If you recall, biscuit conditionals are weird.

Jakob Prange
Hong Kong Polytechnic University

WRONG RESPONSE!

But there is a response system involved here!
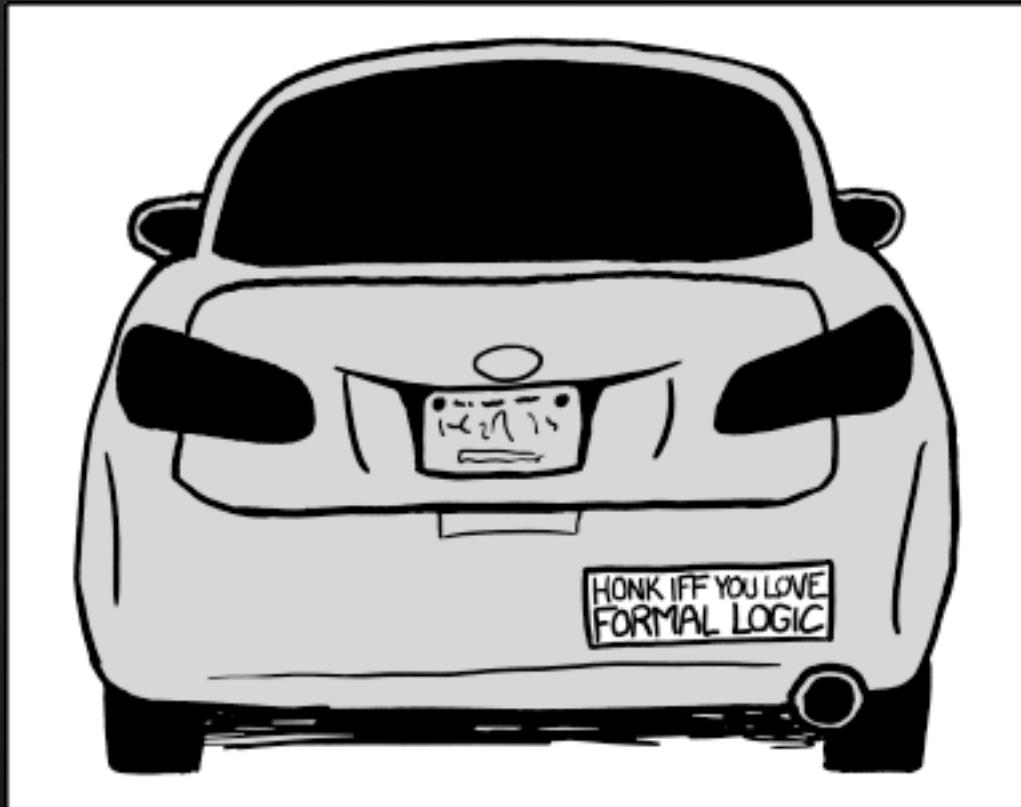
There are biscuits on the sideboard if you want them.

– J L Austin, 1961

https://xkcd.com/1652

Outline

- The two types of conditionals and their functions

- Two attempts at a unifying mechanism

- How many types are there, really?

- A hearer-focused account

Two types of conditionals
and their functions

https://xkcd.com/1033

Two types of conditionals

Genuine conditional (GCs)

- Logical, standard, "normal"
- "If … then …"
- Truth-functional

p	q	p → q
T	T	T
T	F	F
F	T	T
F	F	T

Non-conditional conditionals (NCCs)

