

THE MORPHOSEMANTICS OF  
WARLPIRI COUNTERFACTUAL  
CONDITIONALS

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Iatridou (2000) presents a morphosemantic theory of counterfactual conditionals in which past tense morphology is crucially implicated. Some subsequent work investigates how counterfactuality is realized in languages that lack tense (see Rackowski 1998 for Tagalog and Nevins 2002 for Chinese). In this squib I address a different issue: the morphosemantics of counterfactuality in Warlpiri, a language that has past morphology, but fails to use it in counterfactuals. I show that despite this *prima facie* challenge, the Warlpiri data provide additional support for Iatridou's theory.

Iatridou (2000) observes for a range of languages that counterfactuals necessarily display past tense morphology, which fails to contribute a past interpretation. This is illustrated in (1) for English future less vivid (FLV) conditionals,<sup>1</sup> present counterfactuals (PresCF), and past counterfactuals (PstCF).

- (1) a. *FLV*  
(I don't think he will take my advice, but . . .)  
If he took my advice, he would get the job.
- b. *PresCF*  
(He isn't friendly, but . . .)  
If he were friendly, I would invite him.
- c. *PstCF*  
(I didn't have the car yesterday, but . . .)  
If I had had the car, I would have gone for a drive in the countryside.

Thus, (1a) receives a future interpretation and (1b) receives a present interpretation, despite the presence of past morphology in each.<sup>2</sup> In addition, (1c) exhibits two layers of past morphologically, but only one layer temporally. Thus, although it has the morphology of the pluperfect, it is not interpreted as a past of the past; instead, it is interpreted as a simple past. Thus, the PstCF also involves past morphology that does not receive its usual past tense interpretation. Iatridou proposes that the past morpheme is better analyzed as an exclusion feature (ExclF)—that is, an underspecified morpheme that results in a past tense interpretation when it ranges over times and a counterfactual

<sup>1</sup> Iatridou argues that the FLV conditional is essentially a future counterfactual, expressing the speaker's belief that the actual world will not become a world in which the proposition contained in the antecedent is true. It thus contrasts with the future neutral vivid (FNV) conditional in which the speaker remains agnostic about the likelihood that the actual world will become a world in which the proposition contained in the antecedent is true.

(i) If John takes the medicine, he will get better.

<sup>2</sup> The FLV and PresCF conditionals exhibit identical morphological elements, being distinguished only by the Aktionsart of the predicate. Telic predicates and stage-level statives result in FLV conditionals whereas individual-level statives and stage-level statives result in PresCF conditionals. See Iatridou 2000 for details.

interpretation when it ranges over worlds. ((2) is adapted from Iatridou 2000:246.)<sup>3</sup>

- (2) ExclF = T(x) excludes C(x)  
*T(x)* stands for ‘‘Topic(*x*)’’ (i.e., ‘‘the *x* that we are talking about’’). *C(x)* stands for ‘‘the *x* that for all we know is the *x* of the speaker.’’
- a. ExclF(t) = the topic time excludes the time of utterance  
 (‘‘the time interval that we are talking about excludes the time interval that for all we know is the time of the speaker’’)
  - b. ExclF(w) = the topic worlds exclude the actual world  
 (‘‘the worlds that we are talking about exclude the worlds that for all we know are the worlds of the speaker’’)

In FLV and PresCF conditionals, then, the past morphology is the realization of ExclF(w), yielding counterfactuality. In PstCF conditionals one layer of past morphology realizes ExclF(w), whereas the other realizes ExclF(t), in order to express both past tense and counterfactuality.

Iatridou further observes that in many languages imperfective aspectual morphology in counterfactuals also fails to receive its usual interpretation; in counterfactuals it is compatible with either a perfective or an imperfective interpretation. Iatridou proposes that ‘‘[w]hen the temporal coordinates of an eventuality are set with respect to the utterance time, aspectual morphology is real; when the temporal coordinates of an eventuality are not set with respect to the utterance time, morphology is always Imp [imperfective]’’ (p. 262).

Turning to Warlpiri, we observe that tense and aspect information appears in two separate positions in the clause: a second-position clitic cluster that also includes subject and object agreement, and a verbal suffix. The clitic position includes the present imperfective morpheme *ka*, (3a), the past imperfective morpheme *lpa*, (3b), and the perfective morpheme  $\emptyset$ , (3c). The suffixal slot on the verb may be filled by a greater range of elements, and the phonological realization of these elements varies according to the conjugation class of the verb. The morphemes relevant here are the nonpast (3a), past (3b), and irrealis (3c).<sup>4</sup>

- (3) a. Ngaju *ka-rna*                      *wangka-mi*.  
           I        *PRES.IMPV-1SG* speak-*NPST*  
           ‘I am speaking.’  
           (Hale, Laughren, and Simpson 1995:1430)

<sup>3</sup> The past interpretation is predicted under the assumption that future is a modality rather than a tense (e.g., Palmer 1986, Kamp and Reyle 1993, Vlach 1993).

