In search of (im)perfection:
the illusion of counterfactual aspect[*]

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1.   Introduction & Puzzle

It has been widely observed that counterfactual conditionals (CFs) in many languages are marked by *past tense* morphology (Anderson 1951, Hale 1969, Isard 1974, Steele 1975, Lyons 1977, James 1982, Palmer 1986, Fleischman 1989, Iatridou 2000, Van Linden and Verstraete 2008):

(1)   a.   If I **knew** the answer **now**, I would tell you.
        b.   If I **left tomorrow**, I would arrive next week.[1]

In addition to this use of past tense in CFs, CFs in many languages appear to also require *imperfective* morphology, as first noted by Iatridou (2000). This pattern is illustrated by the Greek example below in (2):

(2)   a.   An efevɣes   avrio   θa eftanes   eki tin ali   evδomaδa
              if   leave.PST.**IMPF** tomorrow FUT arrive.PST.IMPF there the other week
              'If you left tomorrow, you would get there next week.'
        b.   *An efiɣes   avrio   θa eftases   tin ali   evδomaδa
              if   leave.PST.**PFV** tomorrow FUT arrive.PST.PFV the other week
                                                           (Iatridou 2000, ex. (21))

To account for the pattern in (2), it has been argued that imperfective morphology is *generally* required in CFs in languages with the relevant aspectual morphology, either because imperfective aspect makes a semantic contribution to CF interpretation (Arregui 2009, Ippolito 2004, Ferreira 2011); or for some non-semantic morphological or syntactic

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[1]This example is technically not a counterfactual conditional, but a **future less vivid** (FLV). These future-oriented conditionals share morphological and syntactic properties with true counterfactuals, and the two will be treated together here.

reason (Iatridou 2000, 2009). In this paper, we show that the apparent link between CFs and imperfective in constructions like (2) is in fact *illusory*.

While previous authors have assumed that languages with an imperfective requirement are a *subset* of those requiring past (following Iatridou's (2000, 2009) typology), we show that the actual typology of aspect in CF constructions that require past is broader, with these languages falling into one of three categories: (1) Languages in which imperfective morphology appears in all CFs (Iatridou 2000, Arregui 2009, Ippolito 2004), (2) Languages in which perfective morphology appears in all CFs (Halpert and Karawani 2012, Karawani and Zeijlstra 2010), and (3) Languages that allow either perfective or imperfective morphology in CFs (Iatridou 2009).

We bring these three patterns together into a unified account of aspect in CFs: CFs in the relevant languages simply require syntactic past marking to convey counterfactuality. In languages where syntactic PAST is formally underspecified for aspect, marking a CF as PAST can result in the occurrence of what looks like aspectual marking, leading to the illusion of CF-linked aspect in these languages. In short, CF-linked aspect in constructions like (2) is a morphological conspiracy, arising from the requirement to mark PAST in CFs.

2. Background: Morphological Marking in CFs

As mentioned in the introduction, many languages mark counterfactual conditionals with morphology that in other contexts conveys purely temporal meanings. Tense and aspect marking in CFs that does not seem to result in its ordinary temporal interpretation has been called "fake" to distinguish it from its typical temporal use (Iatridou 2000).

Fake *past* morphology has been well-documented and widely investigated (Anderson 1951, Hale 1969, Steele 1975, James 1982, Palmer 1986, Fleischman 1989, Iatridou 2000, Van Linden and Verstraete 2008, a.o.). A number of authors have argued that fake past is the *locus* of CF semantics. Some have proposed that what we call "past" simply marks a more abstract category of *remoteness*, which can be either temporal or modal (Steele 1975, Iatridou 2000, Ritter and Wiltschko 2010), while others have proposed that CF meaning can be derived from a purely temporal past (Ippolito 2002, Arregui 2009).

Fake *imperfective* in CFs has also been reported (Iatridou 2000, 2009, Van Linden and Verstraete 2008). In contrast to fake past, however, this fake aspect has received much less attention, and its role in CFs is much less well understood. It has been argued that imperfective occurs in CFs simply because it is a cross-linguistically *default* aspect (Iatridou 2009); because *perfective* is incompatible with CFs (Arregui 2004); or because imperfective (like past) contributes to the semantics of CFs (Ippolito 2004, Ferreira 2011). All of these claims rest on the assumption that when fake aspect occurs in CFs, it is always *imperfective*. Following Iatridou (2000), Arregui and Ippolito assume that in languages that mark CFs with fake past, if any aspect appears in CFs, it is fake imperfective. While Iatridou (2009) observes that some languages (e.g. Russian, Polish) allow *real* aspect in CFs, she maintains that all "fake" in CFs is imperfective.