- Well, they're weird.
- "If" doesn't mean "if"?
- Not really about truth?
- But what, then, are they about?
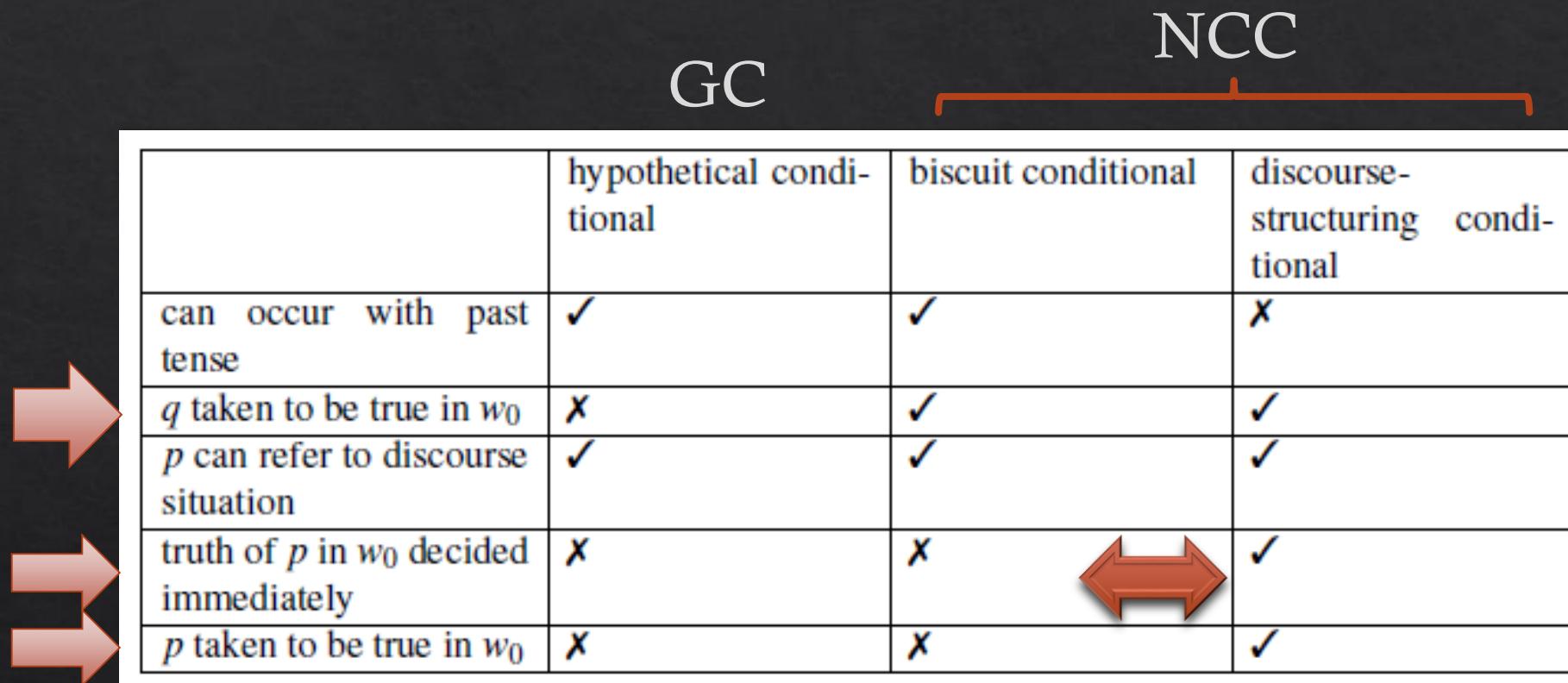
Geis & Lycan (1993):
Functional & Descriptive Properties

◈ Properties of Genuine Conditionals

  ◇ A: can add "then" to consequent without change in meaning

  ◇ B: can add "only" to antecedent

  ◇ C: consequent inferable from antecedent + contextual assumptions

  ◇ D: Contraposition and Modus Tollens hold

  ◇ E: Equivalence to disjunction holds

  ◇ F: can be put in subjunctive / counterfactual with similar meaning

  ◇ G: intuitively conditional

  ◇ H: antecedent and consequent are not asserted,
     but entire sentence is asserted (as opposed to conditional assertion of consequent)

◈ NCCs do not have these properties!

◈ Genuine conditionals and NCCs are on a spectrum

  ◇ NCCs *usually* do not have *most of* these properties, while GCs *usually* do have *most* of them
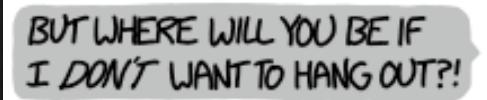
Geis & Lycan (1993):
Functional & Descriptive Properties

◈ Function of GCs: Convey conditional dependency between p and q

◈ Function of NCCs: Convey q,
with p as felicity/relevance condition or face-threat mitigation

Csipak (2014):
Discourse-structuring Conditionals

NCC

GC

	hypothetical conditional	biscuit conditional	discourse-structuring conditional
can occur with past tense	✓	✓	✗
q taken to be true in w_0	✗	✓	✓
p can refer to discourse situation	✓	✓	✓
truth of p in w_0 decided immediately	✗	✗	✓
p taken to be true in w_0	✗	✗	✓

HONK IFF YOU LOVE FORMAL LOGIC

BUT WHERE WILL YOU BE IF I DON'T WANT TO HANG OUT?!

If you promise not to tell anyone, Kirsten is asleep.