<sup>4</sup> All examples are from the Warlpiri Dictionary Project (1993) unless otherwise indicated; glosses are my own.

- b. Wati-*lpa*-lu      ya-*nu*.  
 man-*PST.IMPF*-3PL go-*PST*  
 'The men were leaving.'  
 (Hale, Laughren, and Simpson 1995:1435)
- c. Nama-ju  $\emptyset$     langa-ngka yuka-*ja*    ngarra- $\emptyset$ -*rna*  
 ant-TOP *PERF* ear-LOC    enter-*PST* FUT.C-*PERF*-1SG  
 pali-*yarla*.  
 die-*IRR*  
 'An ant got into my ear and I almost died.'

It is important to notice that the present/past distinction in the imperfective is not interpreted independently of the nonpast/past distinction on the verb. That is, (3b) can be interpreted as having only one layer of past (i.e., 'The men were leaving' rather than 'The men had been leaving'), despite the presence of two morphemes apparently realizing past tense.<sup>5</sup> In the initial clause of (3c), the past suffix on the verb results in a past interpretation without the past imperfective.<sup>6</sup> Thus, I propose that the clitic slot is a purely aspectual slot, *ka* and *lpa* being contextual allomorphs of the imperfective.<sup>7</sup>

- (4) perfective  $\rightarrow \emptyset$   
 imperfective  $\rightarrow ka$  / nonpast  
 imperfective  $\rightarrow lpa$  / past

Turning to counterfactuals, consider (5) and (6), which illustrate the FLV and PresCF conditionals, respectively.

- (5) *FLV*
- a. *Kaji-lpa-npa*                      yujuku kiji-*karla* karru-ngka,  
*NFACT.C-PST.IMPF*-2SG shelter erect-*IRR* creek-LOC  
 kaji-ka-ngku                      ngawarra-rlu    muku-rra  
*NFACT.C-PRES.IMPF*-2SG.OBJ floodwaters-ERG all-THITHER  
 ka-ny*i*.  
 carry-NPST  
 'If you were to erect a shelter in the creek bed, the floodwaters would carry it all away on you.'

<sup>5</sup> In fact, the interpretation involving two layers of past ('The men had been leaving') is also possible, but independent of the past imperfective morphology. This interpretation is discussed below. What is crucial to the discussion here is that the interpretation involving a single layer of past is available.

<sup>6</sup> Below we will see that the converse is not true. The past imperfective may cooccur with the irrealis suffix instead of the past suffix, in which case the sentence is no longer interpreted as past.

<sup>7</sup> The analysis of *lpa* will be sharpened below.

- b. *Kaji-lpa-ji*                      *paji-karla* nyanungu-rlu,  
*NFACT.C-PST.IMPF-1SG.OBJ sting-IRR 3-ERG*  
*kaji-ka-rna-rla*                      marlaja  
*NFACT.C-PRES.IMPF-1SG-DAT because.of*  
*ularula-jarri-mi*    nyanungu-ku-ju  
*swollen-INCH-NPST 3-DAT-TOP*  
*nganayi-ki*                      —waripakarnu-ku.  
*whatchamacallit-DAT —snake-DAT*  
 'If it were to bite me I would swell up as a result, from  
 that little green snake.'

(6) *PresCF*

- a. *Kaji-lpa-mpa*                      yangka                      nyuntu-lku  
*NFACT.C-PST.IMPF-1SG aforementioned you-CS*  
*nyina-karla* jintu, yantarli,                      ngula  
*sit-IRR*                      alone person.at.home then  
*kaji-ka-ngku*                      jamirdi-nyanu-rlu  
*NFACT.C-PRES.IMPF-2SG.OBJ mother's.father-POSS-ERG*  
*payi-rni . . .*  
*ask-NPST*  
 'If you were just sitting alone, at home, then your mother's  
 father might ask you . . .'
- b. *Yapa panu kaji-lpa-lu*                      karri-yarla,  
*person many NFACT.C-PST.IMPF-3PL stand-IRR*  
*kaji-ka-rna*                      raakujarra-yirra-rni yungu-rna  
*NFACT.C-PRES.IMPF-1SG clear-put-NPST CAUS.C-1SG*  
*nya-nyi-rra.*  
*see-NPST-THITHER*  
 'If there were a lot of people, I would clear a passage in  
 order to see.'

The complementizer used to introduce the antecedent of the conditional is the nonfact complementizer *kaji*; this is not the locus of counterfactuality in Warlpiri, however, since *kaji* has a range of uses, including 'if', 'when', 'while', 'until', 'might'.

