

# The Present Tense Is Fake in Indicative Conditionals: A Solution to Mackay's Problem\*

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COOL Logic Seminar  
Friday September 8, 2017

## 1 Overview

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- A general problem: what's the difference between (1a) and (1b)?

- (1) a. If Hana **is** outside, she **is** smoking a cigarette. (Indicative conditional)  
b. If Hana **was** outside, she **would be** smoking a cigarette. (Subjunctive conditional)

The difference in tense marking seems to produce a subtle difference in meaning.

- A more specific problem: how come this tense marking doesn't seem to be about time?

- (2) a. #Miquel **sang** karaoke **tomorrow**.  
b. If Miquel **sang** karaoke **tomorrow**, he would sing "Golden Slumbers".

⇒ *The problem of fake tense*

- The *past-as-modal (PAM) approach* proposes that fake past has a modal meaning.
- Bad news for the PAM approach: *Mackay's Problem* (Mackay 2015)
- I'm going to offer a new PAM theory which avoids Mackay's Problem.

### Proposal:

- **Present tense triggers a presupposition that there's a contextual  $x$  s.t.  $\phi(x) = 1$ .**
- **Past tense triggers no presupposition whatsoever.**
- **The temporal meaning of past marking arises as an obligatory implicature.**

NB: If you're not familiar with conditionals, just think of them as restricted quantifiers over possible worlds. "If  $\phi$ , then  $\psi$ " is true if  $\psi$  holds in all relevant worlds where  $\phi$  holds. What it means for a world to be relevant is a matter of seemingly perpetual debate.

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\*This presentation is based on ongoing work supervised by Katrin Schulz. Thanks to Katrin and to Dean McHugh for their helpful comments.

## 2 The Plot

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### 2.1 Indicatives vs. subjunctives

- Three central questions about the difference between indicatives and subjunctives.
  1. **What is their difference in meaning?**
  2. **What is their difference in morphological form?**
  3. **How does their difference in meaning follow from their difference in form?**
- Many of you have likely heard lies about questions #1 and #2.
- **Lie #1:** Subjunctive conditionals require their antecedents to be false (i.e. they're *counterfactual*).

This lie seems pretty plausible if you look at the right data:

- (3)
- a. If Dean had arrived at the airport on time, his luggage would have made it on the airplane.  
 $\rightsquigarrow$  Dean did not arrive at the airport on time.
  - b. If Dean arrived at the airport on time, his luggage made it on the airplane.  
 $\not\rightsquigarrow$  Dean did not arrive at the airport on time.

But other examples show that it doesn't hold as a general rule:

- (4) **Anderson Case** (Anderson 1951):  
 If Morwenna had eaten glue, she would be showing exactly the symptoms she's showing.  
 $\rightsquigarrow$  Morwenna didn't eat glue.
- (5) **Peters Pair** (p.c. to Irene Heim, quoted in von Fintel 1998):
- a. Look guys. You gotta admit this. If two gunmen **had** shot Kennedy, then two guns **would have been** found. So let's find out how many were in fact found. Perhaps that's going to get us somewhere.
  - b. Look guys. You gotta admit this. If two gunmen **shot** Kennedy, then two guns **were** found. So let's find out how many were in fact found. Perhaps that's going to get us somewhere.

- **Lie #2:** Subjunctive conditionals are marked with subjunctive mood.<sup>1</sup>

There's really nothing plausible about this lie. Arguments from Iatridou (2000):

1. Many languages lack a subjunctive form altogether (e.g. Danish, Dutch)
2. Many that do have a subjunctive don't use it in subjunctive conditionals (e.g. French, Swahili, all Indo-Aryan languages that have a subjunctive).
3. Languages with a subjunctive use it in subjunctive conditionals only if there is a specifically past subjunctive form.
4. If a language loses its past subjunctive form, subjunctive conditionals switch to past indicative, not present subjunctive.

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<sup>1</sup>If this statement sounds contradictory to you, you're not alone. Iatridou and von Fintel (2016) suggest replacing the term *subjunctive* with *X-Marked* ('extra-marking') and *indicative* with *O-Marked* ('ordinary-marking'). I'm not using these terms in this presentation for simplicity, but I use them in the paper version.