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Conditionals around the World

◈ Chinese

如果
If

那
Then

If——————————————result

In-accordance-with——result

Conditionals around the World

◈ German

Wenn _____ Dann _____

If Then

Also: "when"

Conditionals around the World

◈ If you fail an exam, you have to repeat a year.
如果你考試不及格，就得重讀一年。
Wenn du eine Prüfung nicht bestehst, musst du ein Jahr wiederholen.
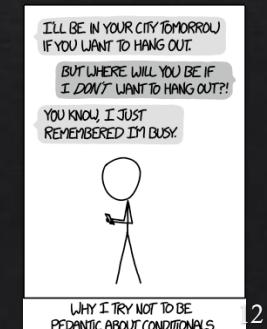
◈ If you think of going anywhere tomorrow, let me know.
如果你明天想上哪兒去，就跟我說一聲。
Wenn du vorhast morgen auszugehen, sag bescheid.

Explicit speech act consequent

◈ If you think of going anywhere tomorrow, I'm available.
如果你明天想上哪兒去，我有时间。
Wenn du vorhast morgen auszugehen, ich habe Zeit.

Biscuit

Conditionals around the World

◈ If you fail an exam, **(then)** you have to repeat a year.
如果你考試不及格，（那）就得重讀一年。
Wenn du eine Prüfung nicht bestehst, **(dann)** musst du ein Jahr wiederholen.

◈ If you think of going anywhere tomorrow, **(?then)** let me know.
如果你明天想上哪兒去，（?那）就跟我說一聲。
Wenn du vorhast morgen auszugehen, **(?dann)** sag bescheid.

◈ If you think of going anywhere tomorrow, **(#then)** I'm available.
如果你明天想上哪兒去，（#那）我有时间。
Wenn du vorhast morgen auszugehen, **(#dann)** habe ich Zeit.

German (and Dutch) Word Order

◈ Standard main clause order: V2

  ◇ Wenn du eine Prüfung nicht bestehst, musst du ein Jahr wiederholen.
     If you fail an exam,   must you a year repeat

◈ Biscuit word order

  ◇ # Wenn du vorhast morgen auszugehen,   habe ich Zeit.
     If you think of going anywhere tomorrow, have I time

  ◇ Wenn du vorhast morgen auszugehen,   ich habe Zeit.
                                             I have time

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German (and Dutch) Word Order

◈ Davison (1983): Word order triggers biscuitness.

◈ Kroeger (2022): Biscuit antecedent is not a constituent of the main clause at all; it attaches to some higher node in the sentence.

◈ Csipak (2015, 2017): Speaker preference, not grammaticalized.

Two attempts at a unifying mechanism

We not only need to explain each type of conditional separately, but also describe a mechanism by which they can be distinguished during on-line processing.

DeRose & Grandy (1999): Unification as Conditional Assertion

◈ Indicative non-biscuit conditionals do not assert "if p then q" since this does not have a truth value and hence is not assertible.

◈ Rather, ALL indicative conditionals, biscuit or not, are **conditional assertions**.

DeRose & Grandy (1999):
Unification as Conditional Assertion

Assertion of Conditional

```
assert (q if p else True)


assert (not p or q)
```

