Unifying *if*-conditionals and unconditionals

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INTERROGATIVE STRUCTURE

Alternative unconditionals as interrogatives

- Characteristic properties of embedded alternative interrogatives: negative stripping (*or not*), and unexpected leftward appearance of *or not*.

(9) Alfonso wondered whether the party was cancelled or was not cancelled.

(10) Alfonso wondered whether the party was cancelled **or not**.

(11) Alfonso wondered whether **or not** the party was cancelled.

- Alternative unconditionals show the same pattern:

(12) Whether the party is cancelled or is not cancelled, we should go out tonight.

(13) Whether the party is cancelled **or not**, we should go out tonight.

(14) Whether **or not** the party is cancelled, we should go out tonight.

Constituent unconditionals as interrogatives

- Somewhat less obvious: competing analysis as a free relative.
- Adjoined relative structure familiar from correlative constructions in e.g. Hindi (see Srivastav 1991; Dayal 1995; Bhatt 2003 and many others).
- A preemptive strike: *-ever* is not a useful diagnostic – found in root interrogatives.

(15) Whoever could have done that?

(16) Whatever is Alfonso be saying to that woman?

- (Does tell us that the structure is not e.g. a relative clause, or an exclamative.)
- Further tests on handout.

Test 1: Multiple *wh*

- Multiple *wh*: possible in questions, unconditionals, not in free relatives (Izvorski 2000; Gawron 2001; Huddleston and Pullum 2002; Grosu 2003):

(17) Alfonso knows who said what.

(18) * Alfonso talked to who(ever) said what.

(19) Whoever buys whoever's property, the town council will still grant a building permit. (Gawron)

(20) ? Whoever said what to whom, we've got to put this incident behind us and work together as a team. (CGEL)

- Conclusion: not free relative; CP not DP structure.

Test 2: proforms

- Correlatives typically must involve a proform in the main clause correlated with the relative pronoun in the correlative. (cf. Hindi, Dayal 1997)
- Not true of English unconditionals.

(21) Whatever Alfonso said, Joanna got mad.

(22) Whoever brought the beer, it is a good brand.

(23) Whoever talks to Joanna, she will be irritable.

- Conclusion: not correlative structure.

Test 3: Givenness and echo question licensing

- Echo question licensing: Jespersen 1949; Baker 1968; Caponigro 2003: Can only question/echo interrogatives with *what*. (Echo)questioning a FR uses interrogative pronoun based on head of FR.

(24) A: Alfonso knows who Joanna talked to.
    B: What does Alfonso know? / Alfonso knows WHAT?
    B': * Who does Alfonso know? / Alfonso knows WHO?

(25) A: Alfonso talked to whoever Joanna did.
    B: * What did Alfonso talk to? / Alfonso talked to WHAT?
    B': Who did Alfonso talk to? / Alfonso talked to WHO?

- Difficult to apply directly to unconditionals; can't directly question or echo-question the adjunct.
- However, a very interesting echo pattern:

(26) A: Whoever Joanna talked to, Alfonso will be jealous.
    B: Alfonso will be jealous regardless of WHAT?
    B': * Alfonso will be jealous regardless of WHO?

- *Regardless of* takes a question complement.
- Artstein 2002 (following Schwarzschild 1999 on questions): echo questions subject to a **givenness** requirement.
- *what* presupposes non-human, so is the only one compatible with abstract entities ("issue", "proposition", etc.). *who* presupposes human.
- The question/issue of who Alfonso talked to, but **not the referent**, must be given in order for (26B) to be licensed.
- Conclusion: unconditional is an interrogative, not a FR.

