Conditionals Seminar: Day 2

- Administrative:
  - Stay tuned to course website for announcements/readings, etc. [*e.g.*, first 4 chapters of Bennett are there in PDF format, as are some primary sources]

    `http://socrates.berkeley.edu/~fitelson/conditionals/`
  - **Oct. 5**. Alan Hájek will present Chapter 5 (which is his stuff anyway!).
  - Introductions? Welcome Graham Priest!
- **Tomorrow**. HPLMS, here at 6pm. Graham: "Intentionality and Non-Existence"
- Grice, Jackson, and the horseshoe ($\supset$) analysis of the indicative ($\rightarrow$)
  - The Or-to-If Inference [an inference of what kind, and from what to what?]
  - Grice: Conversational Implicature, $\rightarrow$, and $\supset$
  - Jackson: Conventional Implicature, $\rightarrow$, and $\supset$
  - Logic, semantics, pragmatics, epistemology [a big shell game?]

Logical Background: $\supset$ (the horseshoe) and $\rightarrow$ (the indicative)

- The horseshoe ($\supset$) is a *truth-functional* sentential operator. Truth-tables:

p	q	$p \supset q$	$\neg p \vee q$	$\neg(p \,\&\, \neg q)$	$p \rightarrow q$
T	T	T	T	T	?
T	F	F	F	F	F
F	T	T	T	T	?
F	F	T	T	T	?

- Note: $p \supset q$ is *truth-functionally equivalent* to $\neg p \vee q$ [and to $\neg(p \,\&\, \neg q)$].
- The second row of the truth-table is uncontroversial. If p is true and q is false, then $p \supset q$ is false, and (intuitively) so is the indicative conditional $p \rightarrow q$.
- *I.e.*, intuitively, $\neg p \vee q$'s *falsity* entails the *falsity* of $p \rightarrow q$. Or, equivalently (in classical logic!), $p \rightarrow q$'s *truth* entails $\neg p \vee q$'s *truth*. Most accept this.
- It's the *other* rows of the truth-table that are controversial for $p \rightarrow q$. The question is: Does $\neg p \vee q$'s *truth* entail $p \rightarrow q$'s *truth*? To summarize:
  - **Unontroversial**: $p \rightarrow q \Rightarrow p \supset q$. **Controversial**: $p \supset q \Rightarrow p \rightarrow q$.

Bennett §9: The "Or-to-If" Inference (OTI) [Take 1]

- Bennett begins chapter 2 with Jackson's rendition of (OTI). I must *quote* this:

  > You believed Vladimir when he told you 'Either they drew or it was a win for white'; which made it all right for you to tell Natalya 'If they didn't draw, it was a win for white'. That was all right because what Vladimir told you entailed what you told Natalya. Quite generally:
  >
  > (1) $P \vee Q$ entails $\neg P \rightarrow Q$
  >
  > If (1) is correct, then so is the horseshoe analysis, as the following shows. . . .

- At this point, Bennett reasons from (1) in a *classical* way, as follows:

  (2) $\neg A \vee C$ entails $\neg\neg A \rightarrow C$ [two *substitutions*: $\neg A/P$ and C/Q]

  (3) $A \supset C$ entails $A \rightarrow C$ [two *equivalences*: $\neg A \vee C // A \supset C$ and $\neg\neg A // A$]

- The 'Quite generally' sanctions (2), and classical logic sanctions (3), which secures the $\supset$-analysis, since $A \supset C \Rightarrow A \rightarrow C$ is the controversial direction.
- Questions: *What* is this argument supposed to show? And, *how* (hint: IBE)?
- We will come back to these questions when we discuss §18 (end of Ch. 3).

- Meanwhile, Bennett mentions that the horseshoe analysis has some peculiar consequences, since $P \supset Q$ is true *whenever P is false* and *whenever Q is true*:
  - If I ate an egg for breakfast this morning, then you ate a million eggs.
  - If there are no planets, then the solar system has at least eight planets.
- Many absurd-sounding examples along these lines can be concocted.
- Everyone seems to agree that it would be silly to *assert* such conditionals [*e.g.*, that it would *not* be "all right for you to *tell*" someone such things].
- Many go further, and argue that such conditionals are *false*, because they *entail* the existence of a *connection* (of some appropriate kind) between antecedent and consequent – a connection that clearly does not exist.
- Defenders of the horseshoe analysis (*e.g.*, Grice and Jackson, among others) must have ways to *explain away prima facie* counterexamples like these.
- Such explaining away must (at least) tell us why such conditionals do *not* (in fact) have any false *logical consequences* (*i.e.*, false *entailments*).
- We begin with Grice: *entailments versus conversational implicatures.*