Conditional Assertion
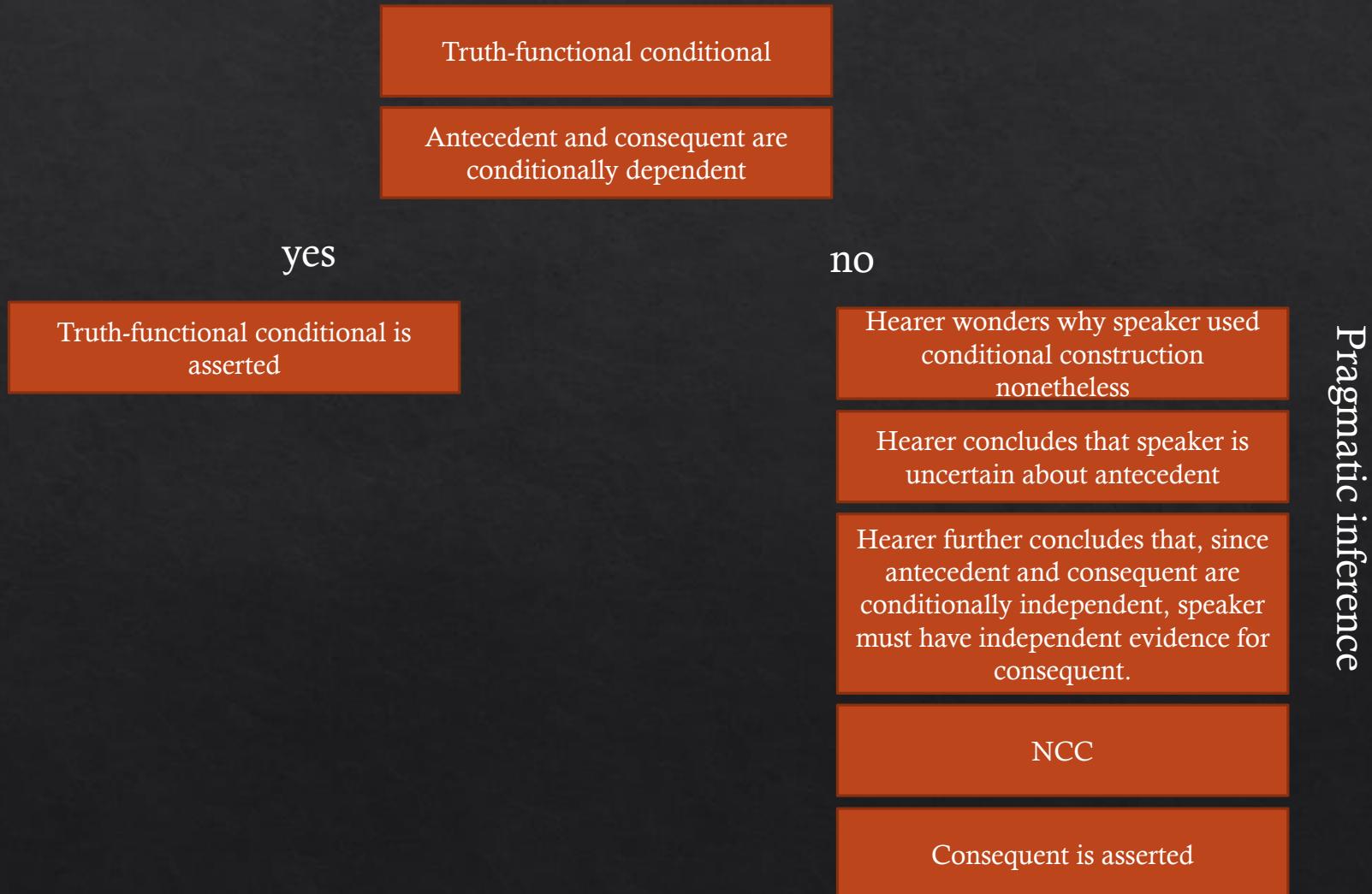
```
if p:
    assert q


else:
    pass
```

DeRose & Grandy (1999): Unification as Conditional Assertion

◈ Unified through as single semantico-pragmatic mechanism

◈ Thus, no need to distinguish separate types

◈ Problematic for non-biscuit conditionals, because antecedent's truth value is unknown at time of utterance

◈ So it would have to be counterfactual/future conditional assertions

   ◇ If p was known and p were T, Speaker would assert q
   Once p turns out to be T, Speaker will assert q

   ◇ If p was known and p were F, Speaker would not assert q
   If p turns out to be F, Speaker will not assert q

◈ Biased towards NCCs

Csipak (2017): Unification as Truth-Semantic

Truth-functional conditional

Antecedent and consequent are conditionally dependent

yes

Truth-functional conditional is asserted

no

Hearer wonders why speaker used conditional construction nonetheless

Hearer concludes that speaker is uncertain about antecedent

Hearer further concludes that, since antecedent and consequent are conditionally independent, speaker must have independent evidence for consequent.

NCC

Consequent is asserted

Pragmatic inference

Csipak (2017): Unification as Truth-Semantic

Truth-functional conditional

Antecedent and consequent are conditionally dependent

yes

no

Truth-functional conditional is asserted

Hearer wonders why speaker used conditional construction nonetheless

Hearer concludes that speaker is uncertain about antecedent

Hearer concludes that speaker is uncertain about **consequent**

Hearer further concludes that, since antecedent and consequent are conditionally independent, speaker must have independent evidence for consequent.

Hearer further concludes that, since antecedent and consequent are conditionally independent, speaker must have independent evidence for **falsity of antecedent**.

NCC

Consequent is asserted

Antecedent is denied

Pragmatic inference

p	q	p → q
T	T	T
T	F	F
F	T	T
F	F	T

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Csipak (2017): Unification as Truth-Semantic

◈ Unified at semantic level

◈ Distinction between different types is multi-step pragmatic inference

◈ Predicts function of NCCs to be assertion of consequent + assertion of uncertainty about antecedent?