Turning to the tense/aspect morphology, we discover that the verb bears, not the past suffix as expected, but an irrealis suffix. Thus, Warlpiri is a prima facie counterexample to Iatridou's claim that past morphology is an underspecified morpheme expressing either past tense or counterfactuality.

However, when we consider the aspectual clitics in counterfactuals, we discover that there is indeed reason to posit ExclF in Warlpiri. FLV and PresCF conditionals in Warlpiri show imperfective aspect. Further, as predicted, although imperfective aspect morphology receives an imperfective interpretation outside of conditionals, in counterfactuals it receives either an imperfective interpretation, as seen in the examples in (6), or a perfective interpretation, as in (5) and (7).

- (7) a. *Kaji-lpa-mpa*                      *ya-ntarla-rni*                      *kuyuwangu*,  
 NFACT.C-PST.IMPF-2SG come-IRR-HITHER meat-WITHOUT  
*kapu-∅-rna-ngku*                      *kulu-jarri-∅*.  
 FUT.C-PERF-1SG-2SG.OBJ angry-become-NPST  
 'If you come back without any meat, I'll be angry with you.'
- b. *Murdu-kayi-parnta-rlangu-rlu*                      *manu yangka*  
 thud-loud-having-EXAMPLE-ERG OR                      aforementioned  
*yapa-rlangu-rlu* —                      *kaji-lpa-lu*  
 person-EXAMPLE-ERG — NFACT.C-PST.IMPF-3PL  
*kati-karla wirliya-rlu*,                      *ngula ka-lu*  
 tread.on-IRR foot/track-ERG FACT.C PRES.IMPF-3PL  
*ngarri-rni kulpurpari-lki*.  
 call-NPST squashed-CS  
 'Like if they should run it over with a car or should a person trample it with his foot, then they call it (kulpurpari-ari).'

Crucially, it is the contextual allomorph of the imperfective morpheme in the environment of past tense, *lpa* (see (4)), that is found in these counterfactuals, although there is no past tense in the sentences. Therefore, I propose that *lpa* is the allomorph of the imperfective found in the context of ExclF, ExclF being realized as the past suffix when it ranges over times and the irrealis when it ranges over worlds.

(8) imperfective → *lpa* / ExclF

In contrast to the FLV and PresCF conditionals, future neutral vivid (FNV) conditionals (which do not involve counterfactuality) do not display the *lpa* imperfective allomorph; nor do they display the irrealis verbal suffix.

- (9) a. *Kaji-∅-mpa-ju*                      *marlu*                      *pi-nyi*,  
 NFACT.C-PERF-2SG-1SG.OBJ kangaroo kill-NPST  
*kapu-rna-ngku*                      *maniyi yi-nyi*.  
 FUT.C-1SG-2SG.OBJ money give-NPST  
 'If you kill me a kangaroo, I'll give you some money.'
- b. *Kaji-∅-rna*                      *karnta ma-ni*,  
 NFACT.C-PERF-1SG woman get-NPST  
*kapu-∅-rna-ju*                      *marda-rni*.  
 FUT.C-PERF-1SG-1SG.OBJ keep-NPST  
 'If I get a wife, I will keep her for myself.'

Iatridou shows that aspectual morphology in FNV conditionals is unrestricted and interpreted, as in matrix future clauses. However, no examples of a FNV conditional with imperfective morphology can be found in the Warlpiri dictionary. This appears to be due to a restriction on the future in Warlpiri in general: even when the form in ques-

tion is interpreted as a future imperfective, perfective morphology is required.<sup>8</sup>

- (10) a. Kapi- $\emptyset$ -npa-jana          jarda piki-nguna  
 FUT.C-PERF-2SG-3PL.OBJ sleep in.danger-sleepNPST  
 warrura-kurlu.  
 wrong.skin-WITH  
 'You will be sleeping with your wrong skin wife in danger.'
- b. Kirntangi marnkurrpa-ku kapi- $\emptyset$ -rna  
 month three-DAT          FUT.C-PERF-1SG  
 nyina-mi-yi          yatijarra Lajamanu-rla.  
 be-NPST-DURATIVE north Lajamanu-LOC  
 'I will be staying up north at Lajamanu for three months.'

Indeed, when an imperfective aspect marker is introduced into the FNV sentences in (9), the interpretation is no longer future; instead, it is present epistemic. Compare (9b) with (11).<sup>9</sup>

- (11) *Kaji-ka-rna*          karnta ma-ni.  
 NFACT.C-PRES.IMPF-1SG woman get-NPST  
 'I might/am likely to get a wife.'

Thus, the behavior of the aspectual morphology in Warlpiri FNV conditionals is also that of future sentences in general.

To complete the discussion, consider the Warlpiri past counterfactual construction.