§10: Grice on Conversational Implicature, Entailment, and Indicative Conditionals

- According to Grice, when someone utters '$A \rightarrow B$' in a conversation, what they *say* (*i.e.*, what's *entailed* by the utterance) is just $A \supset B$.
- So, no "connection" between A and B is *entailed* when '$A \rightarrow B$' is uttered.
- Implicatures are generated because conversations are cooperative endeavors, which are governed by certain rules of civilized discourse, including:
  - Be appropriately informative (give enough news but not too much).
  - Be truthful (say only what you believe and try to have only true beliefs).
  - Be relevant.
  - Be orderly, brief, clear, *etc*.
  - In a nutshell: *Be helpful*.
- **Or**: Uttering 'P or Q' when one is sure that P (*ceteris paribus*) violates two Gricean rules at once. It would be more informative *and* briefer to say simply 'P'. So, 'P or Q' *implicates* (but does not *entail*) '…and I know not which'.

- Since Grice is a horseshoe guy, his story about '$\rightarrow$' is *very* similar to 'Or'.
- Uttering a conditional the antecedent of which you know to be false (or with known true consequent) violates Gricean conversational rules, since in such cases you know something more informative and simpler than what you say:

(1) If I ate an egg for breakfast this morning, then you ate a million eggs.

(2) If there are no planets, then the solar system has at least eight planets.

- So, the 'paradoxical' cases of $\supset$ are not strange because *what is said* is false, they are strange because *what is implicated* is false. But, what is implicated?
- For Grice, what is implicated (conversationally) when someone utters (1) is that the utterer doesn't know that they did *not* eat an egg for breakfast.
- In (2), *two* implicatures are violated, since, presumably, the utterer knows *both* that the antecedent is false, *and* that the consequent is true.
- Note: this doesn't seem to explain why we tend to associate a claim about A and B being "connected" with utterances of '$A \rightarrow B$.' One might think that '$A \rightarrow B$' *could* "implicate" such a connection, but that's not Grice's line.

§11: "Semantic Occamism" and Strawson's Critique of Grice

- Grice has a *thin* (*truth-functional*) account of the meaning of 'and' (&) and 'or' ($\vee$). He favors such thin meanings if they – together with his theory of implicature – can sufficiently explain what he takes to be the linguistic data.
- He also thinks this strategy (thin meaning + implicature) works for (indicative) 'if'. [It is worth mentioning that many linguists – and some philosophers, like Dudman – don't even think 'if' is a sentential operator!]
- An alternative approach would be to have *thick* (non-truth-functional) accounts of the meanings of sentential operators like 'and', 'or', and 'if' — and then let these thick meanings carry *all* of the explanatory load.
- Problem: the thick alternative seems to require *ambiguities* – that is, *many senses* of the words in question (*e.g.*, sometimes 'and' means 'and then', *etc.*).

  Occam's Razor (semantic version). Don't postulate more senses (or thicker ones) than is necessary to adequately explain the linguistic data.

- Grice thinks his approach, which relies less on the idiosyncrasies of the individual word and more on general laws of (civilized) language use, is more explanatory and more in-line with Occam's (semantic) Razor.
- Strawson disagrees. He thinks '$A \rightarrow C$' has a thicker meaning, closer to:

(†) There is a connection between A and C which ensures that: $A \supset C$.

- Strawson claims that Grice's theory predicts that *no language could possibly contain* an indicative conditional connective that means (†). Bennett says 'no'.
- Bennett: Grice thinks that *our* linguistic practices preclude an $\rightarrow$ that means (†), but this does not entail that there couldn't be some *other* linguistic community whose 'if' usage is best explained using a thick meaning like (†).
- Huh? Bennett says there could be communities in which it is appropriate to utter 'A or B' *even if* one knows A (or B) — *deliberately withholding info.*
- Then, he claims this could force a *thick*, *Gricean* meaning like: 'It is not the case A is true and C is false, *and this is not a deliberate withholding*.'
- OK. But, what's *that* got to do with (†), with its *connection between A and C*?

- Nonetheless, I think Bennett's analysis of what's at issue between Strawson and Grice is good. The following (conditional!) question is, indeed, crucial:

  > If the facts about the use of expression E-including ones about what uses of it would be found peculiar or unsatisfactory-can be explained either by (1) attributing to E a fat meaning or by (2) attributing a thin meaning and bringing in Gricean conversational principles, are we intellectually obliged to adopt (2)?