◈ Mechanism for deducing the latter demands too much from the hearer

◈ Biased towards GCs

How many types are there, really?
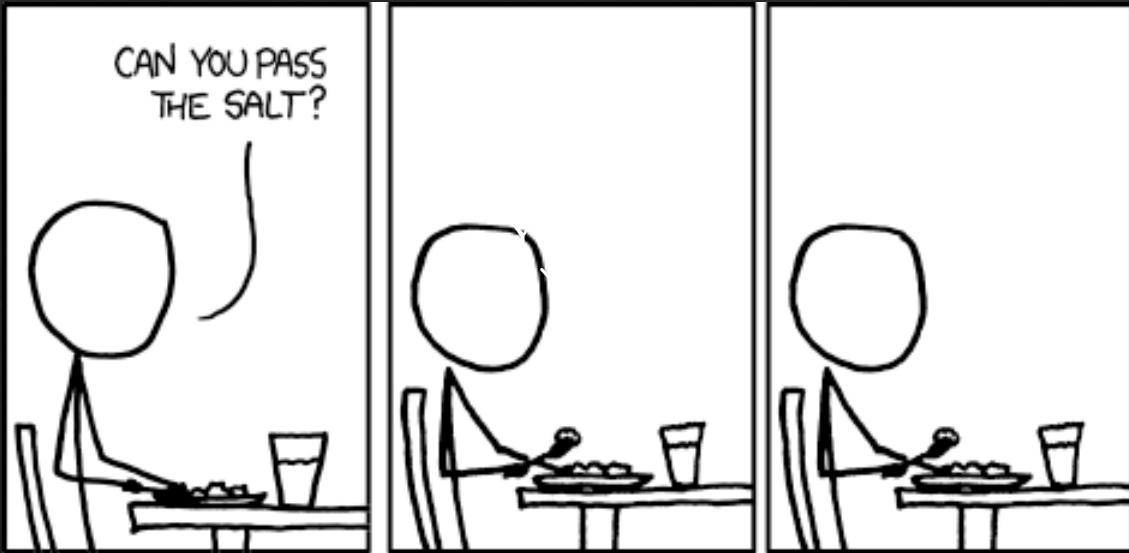
How many types are there, really?

◈ Genuine conditional

◈ If you fail an exam, you have to repeat a year.

◈ Explicit speech act consequent

◈ If you think of going anywhere tomorrow, let me know.

◈ Biscuit

◈ If you think of going anywhere tomorrow, I'm available.

◈ Discourse-structuring (Implicit speech act antecedent)

◈ If you promise not to tell anyone, Kirsten is asleep.

◈ Half Biscuit, Half Speech act?

◈ If you don't mind, I'm trying to read.

◈ Reverse biscuit-speech-act?

◈ If you recall, biscuit conditionals are weird

◈ …

What about consequent-first clause order?

sentence	source	NCC?	ante about Ad	ante about Sp	ante ref part of cons	ante ref entire co	ante ref entire se	gener	ante -> cons	cons -> ante	ante past ok?	German TOP V	German V S	
There are biscuits on the sideboard, if you want th	J. L. A	1	1	0	1	0	0	0	1	1	1?	1	1	*
If you're looking for the captain, he isn't here.	From F	1	1	0	1	0	0	0	1	1		1	0	
(Only) if she goes, (then) I go.	Geis &	0	0	0	0	0	0	?	1	1	1	0	1	
If she were to go, I would go.		0	0	0	0	0	0	0	1	1?		0	1	
If you {didn't, want to} know, she and I never got along.		1	1	0	0 imp		0	0	1?			1	0	
If you'll take my word for it, she is better at karate than Te		1	1?		0	1	0	0	1	1		1	0	
I've been out buying David's present, if you care.		1	1	0	0 imp		0	0	1	1		1	0	
If you have time to talk about the meeting, Geoff really ma		1	1	0	0 reverse imp?		0	0	1	0	0	1	0	*
If I may remind you, I've been working here for seventeen		1	1	1	0	1	0	0	1?			1	0	
If you don't mind, I'm trying to read.		?	1	0	0 imp?		0	0	1	1		1?		
If you're listening, I'd like to be picked up now. [Said to a		1	1	0	0 imp		0	0	1	0	0	1	0	*
If you're reading this, it's a carolina-blue day here in Chap		1	1	0	0	1	0	0	1	0	0	1	0	*
If you're reading this, you're too close.		0	1	0	0	0	1	0	1	1	?		1	
I want some pad thai, unless there isn't enough time to fi	?		0	0	1	0	0	0 ?		1	?	?		literal cons is asserted, but cons speech act is ge
If you don't mind, please pick up some Molson's.	0?	1	0	0 imp?	?		0	1	1	/	/	imp		
If you can hear me, come over here and pull us up!	1?	1	1	0	0	0	0	1	0	0 /	/	imp	*	
If it's not too much trouble, could you give me a ride home	0?	imp?		0 ?	?		0	0	1	1	/	/	question	
If you know, could you tell me who's won the prize?	0?	1	0 imp		0	0	0	1?		/	/	question		
If you have time, why is Johnson going to quit the firm?	1?	1	0	0	0	0	0	1	0	/	/	question		
I think you could get more work done than you do, if that'		1	0 imp?		0	1	0	c?	?	1	0	1	0	*
You need a haircut, unless I'm being {presumptuous, rude		1	0	1	0 imp?		0	0 ?		1	0 ?	?		*
John is having a little rest, if you {follow me, know what I		1	1	1	0 imp?		0	0	0	1	0 ?	?		*
If Peter asks you, I did receive his letter.		1	future-o	0	1 imp?		0	0	1	1	0	1 ?	German VS poss	*	ante is future-o
If you're hungry, there's a Taco Bell.		1	1	0	0	0	0 ?		1	1		1 ?		*
That adverbs book came, if you ever need to look at it.		1	future-o	0	1	0	0 a?		1	1		1	0		ante is future-o
Ken knows about that kind of stuff, if he's still in College		1	0	0	1	0	0 c?		1	1		1	0	
It was a great article, if I {do, may} say so myself.		1	0	1	0	1	0	0 ?		1	?	?		idiom?
If I don't see you (again), have a good trip.		1	1	1	0	0	0	0	1	0	0 /	/	imp	*
How about inviting Fritjof Boeger, if {I've spelled, I'm prono		1	0	1	1	0	0	0	0	1 ?	?	?		*	meta-uncertain
If I'm not talking too loudly, can you tell me why you didn'		1	0	1	0 ?	?		0	1	0	0 /	/	question	*
If you recall, whales are mammals, not fish.	Jakob	1	1	0	0 imp		0 c		1	1	0	1	0 implies falsity of	*
If you notice, the layers in this croissant are close	Jakob	1	1	0	0 imp		0	0	1?	1?!		1	0 implies falsity of	*
If you promise not to tell anyone, I ran into Alex la	Csipak	1	1	0	0 imp		0	0	1	0	0	1	0	*

