

Conditionals without *if*

Kai von Fintel (joint work with Sabine Iatridou)

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If ... the biggest little word

The word *if*, just two tiny letters
Says so much for something so small
The biggest little word in existence;
Never answers, just questions us all

If regrets were gold, I'd be rich as a queen
If teardrops were diamonds, how my face would gleam
If I'd loved you better, I wouldn't be lonely
If only, if only, if only

Dolly Parton, *If Only*

A research program

An in-depth cross-linguistic look at conditionals without *if* to learn more about the compositional semantics of conditionals in general.

A map of the talk

- if
- iflessness
 - modal subordination
 - internal partition
 - conditional conjunction
 - imperative conditional conjunction

So many *if*'s

causal/ontic vs. epistemic

- (I) a. If Alex leaves before rush hour, she will be in the office on time.
- b. If Alex is in the office, she left before rush hour.

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causal/ontic vs. epistemic

- (1) a. If Alex leaves before rush hour, she will be in the office on time.
- b. If Alex is in the office, she left before rush hour.

indicative vs. subjunctive

- (2) a. If Alex leaves before rush hour, she will be in the office on time.
- b. If Alex had left before rush hour, she would have been in the office on time

one-case vs. multi-case

- (3) a. If Alex leaves before rush hour (this morning), she will be in the office on time.
- b. If Alex leaves before rush hour, she's (generally) in the office on time.

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factual

- (4) If Alex is so smart, why does she leave late all the time?

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factual

- (4) If Alex is so smart, why does she leave late all the time?

biscuits

- (5) If Alex is hungry, there are granola bars in the car.

The classic view

The Platonic ideal of a conditional

- the *if*-clause sets up a hypothetical scenario
- the consequent is used to characterize the scenario

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Stalnaker (1968)

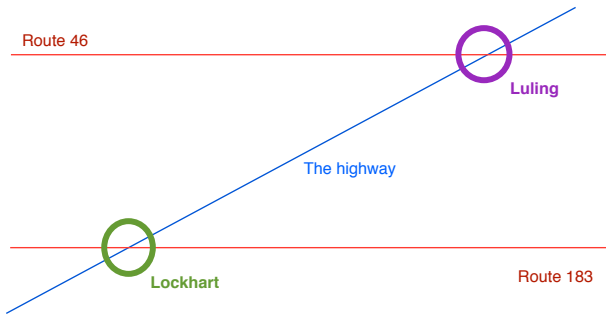
if p , q is true in a world w iff q is true in the world $f(w)(p)$

where f is a selection function that relative to a world w selects the p -world that is most similar to w

The modal-centric restrictor view

Problems with the interaction of conditionals and modals

(6) If we're on Route 183, we must be in Lockhart.



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Kratzer’s solution: *if*-clause “restricts” the modal in the consequent.

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Covert modals in bare conditionals

(7) If we’re on Route 183, we are in Lockhart.

Kratzer: covert epistemic necessity modal

The problem of the many *ifs*

How does tense-mood-aspect marking (and a possible set of covert operators) lead to the different kinds of conditionals?

The problem of the many *if*s

How does tense-mood-aspect marking (and a possible set of covert operators) lead to the different kinds of conditionals?

While there's been pioneering work (Iatridou, Condoravdi, Ippolito, Kaufmann, etc.), on the whole we do not have a comprehensive picture yet.

Iflessness?

Evans & Levinson:

Consider that instead of saying, “If the dog barks, the postman may run away,” we could say: “The dog might bark. The postman might run away.” In the former case we have syntactic embedding. In the latter the same message is conveyed, but the “embedding” is in the discourse understanding – the semantics and the pragmatics, not the syntax. It is because pragmatic inference can deliver embedded understandings of non-embedded clauses that languages often differ in what syntactic embeddings they allow. For example, in Guugu Yimithirr there is no overt conditional – and conditionals are expressed in the way just outlined (Haviland 1979).

How do conditionals without *if* work?

(1) modal subordination

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- (1) modal subordination
- (2) internal partition
- (3) conditional conjunction

Parataxis

- (8) Alex goes in there, he'll get shot.
- (9) Alex is in his office, he left early.
- (10) You're so smart, why don't you do this yourself?
- (11) You're hungry, there's pizza.

(12) No pain, no gain.

(13) No shoes, no shirt, no service.

(12) No pain, no gain.

(13) No shoes, no shirt, no service.

Variants (from Dancygier & Sweetser):

(14) No shirt, no shoes, no problem (found by Mark Turner at the San Diego beachfront)

(15) No shirt, no shoes, full service (San Francisco City Lights bookstore)

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Somewhat of a mystery why these are typically “no” or “another”.

- (16) ??Shirt (and) shoes, service.

Modal subordination

Roberts (1989):

(17) A wolf might come in. It would eat you first.