More recent work on the morphological marking of CFs, however, has shown that the full cross-linguistic typology includes languages with fake *perfective* aspect in CFs. The

goal of this paper is to show that this typology motivates a new approach to aspectual morphology in CFs.

3. Updated typology: 3 patterns of aspect in CFs

The rest of this paper demonstrates that, among languages in which CFs are marked by past morphology, we can distinguish three different patterns of aspect marking: in addition to languages in which imperfective is required in CFs, and those in which real aspect can be expressed, there are languages that appear to require fake *perfective*. This broader typology is laid out in Table 1:

Pattern A: **Greek, Romance, Zulu**
Languages that appear to also require **imperfective**.

Pattern B: **Palestinian Arabic**
Languages that appear to also require **perfective**.

Pattern C: **Russian, Polish**
Languages that allow **real** perfective or imperfective aspect.

Table 1: Broader typology of languages that mark CFs with past

We argue, however, that the contrast between these three patterns is in part an illusion. We propose that all these languages mark CFs only with morphology that reflects syntactically specified PAST. The appearance of fake aspect in addition to fake tense, in patterns A and B, is due to the underspecification of inflectional morphology. Morphemes that are traditionally described as conveying *both* tense and aspect are, we argue, underspecified for aspect: they encode only the presence of syntactic PAST specification. It is only within the broader inflectional system of a language that these PAST morphemes come to be associated with a canonical aspectual value, in contrast to other morphology that is syntactically specified for aspect.

This proposal is naturally framed in any morphological framework that incorporates the idea that mrophology can be featurally underspecified, such as the post-syntactic model of Distributed Morphology (Halle and Marantz 1993, 1994, Harley and Noyer 1999).

In the remainder of this paper, we demonstrate that morphology that ordinarily conveys, for example, "past imperfective", *can* be specified for both tense and aspect, but in some languages may be specified for only one. The apparent requirement for imperfective aspect in CFs in Greek or Romance languages is merely a morphological reflex of the need to realize PAST. What is called "past imperfective" morphology in these languages is syntactically specified only for PAST; its imperfective interpretation arises only in opposition to a true PERFECTIVE morpheme. The reverse will be true for Palestinian Arabic, where

we see an apparent requirement for perfective morphology instead. Finally, in the Slavic languages, we see the appearance of real (interpreted) aspect, which we argue reflects the full specification of both tense and aspect morphology.

This approach depends on the argument that certain inflectional values in some languages are *underspecified*. In the remaining sections we provide arguments for the underspecification relationships required by this account of inflectional marking in CFs.

4. Pattern A: apparent requirement for Imperfective

Work on fake aspect in CFs has focused for the most part on Greek and the Romance languages, whose CFs are marked by fake past imperfective morphology. "Real" tense and aspect is generally suppressed in these languages. Analyses of fake aspect have stemmed from the puzzle of fake imperfective primarily in the context of Greek and Romance languages.

(3) a. Si Pierre partait   demain, il arriverait   là-bas le lendemain
         if Pierre left.PAST.**IMPF** tomorrow he would arrive there the next.day
         'If Pierre left tomorrow, he would arrive there the next day.'
     b. *Si Pierre est parti   demain, il serait arrivé là-bas le lendemain
         if Pierre is left.PAST.**PFV** tomorrow he would-arrive there the next.day

As stated above, we argue that this apparent requirement for imperfective marking arises because "past imperfective" morphology is the only true exponent of PAST features in these languages and that, despite its canonical imperfective interpretation, this morphology is in fact underspecified for aspect. In contrast, what is traditionally called the "past perfective" in these languages in fact expresses only syntactic PERFECTIVE, and not PAST.[2]

	'past imperfective'	'past perfective'
SYNTAX		
TENSE	+PAST	$\emptyset^3$
ASPECT	$\emptyset$	+PERFECTIVE
MORPHOLOGY (French)	*-ait* (*imparfait*)	*être/avoir* + ptcp (*passé composé*)

Table 2: *Feature specifications for Pattern A*

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[2]A plain perfective may receive a past interpretation simply due to incompatibility between perfective and present tense (Dahl 1985), or because a present perfective has an anterior interpretation similar to a present perfective.