- The answer to this question is, presumably, 'Yes', for someone who adopts something like Occam's Razor as a scientific methodological principle.
- I, for one, do not (and I think the answer is 'No'). But, that's another seminar.
- As Bennett points out, this question isn't even *relevant* unless its antecedent is satisfied — unless the salient data *are explained* by the two competing (thin *vs* thick) accounts. Bennett thinks this is *not* the case, and I'm inclined to agree.
- Of course, Grice thought his thin account was explanatory in the requisite sense, but Bennett thinks this is just because he did not look at enough data.
- What data, exactly, does Bennett have in mind? Enter The Ramsey Test . . .

§12: The Ramsey Test

- Before we get into the Ramsey Test, we need to bring something that's been lurking to the fore. The "data" we are talking about have to do with which kinds of statements are "assertible" ("all right to say") in certain contexts.
- The Ramsey Test is – on one reading – about the "degree of assertability" of indicative conditionals. I (and Bennett!) think it's better to talk about "degree of acceptability" or "degree of believability" instead. But, let's push on.
- There are many renditions of the Ramsey Test. The plausible ones, I think, have to do with determining (or constraining) the appropriate doxastic attitude one should (or may) have concerning an indicative conditional $A \to C$.

  The Ramsey Test (Version 1). Add A to your stock of beliefs. Allow this change to propagate through your belief structure in such a way that it results in "minimal change". Now, check to see if the new stock of beliefs includes C. If/only if (? – see below) it does, then it's OK for you to believe/assert $A \to C$.

- This first rendition of the Ramsey Test has its problems. Bas van Fraassen (originally, Richard Thomason) discusses examples like: 'If my business partner is cheating me, then I will never be aware of the fact that he is'.
- Applying Version 1, I add 'my business partner is cheating me' to my stock of beliefs. On just about any "minimal" or "conservative" propagation, my new corpus seems to include 'I am aware that my partner is cheating me'.
- So, Version 1 (even just as a necessary condition – see below) says I should not accept/assert the conditional. But, intuitively, this may be wrong (I may, *e.g.*, know that my partner is very cunning, knowledgeable, discreet, *etc.*).

  The Ramsey Test (Version 2). Take your current degree of belief/credence function P (over the algebra of all propositions you now entertain), and impose on it the constraint that $P(A) = 1$. Allow this constraint to propagate in the most natural and conservative way. Then, see what value $P(C)$ takes after this process is complete. If/only if (? – see below) $P(C)$ is "sufficiently high", then it's OK for you to believe/assert $A \to C$.

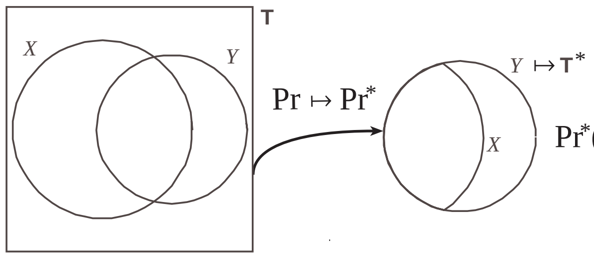
- It's not clear how this helps. *Much* more on "$P(A \to C)$" in chapters 4 and 5!

- Note: Version 2 of The Ramsey Test does not involve 'pretending to believe (or know) A'. Instead, it involves imposing a constraint on your degree of belief structure, and seeing how that constraint propagates, quantitatively.
- Also, none of the Ramsey Tests involve asking whether you *would* believe C (or what your degree of belief in C *would* be), *if* you *were* to come to believe/know A. Ramsey gave counterexamples to this subjunctive reading:
- As an atheist, say, John assigns a low probability to 'God exists'. Presumably, John also (permissibly) assigns low probability to 'God exists' *on the supposition that* he has cancer (here, think Version 2 – *conditionalization*).
- But, if John were to come to know he had cancer, then (say) his weakness would turn into religious belief. Intuitively, it would be wrong to saddle him with accepting the indicative conditional 'If John has cancer, then God exists'.
- So, whether I should believe $A \to C$ has nothing to do with whether I *would* believe C *were* I to come to know/believe A. Conditionalization doesn't work that way. We'll talk more about this later. Meantime, a brief digression:

Digression: Visualizing Conditional Probability with 'Muddy Venn Diagrams'

- A 'muddy Venn Diagram' visualization of probability models allows us to better understand the motivation for the definition of conditional probability.
- Intuitively, $\Pr(x \mid y)$ is supposed to be the probability of x *given that* y *is true*. So, when we conditionalize on y, it's like "supposing y to be true".
- Consider a Venn Diagram over X, Y, and think about how we might want to understand $\Pr(X \mid Y)$. If we "suppose Y to be true," then this is like "treating the Y-circle as if it is the entire bounding box of the Venn Diagram".
- This is like "moving to a new probability function $\Pr^*$ such that $\Pr^*(Y) = 1$."