Similarities / Differences (center)

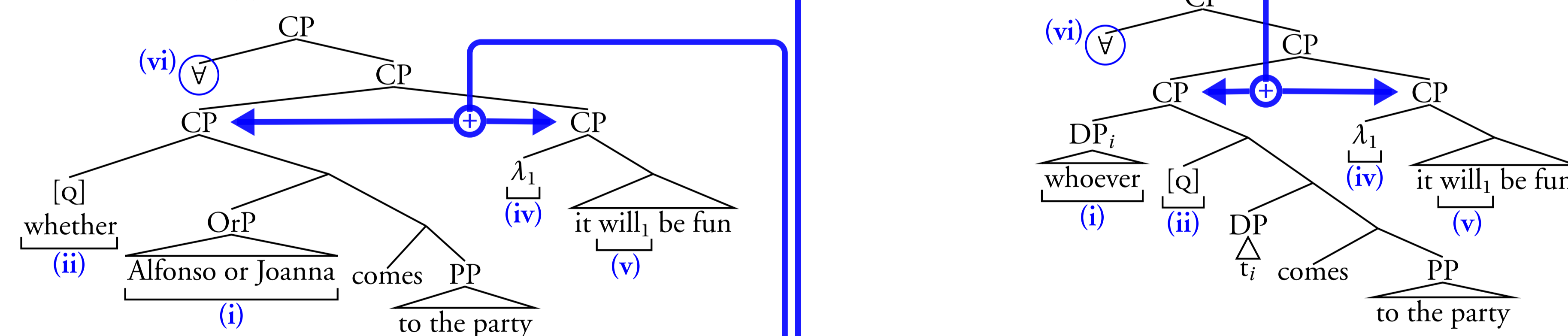| If-conditional	(1) If Alfonso comes to the party, it will be fun.
Alternative unconditional	(2) Whether Alfonso comes to the party or not, it will be fun.
Alternative unconditional	(3) Whether Alfonso or Joanna comes to the party, it will be fun.
Constituent unconditional	(4) Whoever comes to the party, it will be fun.

SIMILARITIES

- Similar meaning – interaction with domain of operator.
- Similar distribution – internal and external properties.
- See right-hand column.

- Interrogative structure (see left-hand column).

DIFFERENCES

- Unconditionals involve an **Indifference entailment**:

(5) "It doesn't matter whether Alfonso comes to the party."

- No indifference with *if*-conditionals:

(6) # If Alfonso comes to the party or not, it will be fun.
(7) If Alfonso or Joanna comes to the party, it will be fun.

- (7) does **not** convey that it doesn't matter whether Alfonso or Joanna comes (though it is compatible with the choice not mattering).

- **Discourse effect**: Avoid taking a stance on an issue while still moving the discourse forward.

(8) A: Alfonso is good at his job.
    B: Whether or not he's good, we have to fire him.

ANALYSIS

- Similarities and differences follow compositionally from structure... ...if we treat unconditionals adjuncts as interrogative conditional adjuncts (following Zaefferer 1990, 1991; Lin 1996; Izvorski 2000; Gawron 2001).

- Crucial & new: compositional Hamblin semantics (Hamblin 1973; Kratzer and Shimoyama 2002; see Alonso-Ovalle 2004, 2006, 2007 for a closely related analyses of disjunction in counterfactuals).

- Uniform type, $\langle st \rangle$, for *if*-conditionals and unconditionals. (No syncategorematic or constructional distinction needed as in previous analyses; see handout.)

- *if*-conditional: singleton set of propositions. Unconditional: non-singleton set of propositions.

- Hamblin's Pointwise Function Application ⇒ uniform composition of conditionals adjuncts.

- Compatible with various implementations of the LKH theory; here I use the binding/correlative version (von Fintel 1994; Bhatt and Pancheva 2006).

Anatomy of an unconditional

(i) Disjunction or an interrogative pronoun introduces alternatives into composition.

(ii) The question operator introduces an exhaustivity presupposition, and lets alternatives through.

(iii) The adjunct composes with the main clause via pointwise function application – one modal claim for each alternative.

(iv) A conditional adjunct (whatever its content) restrict an operator, by binding a domain variable. (Correlative analysis)

(v) The modal imposes an existence presupposition, which when combined with alternatives, projects as a distribution presupposition.