≈ If a wolf came in, it would eat you first.

- The first modal introduces a possibility
- The second modal picks up that possibility and says more about it

Easy to see that this can serve to express conditionals.

Dynamic semantics or pragmatic anaphora resolution?

- Roberts: anaphora resolution, accommodation
- Asher & McCready (2007): binding

The case for dynamic semantics

Asher & McCready (2007):

- (18) a. John doubts/claims that a tiger will walk in.
b. But a wolf might walk in.
c. It would eat you first.

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- (18) a. John doubts/claims that a tiger will walk in.
b. But a wolf might walk in.
c. It would eat you first.
- (19) A wolf_i might walk in. Then again one might not.
#It_i/#The wolf_i would eat you first.

The case for anaphora

- (20) I didn't buy a car. It wouldn't have fit in my garage.
- (21) You should go on the Atkins diet. You would lose a lot of weight.
- (22) Planning a vacation? Puerto Rico would be an interesting choice.
- (23) Either Alex or Billy will win. Alex would celebrate quietly. Billy would party all night.

Another way to set up a scenario: *suppose*

(24) Suppose a wolf comes in. It would eat you first.

Very familiar construction (at least in semi-formal discourse) but almost completely uninvestigated.

Kinds of conditional meanings

- causal/ontic vs. epistemic
- indicative vs. subjunctive/counterfactual
- one-case vs. multi-case
- factual
- biscuits

Counterfactual Suppose

- (25) a. Suppose a wolf had come in.
- b. It would have eaten you first.

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Discovery: Freestanding counterfactual antecedents

The fact that we can have the typical TMA-morphology of counterfactual conditionals in a free-standing *suppose*-clause raises a problem for analyses that see the TMA-morphology in a counterfactual antecedent as mere agreement with the modal in the consequent.

Epistemic modality

- (26)
- a. Suppose we are on Route 183. ??We are in Lockhart.
 - b. Suppose we are on Route 183. ??We must be in Lockhart.
 - c. We might be on Route 183. ??We are in Lockhart.
 - d. We might be on Route 183. ??We must be in Lockhart.

Epistemic modality

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Discovery: Epistemic conditionals are hard to get

Why can free-standing epistemic modals not be restricted to a salient scenario? And how do *if*-clauses manage to restrict epistemic modals?

Could *if*-conditionals be re-analyzed?

Is it possible to analyze *if*-conditionals as a case of grammaticalized modal subordination?

- the *if*-clause sets up a scenario
- the consequent is interpreted in the scenario

Some relevant work: Veltman 2005, Asher & McCready 2007, Gillies 2010, Starr 2014.

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Challenge

Such proposals need to explain why *if*-clauses can restrict epistemic modals, while standard modal subordination cannot.

Internal partition

(27) Your brother would have passed the test.

(28) John would hate a war.

cf. Kasper (1992), Schueler (2008)

No context recoverable

(29) The Eiffel Tower would fall down.

(30) I would plant an apple tree.

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The role of focus structure

(31) Shoes must be worn.

(32) Dogs must be carried.

How to get various conditional meanings

Need modals or other operators that are sensitive to sentence-internal structure, esp. focus.

- ✓ *would*
- ✓ deontic *must*

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- ✓ *would*
- ✓ deontic *must*

What about epistemics? Biscuits?

Epistemics

- (33) John must have [WALKED]_F to work.
≠ If John went to work, John must have walked.
- (34) A dog with three legs must have had an amputation.
= If a dog has three legs, it must have had an amputation.

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Internal Biscuits

- (35) Da wäre noch Pizza im Kühlschrank. (Csipak 2015)

Conditional Conjunction

- (36) Louie sees you with the loot and he puts out a contract on you.
- (37) You drink one more can of beer and I'm out of here.
- (38) One more can of beer and I'm out of here.
- (39) Ignore your homework and you will fail this class.
- (40) You only have to look at him and he shies away in fear.

CC across languages

Greek

(41) Ο skilos mu akui keravnus ke krivete kato apo to trapezi
the dog my hears thunder and hides under the table

'My dog hears thunder and hides under the table'

(42) Ena lathos akoma ke tha se apoliso
One mistake more and will you fire

'One more mistake and I will fire you'

Palestinian Arabic

- (43) Bet-talla' fee-ha w be-hmarr wejh-o
b-look.3sgm in-her and b-redden3sgm face-his

'He looks at her and his face reddens'

- (44) Kamaan ghaltah w betorr-o-ok
Another mistake and b-fire.3-pl-you

French

(45) il voit son patron et il s'enerve
he sees his boss and he gets nervous

(46) une biere de plus et nous vous expulserons
one beer more and we you fire
'One more beer and we will fire you'

Albanian

(47) Mesuesi e-cl shikon dhe ai fshihet nen tavoline
The teacher looks at him and he hides under table-the

(48) nje gabim dhe do te te pushoj (nga puna)
one mistake and fut you fire (from work)

‘One mistake and I will fire you’

(50) ??/*Bir hata daha ve sen -i iş -in -den
one mistake more and you (sg.) -acc work -2.sg.poss -abl.
at -ar -Im
throw -aor. -I.sg

‘one more mistake and I’ll fire you from your job’

Kinds of readings

One case vs. multi-case

(51) John leaves his house before doing his homework, and he's grounded.