$\Pr(X)$



$$\Pr^*(X) = \Pr(X \mid Y) = \frac{\Pr(X \,\&\, Y)}{\Pr(Y)}$$

§13: Ramsey and Grice — Some Points of Agreement & Conflict

- Sometimes, the Ramsey test (applied to "degree of assertibility") and Gricean prescriptions about assertability are in agreement, and sometimes they aren't.
- **Point of Agreement**:
  - '$A \to C$' does not get a high assertability value for me merely because I am highly confident in $\neg A$ (or merely because I am highly confident in C).
  - Grice: because I should rather say something stronger and simpler if I am confident in such a thing (which I would be in both such cases).
  - Ramsey: because the criterion is a high probability in C, *given that* A. And, neither '$P(A)$ is low' nor '$P(C)$ is high' entails '$P(C \mid A)$ is high'.
- **Points of Conflict** (five of them):
  1. Grice condemns asserting '$A \to C$' when $\neg A$ is *known*. Bennett suggests this generalizes ("in degree"?) to the case where A is highly improbable (on my P). But, even if $P(A)$ is very low, $P(C \mid A)$ can be very high. So,

while Grice must frown (at least, a little?), Ramsey might smile. Note: $P(C \mid A)$ is *undefined* when $P(A) = 0$! Thus, *agreement* if $\neg A$ is *known*! Bennett discusses this later under the rubric 'zero intolerance of $\to$'.

2. Grice condemns asserting '$A \to C$' when C is *known*. Bennett suggests this generalizes ("in degree"?) to the case where C is highly probable (on my P). But, even if $P(C)$ is very high, $P(C \mid A)$ can be very high. So, while Grice must frown (at least, a little?), Ramsey might smile. Note: $P(C \mid A) = 1$ if $P(C) = 1$! So, Ramsey *must endorse* asserting '$A \to C$' when C is *known*! This is a strike *against* Ramsey as a *sufficient* condition.
3. Grice (according to Bennett's Jackson) would say that no logical truth is assertible (since they are utterly informative). But, it seems that some are assertible. This just seems like an uncharitable reading of Grice by Bennett's Jackson. But, there is something here worth saying – which is related to (2) above. All conditionals whose consequents are logical truths will pass (all versions of) the Ramsey Test, since $P(\mathsf{T} \mid A) = 1$, for all A. Grice, I take it, would say that *none* of these '$A \to \mathsf{T}$'s is assertible.

4. Some conditionals that are *truth-functionally equivalent* differ greatly in terms of their *assertibility* (and/or *believability*). For instance:
   - (*i*) '(Even) if the bible is divinely inspired, it is not literally true.'
   - (*ii*) 'If the Bible is literally true, it is not divinely inspired.'

   Let D = 'the bible is divinely inspired', and T = 'the bible is literally true'. Then, (*i*) is '$D \to \neg T$' and (*ii*) is '$T \to \neg D$'. If the horseshoe analysis is correct, then (*i*) and (*ii*) are *logically equivalent*, because they are *contrapositives*. There seems to be no way, then, for Grice to account for the fact that (*i*) can be perfectly assertible/believable, while (*ii*) can't be. Ramsey has no such problem: '$P(\neg T \mid D)$ is high' $\not\Rightarrow$ '$P(\neg D \mid T)$ is high'.
5. Jackson's students tend to be happy with Grice's stories about 'and' and 'or', but they strenuously resist his analysis of 'if'. He and Bennett think that this suggests Grice's story is not complete, and that the question 'Why does $\to$ seem not to be truth-functional?' cannot be adequately answered without some appeal to the *meaning* of '$\to$' ("thick"). Presumably, Jackson's students are OK with the Ramsey Test (as *necessary* only?).