[3]The "past perfective" in languages like French is indistinguishable from the "present perfect": both are realized by a present-tense auxiliary followed by a participial main verb. Instead of being unspecified for

This proposal about the appearance of "past imperfective" morphology in CFs depends on the idea that this morphology is specified simply for syntactic PAST. Such a claim about CF morphology must be supported by independent evidence for this particular feature specification in the temporal morphology from elsewhere in the language. Such evidence might involve, for example, the occurrence of "past imperfective" morphology in environments that are neither syntactically nor semantically imperfective.

We propose that the morphological form of past perfect auxiliaries provides exactly this kind of evidence. As illustrated in (4), these auxiliaries appear in the "past imperfective" in French (as well as in other Romance languages):

(4)   **French pluperfects: perfective interpretation, "imperfective" auxiliary**

    a.   Les élèves   avaient   étudié.
        The students have.PAST.**IMPF** study.PTCP
        "The students had studied."

    b.   L'hiver   était   arrivé
        The-winter be.PAST.**IMPF** come.PTCP
        "Winter had come."

Such pluperfect auxiliaries occur in sentences that are, as a whole, in a non-imperfective aspect. The fact that they nonetheless occur with imperfective morphology suggests that *morphological* imperfective comes "for free" with past tense morphology.[4]

4.1   Zulu: "past imperfective" required, perfective possible

Zulu provides another striking example of a Pattern A language. Like Greek and the Romance languages, Zulu marks counterfactual verbs with what is traditionally called a past imperfective morpheme: here, the prefix *be-*. In contrast to these other languages, however, Zulu allows a perfective suffix *-ile* to co-occur with this prefix, in perfectively-interpreted counterfactuals. We argue that this Zulu temporal morphology has the same syntactic specifications seen above in Table 1, but that "real" and "fake" morphology are able to co-occur due to a different organization of this morphology within the verbal stem.

This morphological pattern is demonstrated in (5), where the "fake" prefix *be-* co-occurs with the perfective suffix *-ile* in the antecedent (accommodating the strong perfective preference of the verb 'to sneeze').

(5)   [ukuba **be-**   ngi- thimul- **ile**] be-ngi-zo-dinga   ithishi
        if   PAST.IMPF- 1SG- sneeze- PFV   IMPF-1SG-FUT-need 5tissue

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tense, they might instead be syntactially specified for +PRESENT features. What is crucial to the proposal in this paper, though, is that they *not* be specified for +PAST features.

[4]The literary *passé antéieur* (*les élèves* ***eurent*** *etudié*), and the *passé surcomposé* (*les élèes* ***ont eu*** *etudié*) in French do involve apparently perfective auxiliaries in the past perfect. These forms, however, are limited to temporal adjuncts, and consequently could be said to receive perfective features from a higher syntactic source. The same could not be said of matrix past perfects such as we see in (4), where there is no plausible higher syntactic source for imperfective features.

'If I had sneezed, I would have needed a tissue.'   (Halpert and Karawani 2012, ex. (5))

These two morphemes are normally incompatible, as shown in (6). Though it has some-times been assumed that their incompatibility is due to opposite aspectual specifications, we assume it is instead because it is redundant to mark both PAST and PERFECTIVE when both are interpreted temporally.

(6)   *Be-   ngi- thimul- ile   izolo.
        PAST.IMPF- 1SG- sneeze- PFV yesterday

                    (Halpert and Karawani 2012, ex. (19a))

Following Halpert & Karawani (forthcoming), we assume that the "past imperfective" morpheme in Zulu, as in Greek and Romance, is actually an exponent of PAST alone. At the same time, "past perfective" morphology in Zulu expresses only PERFECTIVE, as shown by the fact that it can occur with a present-tense interpretation when it appears on verbs that describe instantaneous events (Botne and Kerchner 2000).

(7)   ngi- shabal- ele manje
        1SG- disappear- **PFV** now
        "I disappear now."   (Halpert and Karawani 2012, ex. (17a))

The appearance of temporally-interpreted aspectual morphology in Zulu is significant for what it tells us about the broader typology of CF inflection. Some accounts of CF temporal morphology have claimed that the lack of "real" temporal interpretations for CF morphology arises because CFs simply contain no "real" tense and aspect underlyingly (Arregui 2009, Ferreira 2011). Zulu demonstrates, however, that there can be real aspect in CFs. What may distinguish Zulu from Greek and Romance is that PAST and PERFECTIVE do not compete for a single morphological "slot", allowing both to surface on a single verb when semantic considerations do not rule their combination out.

