structure in (22), which is a more detailed version of (15):



Given the denotations for FUT and IMPF as well as the principles governing structures such as (15), (22) has the following denotation:⁴

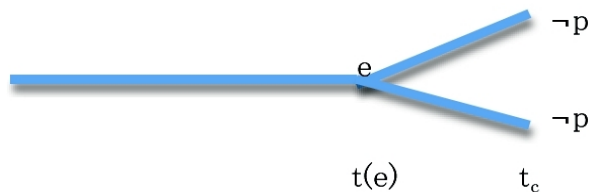
- (23) $[[[(22)]]]^{c,g} = \lambda e_{Ext}: t(e_{Ext}) \subseteq TOP-TIME(c) \ \& \ TOP-TIME(c) < t_0$
 $(\forall w' \in Best(Circ, NI, e_{Ext}, FutP) : \exists e' [e' < e \ \& \ \dots]) \ \text{vacuous}$
 $\forall w \in Best(Meta(e_{Ext}) \text{ where } p([t_0, \infty))(w)) [q([t_0, \infty))(w) = 1].$

4 Note that as it stands IMPF and FUT will not combine because of a type clash. At present, we assume vacuous type-raising of FUT to yield a property of events (as done in the tense literature, e.g., Katz 2001). While this is clearly undesirable, it is unclear to us how to solve this general problem regarding future scoping below modality. Significantly, Copley (2003) manages this by making aspect take temporal property arguments, but this generally produces problems with accomplishments (Landman 1992).

The denotation of (22) is a future conditional with the presuppositions of IMPF and explicit reference to the extensional event.⁵ (24) shows a concrete example:

- (24) a. Si Jean arrivait demain, il rencontrerait Jane.
 If Jean arrive-**impf** tomorrow, he met-**COND** Jane
'If Jean arrived tomorrow, he would meet Jane.'
 b. (24a) defined iff there is a past topical event. If defined, in the best metaphysical alternatives compatible with e where Jean arrives tomorrow, Jean meets Jane.

The question then is what is this e_{Ext} , which, here, determines the set of metaphysical alternatives. Recall that for the canonical Imperfect forms, e_{Ext} was the extensional event part of the P-event in circumstantial worlds. What about counterfactuals? Let's pause for a moment and consider what counterfactual conditionals express. Arregui (2005) makes the intuitively appealing proposal that counterfactuals are *de re* claims about some past time. Hence, a sentence like (24) makes a claim about a particular 'past', such that if this past had led to Jean arriving tomorrow, it would also have led to him meeting Jane. In this vein, we would like to argue that counterfactuals make claims not just about a particular past time, but a particular 'forking' event, following the terminology of Bennett (2003): an event that serves to bifurcate worlds into those where the antecedent holds and those where it does not. Thus, in counterfactuals, we take e_{Ext} to be this very forking event.



For (24), this event is Jean's itinerary-fixing event, i.e., the event that would lead to his arriving tomorrow or at some other time. In a sentence like *'If McCain were President, GM would be bankrupt'*, that forking event is an election event, etc.⁶ Assuming this is the case, (24a) roughly asserts that when one considers the futures of the itinerary fixing in which the antecedent is true, the consequent follows. This is as desired. The remaining task is to demonstrate how one arrives at the forking event given the presuppositions introduced by IMPF. We consider each in turn.

Before we do so, note that while both IMPF and FUT are relative to an extensional event e_{Ext} , which determines the set of worlds they quantify over, what that event is for each is substantially different: for the former, e_{Ext} is actually a subpart of the event that occurs in the modal worlds; for the latter, it is the event that determines what possible futures look like, and hence it is not a proper subpart of the events described in the antecedent and consequent. Thus, while IMPF forces an ongoing event in the actual world, FUT only requires an actual

5 Note that IMPF does additionally make an existential claim about a larger event in circumstantially accessible worlds. However, note that here the property ordering the worlds is trivially true (by vacuity of the type-raised proposition), which renders the condition merely one such that the event is construable as part of a larger event.

6 This proposal does face problems from examples such as *'If gas were \$4/gallon, my plane ticket would have been more expensive.'* (G. Katz, p.c.). Our hunch is that in such cases, counterfactuals are not referring to a particular forking event, but to a family of forking events. We leave these to future research.

event that precedes possible (ongoing or completed) events distinct from the actual event. Because the ongoingness requirement of IMPF follows from its modal contribution, which is neutralized in counterfactuals, and because FUT imposes no such ongoingness requirement, we explain why counterfactuals lack the ongoingness hallmark of the Imperfect. What about the two other hallmarks? How are they avoided or satisfied? Given their presuppositional status, their contribution will not be neutralized, and they should thus impose restrictions on e_{Ext} , i.e., the forking event.