- one case: tonight
- multi-case: house rule

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One case vs. multi-case

(51) John leaves his house before doing his homework, and he's grounded.

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- multi-case: house rule

No epistemic reading

(52) John is not here and he's at home.
≠ If John is not here, he's at home.

Counterfactual

- (53) a. One more can and I would have fired you.
b. *You had drunk one more can and I would have fired you.
c. *Drink one more can and I would have fired you.

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No factual Conditionals

- (54) ??You're so smart and you should do it yourself.

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No biscuits

- (55) !!You're hungry and there's biscuits on the sideboard.

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- (55) !!You're hungry and there's biscuits on the sideboard.

Proposals like Franke's that derive biscuit readings pragmatically via ordinary conditional meanings may have a problem here. Or maybe this shows that conditional conjunction encodes more "true conditionality" than standard conditionals.

The big questions

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- a special meaning for *and*
- a modal operator taking scope over a standard conjunction, which is semantically partitioned to supply restriction and scope

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- a few exceptions

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What explains the limited set of conditional meanings?

First, a red herring

For a certain kind of conditional conjunction, with an imperative as a first conjunct, one might think that it is a case of modal subordination.

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We'll show that this idea won't fly. Then, we'll return to how conditional conjunction actually works.

Imperatives in conditional conjunction

Imperative and declarative (IaD), a.k.a. “pseudo-imperatives”:

(56) Drink one more can and I am out of here.

Again, very common

Greek:

- (57) Fae ena apo afta ke tha pethanis mesa se 24 ores
Eat.IMP one from these and FUT die within 24 hours
‘Eat one of these and you will die within 24 hours’

Again, very common

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Palestinian Arabic:

- (58) Ilmis-ha w b-tindam tool 'omr-ak
touchIMP-it and b-regret.2sgm all life-your
'Touch it and you will regret it the rest of your life'

French:

- (59) ignore tes devoirs et tu échoueras
ignore your homework and you fail-FUT
'Ignore your homework and you will fail'

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ignore your homework and you fail-FUT
'Ignore your homework and you will fail'

Albanian:

- (60) hajë këtë dhe do të vdesësh brenda 24 orësh
eat this and you will die within 24 hours
'Eat this and you will die within 24 hours'

Same exception: Turkish

(61) ??/*Cok Calls ve baSarl-ll ol-ur -sun!
much work (imp.) and success-with be-aor -2.sg
'Study hard and you'll succeed'

(62) ??/*Ev Odev-in -i unut ve baSarl -slz
home work-2.sg.poss -acc. forget (imp.) and success -without
ol-ur-sun!
be-aor.-2.sg
'Ignore your homework and you will fail'

Again, Bangla and Hindi work like Turkish: no laDs!

Theories of imperative semantics

- modal theories
 - $IMP \approx \textit{should/have to}$ “speaker prefers”
 - Schwager/Kaufmann, Condoravdi & Lauer
- dynamic semantic theories
 - Veltman, Mastop
- property semantics + dynamic pragmatics
 - Portner

Readings of IaDs

- (63)
- a. Study hard and you will pass the class.
 - b. Ignore your homework and you will fail the class.
 - c. Open the paper and you will find 5 mistakes on every page.

Clear distinction:

- endorsing IaDs (*e-IaDs*) vs. non-endorsing IaDs (*n-IaDs*)

Possible structural analyses

Type I true imperative + modal subordination

Type II purely conditional analysis (conditional conjunction)

Type I analysis for e-IaDs

Tempting. Modal subordination is clearly in the air:

(64) Invest in this company! You will become rich.

(65) You must/have to/should invest in this company! You will become rich.

Modal subordination across conjunction?

Modal subordination is sometimes fine across conjunction:

- (66) [Let me tell you why we shouldn't open the door]
A wolf might walk in and it would eat us both.

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But modal subordination is not always good across *and*:

- (67) ??You must/have to/should invest in this company and you will become rich.

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- (67) ??You must/have to/should invest in this company and you will become rich.

Puzzlingly for the Type I idea, (67) is exactly the overt counterpart to a good e-laD:

- (68) Invest in this company and you will become rich.

Constraints on conjunction

Bar-Lev & Palacas (1980), Txurruka (2003):

- (69) a. Max fell; he broke his arm.
b. = Max fell and he broke his arm.