5.   Pattern B: Perfective is a component of Past

The previous section argued that imperfective will appear in past-marked CFs when it is the unspecified member of an aspectual opposition in the past. There is no necessary reason that *imperfective* would be the unspecified aspectual value for PAST morphology, however. In principle, we could instead imagine a feature system like the following:

We predict that a language with such an inflectional system would use "past *perfective*", rather than "imperfective", to mark CFs. It appears that Palestinian Arabic bears out this prediction. As (8) demonstrates, Palestinian Arabic marks CFs with past perfective morphology.

	'past imperfective'	'past perfective'
(SYNTAX)		
TENSE	Ø	+PAST
ASPECT	+IMPERFECTIVE	Ø

Table 3: *Feature specifications for Pattern B*

(8)   [iza **ṭileʕ** halaʔ,] kaan b-iwsal ʕal waʔt la
        if leave.PAST.**PFV** now, be.PAST.PFV B-arrive.IMPF on the-time for
        l-muħaadara
        the-lecture
        'If he left now, he would arrive on time for the lecture.'
        (Halpert and Karawani 2011, ex. (6a))

Palestinian Arabic is like Zulu, however, in being able to express "real" aspect in CFs, in addition to "fake" past. In the imperfectively-interpreted CF in (9), imperfective aspect is morphologically realized on the main verb, while the auxiliary is morphologically "past perfective".

It thus appears that in Palestinian Arabic the extra "slot" for tense/aspect morphology comes via the presence of the auxiliary *kaan*. When it occurs in CFs, this auxiliary is inflected as though it were perfective,[5] but appears to mark PAST alone, while real aspectual morphology occurs on the main verb:

(9)   [iza **kanno** **b-yitlaʕ** bakkeer kul yom,] **kaan** **b-iwsal**
        if be.PAST.PFV B-leave.IMPF early every day, be.PAST.PFV B-arrive.IMPF
        ʕa l-waʔt la l-muħadaraat
        on the-time to the-lectures
        'If he were in the habit of leaving early, he would arrive to the lectures on time.'
        (Halpert and Karawani 2011, ex. (19a))

This ability of the past auxiliary *kaan* alone to mark CFs supports the view that the "past perfective" CF marking in (8) is the exponent of PAST features only.

As in the case of French, we need independent evidence that "past perfective" morphology is in fact underspecified for aspect in Palestinian Arabic to support our account of its presence in CFs. Research on the temporal morphology of multiple varieties of Arabic has indicated a need for just this type of underspecification both in the "imperfective" and "perfective" parts of the paradigm.

We find evidence from several sources that "present imperfective" morphology in Arabic is specified only for imperfective aspect – not for tense. Benmamoun (2000) claims that present imperfective predicates, which receive no independent tense morphology, behave

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[5]Discussed in a footnote in Halpert and Karawani (2012).

as if no tense is present in several varieties of Arabic.[6] Furthermore, Karawani and Zeijlstra (2010) show that imperfective marked verbs alone are incompatible with a past reading:

(10)   b-tuktob   (*mbaareħ)
       B-write.IMPF (*yesterday)
       'She usually writes/will write.'
       (habitual)/(future)   (Halpert and Karawani 2012, ex. (11))

For a past imperfective interpretation, PA requires the past tense auxiliary *kaan* (as shown below in (11)).

On the other hand, there is similar evidence that "past perfective" morphology is specified only for PAST, and unspecified for aspect. Karawani and Zeijlstra (2010) argue that the interpretation of "past perfective" in Palestinian Arabic corresponds to a tense operator alone. In addition, Bjorkman (2011) argues that patterns of auxiliary use in Arabic can be most straightforwardly accounted for if the "past perfective" is syntactically (and morphologically) specified simply as PAST.

Finally, we find the exact reverse of the evidence for imperfective underspecification found with Romance pluperfect auxiliaries. Though Arabic languages have a simple past perfective form of the verb, they generally require an auxiliary to form the past perfective (the reverse of the Romance situation). The form of this auxiliary (*kaan* 'be') is morphologically *perfective*, as illustrated in (11), despite the fact that there is no perfective meaning conveyed in such past imperfective clauses (Halpert and Karawani 2012).

(11)   kaanat   tuktub
       be.PAST.**PFV** write.IMPF
       'She used to write.'   (Halpert and Karawani 2012, ex. (12a))

The tense and aspect opposition in Palestinian Arabic is thus the *reverse* of the one seen in the Pattern A languages. Here it appears to be past *perfective* that reflects only syntactic PAST, and thus is used to mark counterfactuality. By contrast, imperfective morphology is unspecified for tense, and thus cannot be used on its own to mark CFs.