4.3 The Anteriority Presupposition

The anteriority presupposition requires that a felicitous use of a counterfactual conditional be made with respect to an event that occurred in a topical interval that is prior to the evaluation time. As has been noted by Condoravdi (2001), Ippolito (2003), and Arregui (2007) the counterfactual component of counterfactual conditionals results from evaluating metaphysical alternatives *in the past*,⁷ as it is the settledness of the past that yields the contrary-to-fact implicature. To consider an example of Condoravdi's, in a situation where the outcome of an event is uncertain, such as during a baseball game, hazarding a guess about the outcome of the event in progress (i.e., *they might still win the game*) is making a metaphysical claim about one's future; there is no sense of the counter to fact simply because there is no fact as of yet. However, once the game is finished and the outcome is foreclosed, the issue in question is settled. Counterfactual reasoning (i.e., *they might still have won the game*), then, is simply accessing the metaphysical alternatives of the event in question – here the game – before its outcome was settled. In the systems referenced above, it is a temporal element (tense/perfect) that supplies the anteriority requirement on the metaphysical alternatives under consideration. In the event-relative system, anteriority is due to an *event* constrained to be in the *past* which determines metaphysical alternatives.

While this allows us to assimilate the contrary-to-fact implicature to prior work, note that the anteriority presupposition does not otherwise determine the extensional event (that is, it does not fix our sights on the game *per se*). This is true for the canonical Imperfect sentences as well, where, in the spirit of Landman, we saw that the property argument is what constrains the nature of e_{Ext} (it must be merelogically compatible with an event which the property denoted by the VP is true of). We thus need a source comparable to the event property to locate the framing event descriptively. We will argue below that in the case of counterfactuals, it is the framing presupposition which serves to identify the extensional event's characteristics.

4.4 The Framing Presupposition

The framing presupposition enforces the runtime of the extensional event within a contextual topic time. However, conditionals are not temporal adverbs, and hence by assumption do not shift topic time. Nonetheless, recall that we concluded from (13) that the lexical content of DPs could sometimes pragmatically introduce topical intervals (e.g., the lifetime of

7 M. Gagnon (p.c.) points out that it is possible to use counterfactuals even if the fork has not yet occurred (e.g., in (24), if Jean has yet to buy his ticket), contrary to our analysis. While this is true, such examples seem predictive (Kaufmann 2005), it's unclear how they differ from predictive future conditionals, and leave it for future research. See also footnote 5.

dinosaurs). We will suggest that conditional antecedents function much the same way, introducing an interval relevant to the antecedent proposition. Based on the discussion in 4.3, this interval should be that during which the outcome of the event was unsettled, i.e., as the baseball game was in progress. What we have just described is simply the interval under which the forking event was a historical issue, in the sense of Ippolito (2008).

(25) **Historical Issue** (Ippolito 2008)

For any proposition p , world w and time t , p is a historical issue in w at t just in case:

- (i) w is historically as close to w_c as allowed by the fact that the set of worlds accessible from w at t (call this set A) must include both p -worlds and $\neg p$ -worlds;
- (ii) all the worlds w' in A maximally similar to w_c are worlds where $ps(p)$ are true ($ps(p)$ = presuppositions in p).

Historical issues at a time t are properties of times still unsettled at t . While there are many historical issues at any given time, recall that in the present case, we are assuming that the antecedent of the conditional is responsible for honing in on the forking event. How? As Ippolito notes, “if p is **foreclosed** [settled] in w_c , t must be a time immediately before the time when p got foreclosed in w_c .” Thus, for a counterfactual antecedent, which is settled at the evaluation time, the time interval made salient (i.e., $TOP-TIME(c)$) will be one whose right boundary is the settling time of the antecedent. We suggest that the antecedent specifies the left boundary as well, pragmatically setting $TOP-TIME(c)$ to an interval immediately bounding the runtime of the event which settled the antecedent property. In sum, the framing presupposition requires that there is an extensional event during an interval bounding the settling event for the counterfactual antecedent. This is sufficient, we suggest, to identify the settling event itself, which serves as a fork (in the sense of Bennett 2003), producing divergence into p and $\neg p$ worlds, and hence the metaphysical alternatives at the time of the event include both types of worlds.

Thus, in canonical Imperfect cases, the framing presupposition serves to temporally locate an extensional sub-event within some independent temporal interval provided by context (or context shifting of temporal adverbs). In contrast, in counterfactual cases, the framing presupposition individuates a forking event via the temporal interval evoked by the antecedent clause.

5 Conclusion

The goal of this paper was to account for the presence of the Imperfect in Romance counterfactuals, despite counterfactuals lacking the traditional hallmarks of the Imperfect. We argued that counterfactuals involve both a IMPF and a FUT, as suggested by morphology. We claimed that the differences of the counterfactual were due to quantification by a different modal, the metaphysical modal FUT, while the counterfactual component followed from the anteriority and framing presuppositions that IMPF imposes on the event determining the alternatives for FUT. By rendering both IMPF and FUT event relative, we demonstrated that the modal force of IMPF is vacuous in counterfactual contexts, thereby, in effect, removing it from the picture.

Several thorny issues remain. Within Romance, we have not considered what Ippolito (2004) calls Imperfect Conditionals, the necessarily contrary to fact conditions which do not

have future morphology. More generally, we have not ventured to comment on either the cross-linguistic split between languages which use the past for the counterfactual and those which use the imperfect or the fact that (in contrast to our semantics for IMPF), generics tend to morphologically pattern with counterfactuals and not progressives (Iatridou 2000).

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