(i-a) $[\![\text{Alfonso or Joanna}]\!]^{g,w,c} = \{\text{Alfonso, Joanna}\}$

(i-b) $[\![\text{Whoever}]\!]^{g,w,c} = \{x \mid x \text{ is human}\}$

(ii) $[\![[Q\ [\alpha]]]\!]^{g,w,c} = [\![\alpha]\!]^{g,w,c}$
 (exhaustivity) defined on g, w, c only if
 $\forall w' \in \bigcap f_c(w) : \exists p_{\langle st \rangle} \in [\![\alpha]\!]^{g,w,c} : p(w') = 1$

(iii) $[\![CP_{combined}]\!]^{g,w,c} = \{ p \mid \exists p' \in [\![CP_{antec.}]\!]^{g,w,c} : p = [\![CP_{conseq.}]\!]^{g,w,c}(p') \}$

(iv) $[\![\lambda_i [\alpha]]\!]^{g,w,c} = \{ \lambda p_{\langle st \rangle} . [\![\alpha]\!]^{g/1 \to p, w, c} \}$

(v) $[\![\text{will}_i]\!]^{g,w,c} = \{ \lambda p_{\langle st \rangle} . \lambda w' . \forall w'' \in (\bigcap f_c(w') \cap g(i)) : p(w'') \}$
 (non-triviality) defined on w', g, c only if
 $\bigcap f_c(w') \cap g(i) \neq \emptyset$

(vi) $\forall = $ Hamblin universal operator

Results:

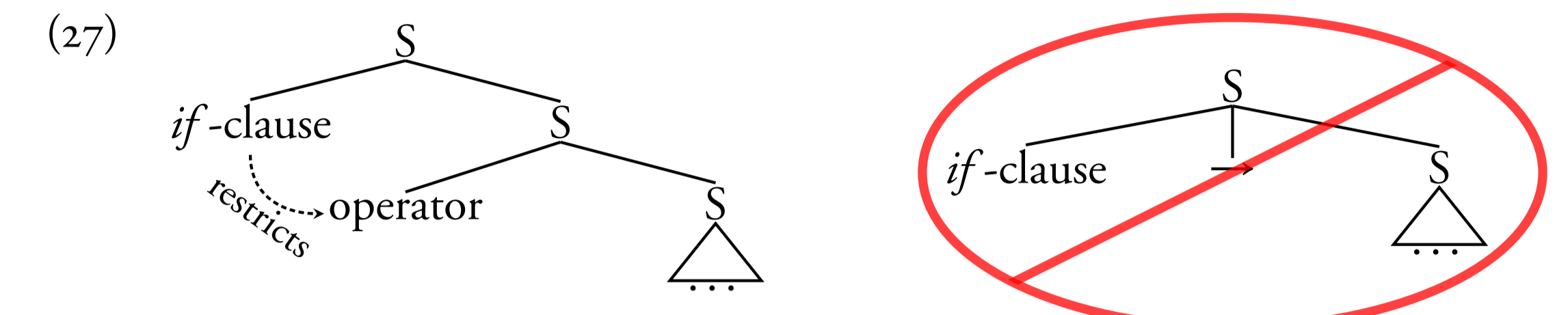$[\![(3)]\!] : \forall \left\{ \begin{array}{l} \lambda w . \text{will}_w(\lambda w' . \text{Alfonso comes in } w')(\lambda w' . \text{it be fun in } w'), \\ \lambda w . \text{will}_w(\lambda w' . \text{Joanna comes in } w')(\lambda w' . \text{it be fun in } w') \end{array} \right\}$
defined only if *every world in the domain (f_c) makes true one of the two alternatives*, and *each alternative is possible in view of f_c.*