6.   Pattern C: Past is independent of imperfective/perfective

Finally, our proposal allows the possibility that a language has both past imperfective and past perfective morphology, with both fully specified:

We predict that in such a language, either past imperfective or past perfective morphology could be used to mark CFs, and that aspectual morphology would always correspond to the actual aspectual interpretation of the sentence.

Russian provides an example of exactly this type of pattern, allowing full aspectual contrasts in CFs, as seen in (12):

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[6]Specifically, Benmamoun (2000) argues that present imperfective verbs in Arabic do not raise to T, citing as evidence their interaction with negation and preference for SVO word order. Based on the absence of movement to T, Benmamoun argues that present tense features are not syntactically active.

	'past imperfective'	'past perfective'
(SYNTAX)		
TENSE	+PAST	+PAST
ASPECT	+IMPERFECTIVE	+PERFECTIVE

Table 4: *Feature specifications for Pattern C*

(12) a. Esli by Džon umer,   my poxoroni-l-i   by ego   na
          if   SUBJ John die.**PFV.PST** we bury.PFV-PST-PL SUBJ he.ACC on
          gor-e.
          mountain-LOC
          'If John died, we would bury him on the mountain.'
     b. Esli by Džon umira-l,   s   nim   by-l by doktor.
          if   SUBJ John die.**IMPF-PST** with he.INSTR be-PST SUBJ doctor
          'If John were dying, the doctor would be with him.' (Sergei Tatevosov, p.c.)

The illusion of CF aspect disappears here: the [PAST] required by CF can be conveyed by either [PAST IMPERFECTIVE] or [PAST PERFECTIVE], so we only see "real" aspect in CFs.[7]

7.   Discussion and Conclusions

In this paper we have argued that all temporally-marked CFs are marked by syntactic PAST alone. This proposal comes out of our discussion of the cross-linguistic typology of aspect in past-marked CFs: while some languages, such as Russian, do not appear to require particular aspectual values, others appear to require a specific aspect in all CFs.

To account for the apparent requirement for specific aspectual values – either imperfective or perfective – in past-marked CFs, we argued that all of these instances involved past morphology that is simply *underspecified* for any aspectual value. We argued that tense morphology that is underspecified for aspect may nonetheless have a canonical aspectual interpretation based on its opposition to temporal morphology that is specified for aspect.

In languages with underspecified PAST morphemes that typically receive an aspectual interpretation outside of CFs, the PAST morphology used to mark CFs will give the illusion of "fake" aspect marking. When past morphology is fully specified for aspect, as in Russian, only real aspect appears in CFs.

This broadened view of temporal marking in CFs allows us to limit the space of theoretical possibilities for accounting for the use of temporal morphology in CFs. It is incompatible with a number of previous approaches to "fake" inflection. First, Since we have argued that syntactically-specificied IMPERFECTIVE aspect is *not* required to mark CFs in any of these languages, our view is incompatible with any account in which the seman-

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[7]We would argue that this is related to the fact that Slavic marks imperfective/perfective with independent (possibly derivational) morphemes on the verb.

tics of imperfective aspect is required to compose CF meanings (Ippolito 2004, Ferreira 2011). In addition, languages like Zulu, Palestinian Arabic, and Russian all allow perfective morphology (real and fake) to appear in CFs, which rules out accounts that claim that the perfective is generally incompatible with CFs (Arregui 2004). The fact that languages like Zulu and Palestinian Arabic allow real aspect or tense to be marked in CFs, alongside the fake CF-linked inflection, also challenge the (sometimes implicit) view that CFs necessarily have no real tense or aspect (e.g. Ferreira 2011, Arregui 2009).

By contrast, our proposal is in line with the view in the literature that PAST is somehow the locus of CF meaning, but distinguishes between two ways in which this view has been implemented. On our account it is crucial that CFs be syntactically specified for PAST, but as we saw in languages like Greek, Romance, and Zulu, a morpheme that merely conveys a past *interpretation*, such as the so-called "past perfective" morphology that we claim is simply PERFECTIVE, is not sufficient to yield a CF interpretation. Our account is thus most in line with proposals that claim that the past required in CFs reflects a syntactic remoteness operator (either temporal or modal) that is encoded by a specific PAST feature (Steele 1975, Iatridou 2000, Ritter and Wiltschko 2010), rather than proposals that that derive CF meaning from a temporal past *interpretation* (Ippolito 2002, Arregui 2009, Ferreira 2011). These latter accounts do not distinguish between syntactically specified PAST and past tense *interpretation*, and so do not predict that featural underspecification should be relevant.