## 2.2 The problem of fake tense

- What are the true answers to questions #1, #2, and #3?
  - Question #1: Quantificational restrictions of some sort (details are unclear)
  - Question #2: Subjunctive conditionals bear extra past tense marking
  - Question #3: Nobody knows. This is the focus of the present work.
- The trouble with #3: **how can tense marking determine quantificational restrictions?**
- An observation: past tense in subjunctive conditionals is compatible with nonpast adverbials.

- (6) a. \*Ian **was** drunk **now**.  
 b. If Ian **was** drunk **now**, he would be louder.

⇒ **The problem of fake tense: what's the contribution of past in sentences like (6b)?**

## 2.3 The past-as-modal solution (to the problem of fake tense)

- Two approaches to solving the problem of fake tense.
  1. *Past-as-modal (PAM) approach*: fake past has a modal rather than a temporal reading
  2. *Past-as-past approach*: fake past is real past scoping in an unusual position
- Today, we're only gonna talk about the *past-as-modal* approach.
- **A PAM theory: Iatridou (2000), which proposes that past contributes the content in (7)**

- (7) ***Topic(x)* excludes *Context(x)***

***x* is a time ⇒ topic times exclude utterance time (i.e. now)**

***x* is a world ⇒ topic worlds exclude utterance worlds (i.e. epistemically accessible worlds)**

- Schulz (2014): a wonderful presuppositional theory playing on the fact that both epistemic and temporal domains contain an ordering (details omitted for sake of time)

## 2.4 Mackay's Problem (for the past-as-modal solution to the problem of fake tense)

- Existing PAM theories **predict that subjunctives never quantify over the actual world.**
- Mackay (2015) pointed out that some subjunctive conditionals actually do:

- (8) a. If Morwenna had eaten glue, things wouldn't be exactly as they actually are.  
 b. If Morwenna had eaten glue, everything would be exactly as it actually is.

- Empirically, **these sentences are contingent.**
  - Situation #1: Morwenna ate glue and is showing typical symptoms.  
 ⇒ (8a) is false and (8b) is true.
  - Situation #2: Morwenna did not eat glue.  
 ⇒ (8a) is true and (8b) is false.

- The predictions of Iatridou (2000), spelled out:

Fake past in (8) excludes all worlds where things are exactly as they actually are, leaving only those where something or other is different.

⇒ **(8a) is predicted to be vacuously true and (8b) vacuously false!**

### 3 A Mackay-Resistant Past-as-Modal Theory

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#### 3.1 The proposal

- To solve Mackay's Problem, I propose the PAM theory shown in (9).

- (9) a. **Present tense (general)**: presupposition that  $\exists x \in \mathcal{D}_\alpha$  such that  $x \in C_\alpha$  and  $\phi(x) = 1$   
 b. **Past tense (general)**: no presupposition

- When  $x$  is a world, we get what's shown in (10).

- (10) a. Present tense (modal): presupposition that  $\diamond\phi$   
 b. Past tense (modal): no presupposition

**Good news: (10) is just the proposal made by Leahy (2017) for independent reasons!**

- When  $x$  is a time, we get what's shown in (11).

- (11) a. Present tense (temporal): presupposition that  $\phi$  holds at utterance time  
 b. Past tense (temporal): no presupposition

**Bad news: (11) is pretty different from standard thinking. This will need some defending.**

#### 3.2 How this solves Mackay's Problem

- **Since past contributes no presupposition, this theory predicts no presupposition failure if a subjunctive conditional quantifies over actual world.**
- A potential worry: doesn't this theory predict exclusion of the actual world as an *implicature*?

– *Implicature*: an inference based on alternative utterances the speaker could have made

- (12) Saul sometimes dreams about Cookie Monster.  
 $\rightsquigarrow$  Saul doesn't always dream about Cookie Monster.

Weak statement  $\rightsquigarrow$  speaker wasn't in a position to say stronger statement

– Implicatures arise from presuppositions too:

- (13) If Dean had arrived at the airport early, his luggage would have made it on the plane.  
 $\rightsquigarrow$  Dean did not arrive at the airport on time.