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- (69) a. Max fell; he broke his arm.
b. = Max fell and he broke his arm.
- (70) a. Max fell; he slipped on a banana peel.
b. ≠ Max fell, and he slipped on a banana peel.

- (71) a. You should do the Atkins diet. It comes highly recommended.
- b. \neq You should do the Atkins diet and it comes highly recommended.

- (71) a. You should do the Atkins diet. It comes highly recommended.
b. \neq You should do the Atkins diet and it comes highly recommended.
- (72) a. You should do the Atkins diet. You will lose a lot of weight.
b. \neq You should do the Atkins diet and you will lose a lot of weight.

- (71) a. You should do the Atkins diet. It comes highly recommended.
b. \neq You should do the Atkins diet and it comes highly recommended.
- (72) a. You should do the Atkins diet. You will lose a lot of weight.
b. \neq You should do the Atkins diet and you will lose a lot of weight.
- (73) Do the Atkins diet and you will lose a lot of weight.

IMP does not behave like clear directives!

Polarity switch

- (74) a. Don't park there! You will be towed.
b. = Don't park there! If you park there, you will be towed.

Polarity switch

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b. = Don't park there! If you park there, you will be towed.
- (75) a. Don't park there and you will be towed.
b. ≠ Don't park there! If you park there, you will be towed.

Turkish, again

Turkish does have conjunctions in modal subordination:

- (76) kapıda bir kurt olabilir ve Allah korusun hepimiz yer
door.loc a wolf might.be and God forbid all.of.us eat.aor
'A wolf might be at the door and God forbid it would eat all of us'

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So, the fact that Turkish doesn't have laDs (even e-laDs), nor conditional conjunctions, would be puzzling if e-laDs were cases of modal subordination.

No modal subordination in IaDs

Discovery: Even e-IaDs are conditional conjunctions

We tentatively conclude that all IaDs, even endorsing ones, involve conditional conjunction, rather than having a true imperative speech act followed by modal subordination across standard *and*.

No modal subordination in laDs

Discovery: Even e-laDs are conditional conjunctions

We tentatively conclude that all laDs, even endorsing ones, involve conditional conjunction, rather than having a true imperative speech act followed by modal subordination across standard *and*.

There are recalcitrant facts (possible force markers in first conjunct of e-laDs). But pssst ...

At least n-laDs are a problem for modal theories of the imperative

(77) Take one more step and I'll kill you.

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There doesn't seem to be a trace of *should*-type modality in n-laDs:

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A point in favor of Portner's analysis

laDs are just another case of a not-quite-propositional first conjunct of conditional conjunction.

LSand

Culicover & Jackendoff:

- conjunction *and* transformed at “Conceptual Structure” into a left-subordinating conditional connective

Klinedinst & Rothschild:

- *LSand* is like regular *and* in that the first conjunct dynamically updates a modal parameter that the second conjunct can be relative to
- *LSand* is different in that its first conjunct is not asserted/entailed
- for bare conditionals: need Kratzer’s covert modals

The alternative

Conditional conjunction is a case of internal partition:

- a modal takes wide scope over conjunction
- focus structure determines that first conjunct restricts and second conjunct becomes the “consequent”

In principle, this should be the null hypothesis.

Keshet (2012)

(79) You come on time and you get a good seat.

- covert *FUT* (for one-case) or *GEN* (for multi-case)
- first conjunct deaccented/given \rightsquigarrow restrictor
- second conjunct focused \rightsquigarrow scope

(80) John usually shaves [after he takes a SHOWER]_F

(81) John usually [SHAVES]_F after he takes a shower.

Exceptionally some operators can take wide scope from the second conjunct:

(82) You come on time and you sometimes get a good seat.

Exceptionally some operators can take wide scope from the second conjunct:

(82) You come on time and you sometimes get a good seat.

(83) You work hard for the next month and you might get a raise.

Some worries

Does the focus-sensitive covert *FUT* modal really exist?

(84) I buy a WATERCOLOR.

≠ If I buy something (a painting), I will buy a watercolor.

cf.

(85) a. I will buy a WATERCOLOR. (no conditional reading)

b. I would buy a WATERCOLOR. (conditional reading)

The conjunction *but* doesn't have a conditional reading:

- (86) You come on time but you don't get a good seat.
≠ If you come on time, you won't get a good seat.

An alternative to consider

- Maybe $_{LS}and$ really does exist.
- It encodes a causal/ontic connection, hence no biscuits
- Multi-case reading due to GEN over $_{LS}and$?

Minimal sufficiency conditional conjunction

We've kept the toughest problem for last:

(87) You only have to look at him and he shies away in fear.

(88) \neq If you only have to look at him, he shies away in fear.

(89) You just look at him and he shies away in fear.

(90) If you just look at him, he shies away in fear.

Fazit

We have much to learn about conditionals from looking at *if*less conditionals.