- (12) *PstCF*
- a. Kala *kaji- $\emptyset$ -rna*          rupe marda-*karla*, ngula  
 but NFACT.C-PERF-1SG rope have-IRR then  
 kapi- $\emptyset$ -rna          puuly-marda-karla rupe-ngku-ju.  
 FUT.C-PERF-1SG catch-have IRR rope-ERG-TOP  
 'Well, if I had had a rope, then I would have caught it with the rope.'
- b. *Kaji- $\emptyset$ -rna*          yaku-ma-*ntarla*, ngarra- $\emptyset$ -ju  
 NFACT.C-PERF-1SG bit.by.bit-get-IRR FUT.C-PERF-1SG.OBJ  
 marda kakarda          kati-karla.  
 maybe nape.of.neck step.on-IRR  
 'If I had dug it out, it might have fallen in on my neck.'

<sup>8</sup> Additional evidence for the incompatibility of the future with the expression of imperfective aspect comes from the western dialects of Warlpiri, which have a future morpheme that is suffixed onto the verb. This suffix cannot cooccur with either imperfective aspect clitic.

(i) Ngaka-(*\*lpa/\*ka*)-rna-ngku          nya-ngku.  
 later-(PST.IMPF/PRES.IMPF)-1SG-2SG.OBJ see-FUT  
 'I'll see you later./I'll be seeing you later.'

Thanks to an anonymous reviewer for bringing this to my attention.

<sup>9</sup> I would like to thank an anonymous reviewer for this example.

Unsurprisingly, we find the irrealis suffix ExclF(w) appearing on the verb. However, there is a question about the source of the past tense interpretation of the sentences, as no past tense morpheme appears. Given that past tense and irrealis both appear exclusively in the single verbal suffix position, Warlpiri cannot morphologically mark two ExclF morphemes in a single clause.

The effects of this morphological restriction can also be witnessed in sentences requiring two ExclF(t) morphemes for the two layers of past of the ‘pluperfect’ meaning. The examples in (13) display the ExclF(t) past suffix on the verb without any additional past morphology, yet they are interpreted as pluperfect.

- (13) a. Jampaly-pu-ngu-lpa-lu      wangkinypa,  
           sharp-CAUS-PST-PST.IMPF-3PL stone.axe  
           yangka              kuja- $\emptyset$       munju-jarri-*ja*.  
           aforementioned FACT.C-PERF blunt-INCH-PST  
           ‘They sharpened the stone-axe which had become blunt.’  
       b. Kuja- $\emptyset$ -rnalu              jarrampayi-jarra pu-*ngu*, . . .  
           FACT.C-PERF-1PL.EXCL creek.goanna-DU kill-PST  
           ‘When we had killed the two creek-goannas, . . .’

Importantly, this morphological pattern is ambiguous. In (14) the same combination of the perfective and the past suffix results in a perfective simple past, as opposed to a pluperfect.

- (14) a. Pu-*ngu*- $\emptyset$ -rnalu-nyanu      jarrampayi wiri-jarra.  
           kill-PST-PERF-1PL.EXCL-REFLEX creek.goanna big-DU  
           ‘We killed ourselves two big creek-goannas.’  
       b. Ngari- $\emptyset$ -rna-ngku ngaju jaarl-karri-*ja*.  
           only-PERF-1SG.OBJ I      block-stand-PST  
           ‘I protected you from that trouble.’

Furthermore, sentences with imperfective morphology are also ambiguous between an interpretation with one layer of past and an interpretation with two layers of past.

- (15) Wati-*lpa*-lu      ya-*nu*.  
           man-PST.IMPF-3PL go-PST  
           ‘The men were leaving./The men had been leaving.’

Therefore, it appears that positions for two ExclF features are semantically present in the language; however, one of these positions is morphologically unexpressed. The examples in (12) indicate that it is the lower position that is unexpressed—these are interpreted as irrealis over past, and the morpheme that appears is the irrealis suffix rather than the past.

Thus, the PstCF conditionals in Warlpiri also conform to expectations: they exhibit ExclF(w) to express counterfactuality, the past interpretation being achieved through the means available to the language, in this case a morphologically unexpressed ExclF(t).

In conclusion, Warlpiri counterfactual conditionals support the

morphosemantic analysis of counterfactuality developed by Iatridou (2000). Warlpiri differs from languages previously studied in having distinct morphological realizations for ExclF(t) and ExclF(w); however, allomorphy in the imperfective aspectual clitic supports the existence of an underspecified ExclF(x) morpheme in Warlpiri as well. Furthermore, Warlpiri future less vivid and present counterfactual conditionals display uninterpreted imperfective aspectual morphology, as expected. Finally, Warlpiri lacks the morphological resources to mark two occurrences of ExclF in a single clause; therefore, in past counterfactuals, as in pluperfect constructions, a lower ExclF(t) is semantically present but morphologically unexpressed. An interesting topic for further research would be to investigate the range of strategies used by languages with this morphological limitation.

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