– **Since implicatures arise from competition between a stronger and weaker form, they disappear when the stronger form is blocked.**

– Leahy (2017) uses this fact to explain Anderson Cases (of which Mackay Sentences are a subcase)

- (14) a. #If Morwenna ate glue, things are exactly as they actually are.  
 b. If Morwenna had eaten glue, things would be exactly as they actually are.  
 $\not\rightsquigarrow$  Morwenna didn't eat glue.

- The upshot is that this theory allows subjunctive conditionals to quantify over the actual world!  
 $\implies$  **Problem solved!**

## 4 Theories Of Tense May Be More Adequate Than They Appear

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### 4.1 A theory of tense

- There's no point in solving Mackay's Problem unless your proposal gives a decent theory of tense.
- Goal (for today): (i) locating past sentences in the past and (ii) present tense sentences in the present
- For present tense, this is pretty easy:

- (15)
- Sentence: Grzegorz is walking his octopus.
  - Assertion:  $walk(Greg)(Octey)(t) = 1$
  - Presupposition:  $t$  is utterance time

- For past tense, this is not easy:

- (16)
- Sentence: Grzegorz was walking his octopus.
  - Assertion:  $walk(Greg)(Octey)(t) = 1$
  - Presupposition:  $\emptyset$

- An idea: **derive the pastness of temporal past as an implicature**

Sketch of a derivation:

1. The speaker could have said (15a) or (16a).
2. Since (15a) has stronger presuppositions, the speaker would have said it if they could.
3. Thus, something blocked the speaker from saying (15a).
4. The most plausible explanation is that (15a)'s presupposition is false.
5. This means that  $\nexists t \in C_i$  s.t.  $walk(Greg)(Octey)(t) = 1$ .
6. Yet we know from the assertion of (16a) that  $walk(Greg)(Octey)(t) = 1$  for some  $t$ .
7. Thus, it must be that  $walk(Greg)(Octey)(t) = 1$  for some  $t$  such that  $t \notin C_i$ .

- Problem: implicatures are not robust like presuppositions— they are typically *cancellable*.

- (17) Saul sometimes dreams about Cookie Monster. In fact, he always does.  
 $\not\rightarrow$  Saul doesn't always dream about Cookie Monster.

- A solution:

- Lauer (2014) argues that under certain circumstances, implicatures are obligatory:

- (18) Use of an expression  $e$  will trigger a mandatory *Need a Reason implicature* if:
- there is another form  $e'$  which is not semantically weaker.
  - there is a ceteris paribus preference favoring  $e'$  over  $e$  that is present in all contexts.
  - use of  $e$  automatically makes  $e'$  salient as an alternative.

- Past tense meets all three requirements via its competition with present tense!
- A new problem: now we seem to predict that when both past and present are true, only the present should be utterable.
- A new solution: in these cases, relevance rather than truth can be the deciding factor.
- This solution departs from Lauer (2014) in extending relevance to cover presupposed content.

## 5 Outlook: parallels between temporal and epistemic domains

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- A prediction: for any pattern involving indicative and subjunctive conditionals, we expect an analogous one regarding past and present tense (and vice versa)
- Exceptions should be explainable by pointing to a feature of the epistemic domain which is lacking in the temporal domain (or vice versa).
- A successful example:
  - Recall the Peters Case from Section 2:
    - (19) a. Look guys. You gotta admit this. If two gunmen **had shot** Kennedy, then two guns **would have been** found. So let's find out how many were in fact found. Perhaps that's going to get us somewhere.
    - b. Look guys. You gotta admit this. If two gunmen **shot** Kennedy, then two guns **were** found. So let's find out how many were in fact found. Perhaps that's going to get us somewhere.
  - My explanation: both forms are okay since there are multiple ways of creating a single common ground from the conversational participants' epistemic states.
  - Thus, my theory predicts the existence of temporal Peters cases when participants in a conversation have different temporal states.  
And indeed:
    - (20) a. I **am** writing this letter in a cafe. It **is** a Monday afternoon, so you **are** at work. By the time you read this, I **will be** in Brussels.
    - b. I **wrote** this letter in a cafe. It **was** a Monday afternoon, so you **were** at work. By now, I **am** in Brussels.
- Unclear: Are there temporal Anderson Cases/Mackay Sentences?
  - We would need a case where a past tense form can have a present tense meaning because the present tense form is infelicitous.
  - I haven't found one yet.