In conclusion, the focus of this paper has been an expanded typology of temporal marking in CF constructions. We have argued that while the surface patterns generated by this new typology are more diverse and complicated than the previous literature had assumed, they in fact allow us to see a simpler generalization: that syntactic aspect is not required to mark CFs in any of these languages. Rather, any apparent requirement for a specific aspect in CFs in these languages is an artifact of a languages temporal specifications and of the requirement for CF-linked PAST morphology.

References

Anderson, Alan Ross. 1951. A note on subjunctive and counterfactual conditionals. *Analysis* 35-38.

Arregui, Ana. 2004. On the accessibility of possible worlds: the role of tense and aspect. Doctoral Dissertation, University of Massachusetts at Amherst.

Arregui, Ana. 2009. On similarity in counterfactuals. *Linguistics and Philosophy* 32:245–278.

Benmamoun, Elabbas. 2000. *The feature structure of functional categories: A comparative study of Arabic dialects*. Oxford University Press.

Bjorkman, Bronwyn M. 2011. BE-ing Default: the Morphosyntax of Auxiliaries. Doctoral Dissertation, MIT.

Botne, Robert, and Tiffany Kerchner. 2000. Time, tense, and the perfect in zulu. *Afrika und Übersee* Band 83:161–180.

Dahl, Östen. 1985. *Tense and aspect systems*. Oxford: Basil Blackwell.

Ferreira, Marcelo. 2011. Displaced aspect in counterfactuals: Towards a more unified the-

ory of imperfectivity. Presentation.

Fleischman, Suzanne. 1989. Temporal distance: A basic linguistic metaphor. *Studies in language* 13:1–50.

Hale, Kenneth. 1969. Papago /čɨm/. *International Journal of American Linguistics* 35:203.

Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, ed. Ken Hale and Samuel J. Keyser. Cambridge, MA: MIT Press.

Halle, Morris, and Alec Marantz. 1994. Some key features of Distributed Morphology. *MIT Working Papers in Linguistics* 21:275–288.

Halpert, Claire, and Hadil Karawani. 2011. Aspect in counterfactuals from A(rabic) to Z(ulu). Handout, WCCFL 29. University of Arizona, April 22–24, 2011.

Halpert, Claire, and Hadil Karawani. 2012. Aspect in counterfactuals from A(rabic) to Z(ulu). In *Proceedings of WCCFL 29*. Cascadilla Proceedings Project.

Harley, Heidi, and Rolf Noyer. 1999. Distributed morphology. *Glot International* 4:3–9.

Iatridou, Sabine. 2000. The grammatical ingredients of counterfactuality. *Linguistic Inquiry* 31:231–270.

Iatridou, Sabine. 2009. Some thoughts about the imperfective in counterfactuals. Handout.

Ippolito, Michela. 2002. On the Semantic Composition of Subjunctive Conditionals. Ms. MIT/Tübingen University.

Ippolito, Michela. 2004. Imperfect modality. In *The syntax of time*, ed. Jacqueline Guéron and Jacqueline Lecarme, number 37 in Current Studies in Linguistics, 359–387. MIT Press.

Isard, S.D. 1974. What would you have done if...? *Theoretical Linguistics* 1:233–256.

James, Deborah. 1982. Past tense and the hypothetical: A cross-linguistic study. *Studies in language* 6:375–403.

Karawani, Hadil, and Hedde Zeijlstra. 2010. The semantic contribution of the past morpheme in palestinian counterfactuals. Handout, Workshop on Tense and Aspect in Generative Grammar. Lisbon, Portugal, July 1–2, 2010.

Lyons, J. 1977. *Semantics*, volume 2. Cambridge University Press.

Palmer, Frank R. 1986. *Mood and Modality*. Cambridge Textbooks in Linguistics. Cambridge University Press Cambridge.

Ritter, Elizabeth, and Martina Wiltschko. 2010. The composition of INFL: An exploration of tense, tenseless languages and tenseless constructions. LingBuzz/001078, July 2010.

Steele, Susan. 1975. Past and irrealis: Just what does it all mean? *International Journal of American Linguistics* 41:200–217.

Van Linden, An, and Jean-Christophe Verstraete. 2008. The nature and origins of counterfactuality in simple clauses: Cross-linguistic evidence. *Journal of Pragmatics* 40:1865–1895.

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