$[\![(4)]\!] : \forall \left\{ \begin{array}{l} \lambda w . \text{will}_w(\lambda w' . \text{Alfonso comes in } w')(\lambda w' . \text{it be fun in } w'), \\ \lambda w . \text{will}_w(\lambda w' . \text{Joanna comes in } w')(\lambda w' . \text{it be fun in } w'), \\ \dots \\ \lambda w . \text{will}_w(\lambda w' . \text{Henry comes in } w')(\lambda w' . \text{it be fun in } w') \end{array} \right\}$
defined only if *every world in the domain (f_c) makes true one of the alternatives*, and *each alternative is possible in view of f_c.*

Indifference entailment in (5) results from exhaustive, non-trivial conditional alternatives.
Discourse effect in (8) results from distribution presupposition (speaker presupposes that each alternative is possible).

CONDITIONALITY

The Lewis-Kratzer-Heim theory of conditionals

- The semantic function of an *if*-clause is to restrict the domain of an operator (Lewis 1975/Kratzer 1977, 1981, 1986, etc./Heim 1982, Partee 1991). "The history of the conditional is the story of a syntactic mistake." (Kratzer 1986)

(27)

What is a conditional?

- The LKH theory provides a potential answer:

(28) **Lewis/Kratzer/Heim Generalized**
A conditional adjunct is any adjunct that serves to restrict the domain of an operator.

- Are there any other such adjuncts besides *if*-clauses and unconditionals?
- Yes, even just in English.

(29) a. Had Alfonso talked to Joanna, he would have known about her brother.
    b. When Alfonso talks to philosophers, he gets annoyed.

(30) **Infinitival purpose clauses** (von Fintel and Iatridou 2005 inter alia)
To get this job, you have to speak fluent Spanish.

(31) **Absolutive adjuncts** (Stump 1986)
    a. Standing on a chair, John can touch the ceiling.
    b. As a blonde, Mary might look something like Jane.

Unconditionals as conditionals

Test 1: Intuitive meaning

- Intuitive meaning is very close to that of a conditional. (König 1986; Zaefferer 1990, 1991; Lin 1996; Gawron 2001; Huddleston and Pullum 2002)
- Unconditionals have a close paraphrase as an exhaustive list of conditionals. (Lin 1996)

(32) a. Whether or not Joanna comes to the party it will be fun.
    b. If Joanna comes to the party it will be fun, and if she doesn't it will be fun.

Test 2: Interaction with an operator

- Do unconditionals restrict the domain of an operator?
- Sort of: they might be said, pretheoretically, to "unrestrict" it. (Zaefferer 1990: they "remove background assumptions" as opposed to introducing them.)
- Both target the same kinds of operators. (Gawron 2001)

(33) If Alfonso comes to the party, you **should** come.

(34) Whether or not Alfonso comes to the party, you **should** come.

- Unconditionals and *if*-conditionals can interfere, and can also stack (un)restrictions.

(35) # Whether or not Alfonso comes to the party, if Alfonso comes to the party, you **should** come.

(36) Whether or not alfonso comes to the party, if the party is at Joanna's house, you **should** come.

Test 3: Tense/aspect

- Similar tense/aspect patterns (Haspelmath and König 1998; Gawron 2001)
- Counterfactual *had...would*:

(37) (Suppose Alfonso didn't end up going to Bard, and Harvard or Princeton were his other choices.)
Whether he had gone to Harvard or to Princeton, he would have become a banker.

- Dependent present tense (see Haegeman 2003 inter alia; present tense in antecedent gets future reading due to *will* in consequent):

(38) Whether Alfonso is tired or not, he will have a good time at the party.

Test 4: Biscuits

- Relevance/speech act/biscuit unconditionals possible (cf. Austin 1956, Iatridou 1991, Haegeman 2003 etc., Siegel 2006, and much other work)

(39) If you're hungry, there's a sandwich in the fridge.

(40) Whether you're hungry or not, there's a sandwich in the fridge.

(41) Whatever you're hungry for, there's probably some in the kitchen.