A hearer-focused account

Adapted from https://xkcd.com/974

Involving the hearer

◈ Geis & Lycan, DeRose & Grandy, and Csipak all focus on **truth** (either objective or from the speaker's perspective)

◈ Csipak involves the hearer, but in a complicated and unnecessarily strenuous way (running through multiple steps of pragmatic inference to determine what is asserted)

◈ Cannot account for consequents that are (explicit or implicit) non-assertion speech acts
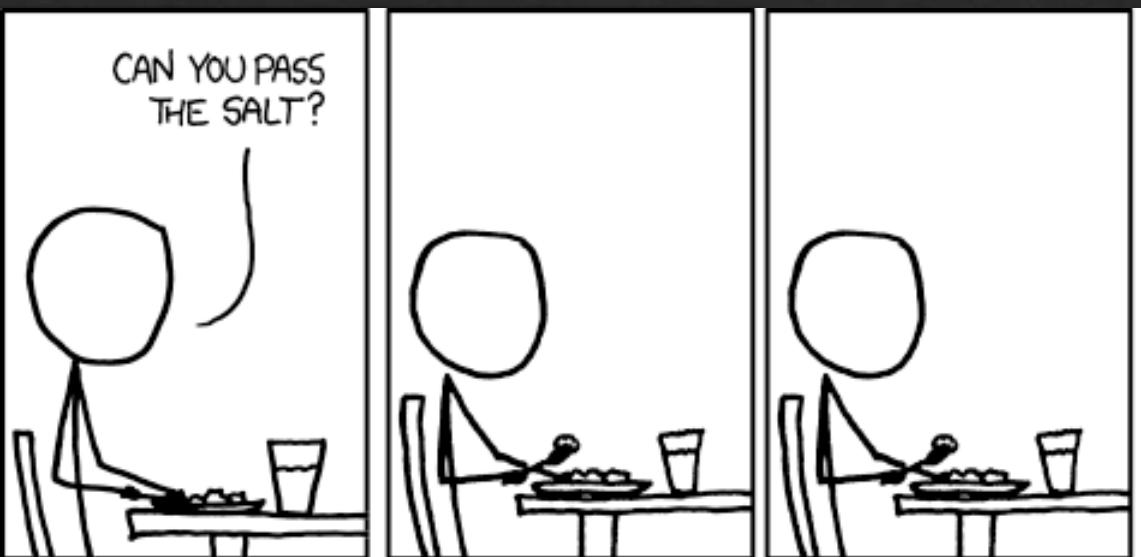
Biscuit Antecedents as Questions

- Felicity condition for question asking:

    - Hearer has immediate access to antecedent (knows or can change)

- I claim: Biscuit and discourse-structuring antecedents have the exact same felicity conditions

If you're thinking of going anywhere
→ Are you thinking of going anywhere?

Biscuit Consequents as Responses
to Projected Responses

◈ Response in the broad sense:

◈ can be about knowing the truth (yes/no)

◈ OR about acting upon the obvious truth

◈ Rhetorical questions

◈ OR about making things true

◈ Implicit speech acts

Biscuit Consequents as Responses
to Projected Responses

◈ Antecedent: Are you thinking of going anywhere?

◈ Response: Yes.

◈ Consequent (response-to-projected-response): I'm available.

Note that this is really an implicit speech act!
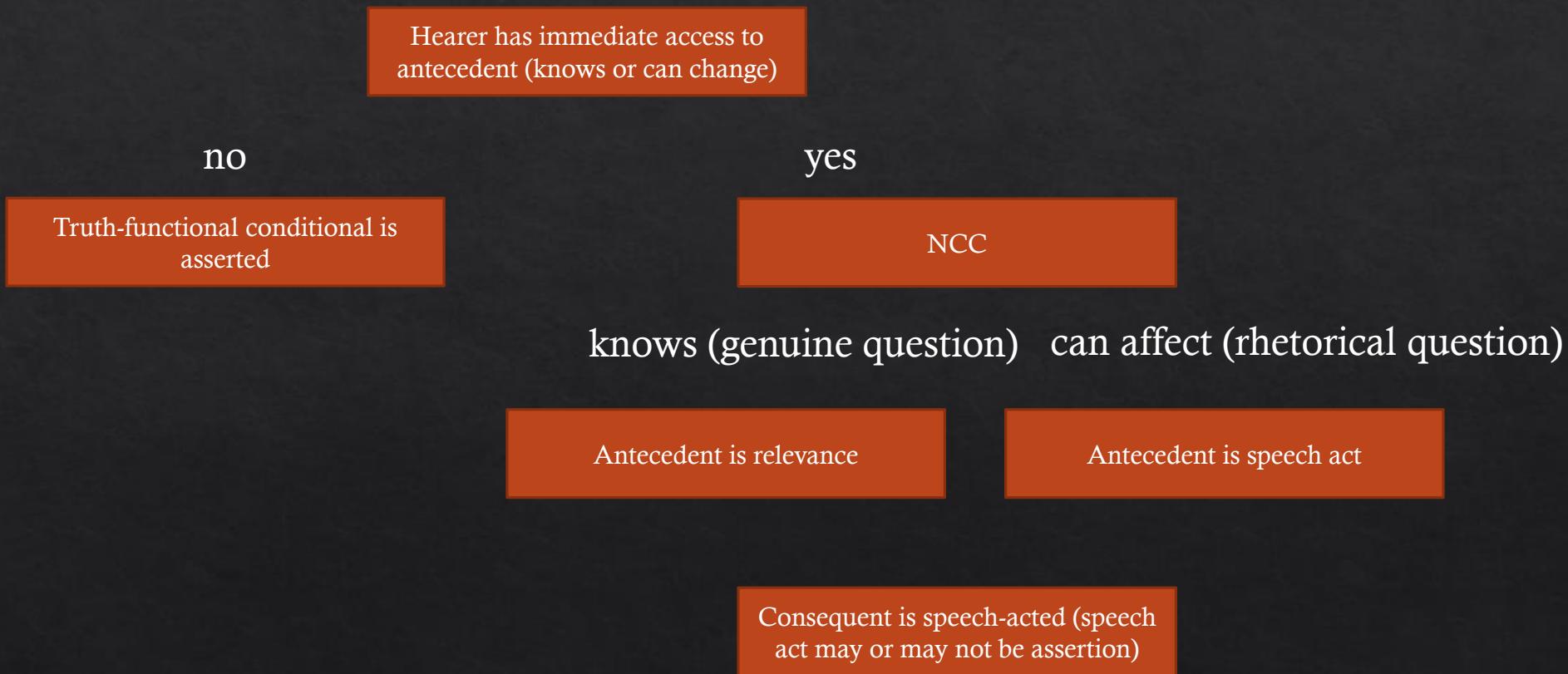
Non-Biscuit Antecedents as Questions

If you fail an exam
→ Do you fail an exam?

◇ Felicity condition of hearer accessibility not met

Unification as Projected Discourse

Hearer has immediate access to antecedent (knows or can change)

no

yes

Truth-functional conditional is asserted

NCC

knows (genuine question)   can affect (rhetorical question)

Antecedent is relevance

Antecedent is speech act

Consequent is speech-acted (speech act may or may not be assertion)
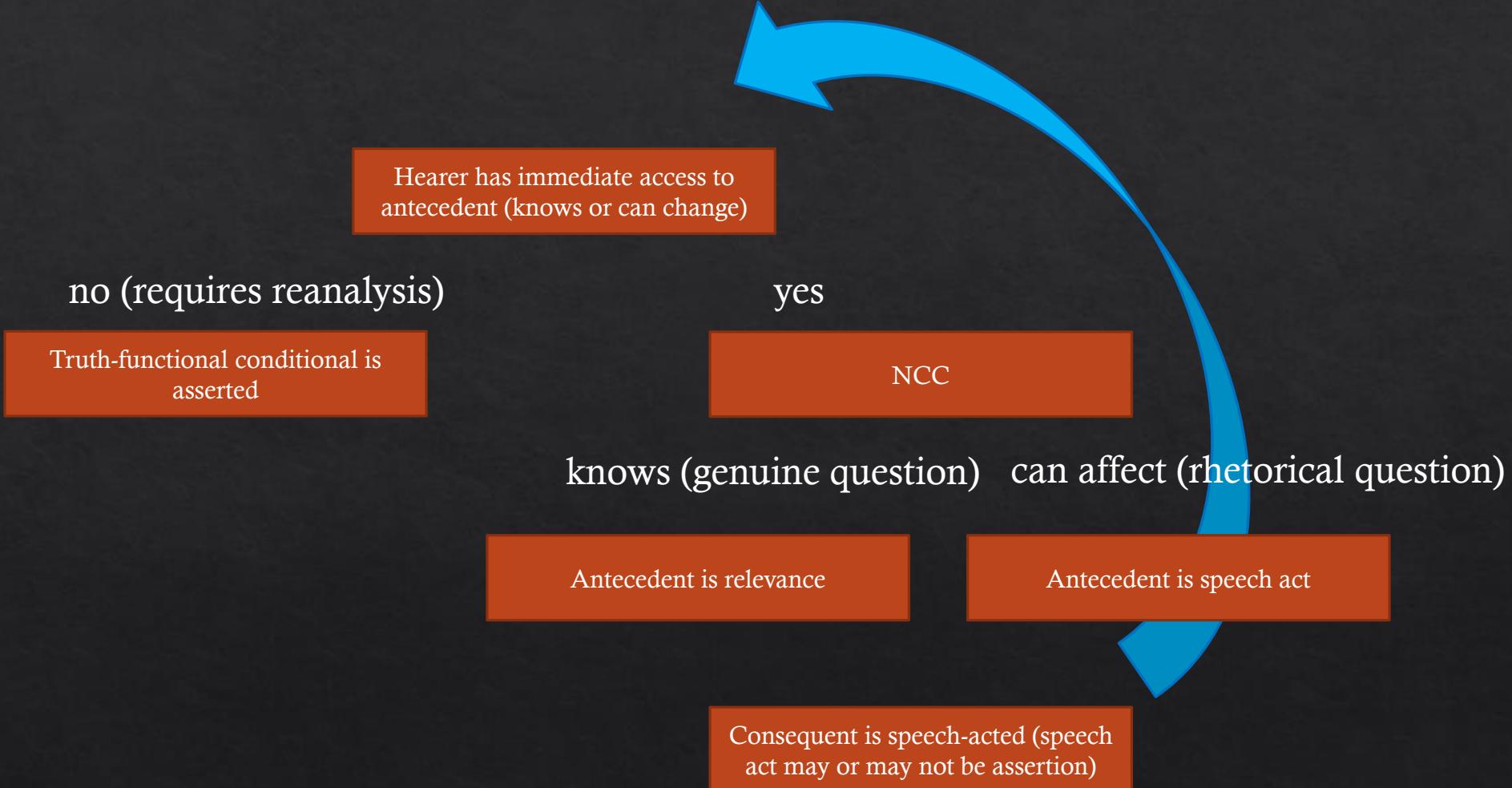
Unification as Projected Discourse

◈ Unified at discourse level:
Locutionary felicity conditions identical with asking antecedent as a question

◈ Distinction mechanism uses familiar pragmatic shortcuts

   ◇ Namely, the same ones used in distinguishing rhetorical from genuine questions

◈ Does not predict consequent to be asserted in either case

   ◇ In fact predicts it to usually not be asserted

Unification as Projected Discourse

Hearer has immediate access to antecedent (knows or can change)

no (requires reanalysis)   yes

Truth-functional conditional is asserted

NCC

knows (genuine question)   can affect (rhetorical question)

Antecedent is relevance   Antecedent is speech act

Consequent is speech-acted (speech act may or may not be assertion)

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Summary & Directions

- We inspected different types of conditionals, finding consistent patterns in English, Chinese, and German.

- We reviewed two previous accounts trying to account for these differences and pointed out their shortcomings.

- We proposed a new account focusing on the analogy between felicity conditions of biscuit conditionals and question-response patterns.

- Next, this proposal needs to be tested empirically.