Chapter 3: Jackson on Grice and Ramsey — §14: Setting the Stage

- In §14, some important background is given, and some subtleties clarified:
  - The horseshoe analysis is that $\rightarrow$ and $\supset$ have the same *truth conditions*.
  - Grice and Jackson both are horseshoe analysts in this sense. The difference between them is the way they explain away the apparent counterexamples.
  - Grice uses considerations of *conversational* implicature to do this, and Jackson uses Ramsey Test + considerations of *conventional* implicature.
  - **Jargon**. A belief (or degree of belief) in C is *robust* with respect to A iff $P(C \mid A)$ is high. For Jackson, this is equivalent to '$A \rightarrow C$' *passing the RT*.
  - Jackson thinks robustness of C wrt A is *necessary but not sufficient* for assertibility/believability of '$A \rightarrow C$'. We have already seen our own potential failures of sufficiency (*e.g.*, '$A \rightarrow \top$'). Grice is *still relevant* here!
  - Key Example: robustness is *necessary* for '$A \rightarrow C$' to be useful in *modus ponens*. He's thinking of "ticket entailment". Such MP "tickets" get you nowhere if '$A \rightarrow C$' is *not* robust (*e.g.*, accepted *merely because* $C \vee \neg A$).

§15: Jackson on Conventional Implicature and $\rightarrow$

- Like Grice, Jackson distinguishes what is *asserted* or *said* when one utters '$A \rightarrow C$', and what is *implicated* by such an utterance. And, like Grice, Jackson accepts the horseshoe analysis of what is said or asserted: $A \supset C$.
- Unlike Grice, Jackson does not talk about *conversational* implicature, which is determined by the rules of conversation that are presupposed to be in force in the context of utterance. Rather, Jackson talks about *conventional* implicature.
- Conventional implicature has to do with the "conventional meaning" of the indicative conditional $\rightarrow$ itself. And, for Jackson, this conventional meaning is encoded by the (passing of the) Ramsey Test (*i.e.*, the robustness of C wrt A).
- The basic idea is that when someone utters '$A \rightarrow C$', they *assert* $A \supset C$, but they *conventionally implicate* that C is robust with respect to A (that is, that relative to *their* degree of belief/probability function P, $P(C \mid A)$ is high).
- This isn't *quite* Strawsonian; it doesn't *quite* say that a "connection" between A and C is part of the meaning of $\rightarrow$. But, it's close. It's "thicker", to be sure.

- Here, Jackson relies on an analogy with certain other connectives, like 'but':
  (1) Noam Chomsky would be a good Commencement speaker, and he is the country's most famous radical left-winger.
  (2) Noam Chomsky would be a good Commencement speaker, but he is the country's most famous radical left-winger.
- According to Jackson, (1) and (2) have the same *truth conditions* (they assert the same proposition). The difference between them is that (2) *conventionally implicates* some kind of *contrast* between the conjuncts of the assertion.
- This conventional implicature is generated not by conversational rules that are supposed by the hearer of the utterance to be in force, but by the *conventional meaning* of the connective 'but' itself. Jackson wants to tell a similar story for:
  (3) Either I didn't eat an egg for breakfast or you ate a million eggs.
  (4) If I ate an egg for breakfast, then you ate a million eggs.
- Jackson: (3) and (4) have the same truth conditions, but (4) conventionally implicates that its consequent is robust wrt its antecedent (*for its speaker*).

- In order for this to be plausible, the analogy between 'but' and 'if' has to hold water. Bennett thinks the analogy is leaky, and so is Jackson's story about 'if'.
- Before we discuss the details of the breakdown of '$\rightarrow$'::'$\supset$' as 'but'::'and', two bits of background on Jacksonian conventional implicature are useful.
- **First**: the primary aim in discourse is to communicate beliefs. The asserted content of an utterance fixes the belief the speaker aims to communicate. The conventional implicatures can help/hurt by removing/adding obstacles.
- This explains why our response to 'Susan was poor but honest' is not to say that it is *false* (assuming both conjuncts are true!). Rather, we might say something like 'You may be right about Susan, but I wouldn't put it that way.'
- But, if the hearer is under the impression, say, that there is a strong correlation between being poor and being dishonest, then this use of 'but' may be to good communicative effect, since it may *remove* an obstacle in the hearer's mind.
- **Second**: (typically) what a speaker *implicates* can be *true* (apt) *even if* what she *asserts* is *improbable*. *E.g.*, 'Wittgenstein wasn't a deep thinker, but he influenced many deep thinkers' (implicature true, assertion improbable).

§16: The Case Against Jackson's Theory of →

- I'll only discuss the first 3 of 5 objections Bennett raises to Jackson's account.
  0. Recall that, typically, (*e.g.*, with 'but') what a speaker *implicates* can be *true* (apt) *even if* what she *asserts* is *improbable*. But, with indicative conditionals, this is *not* the case! If I utter '$A \to C$', then (Jackson says) I *assert* $A \supset C$, and I *implicate* that C is robust with respect to A. But, if $P(A \supset C) < \epsilon$, then $P(C \mid A) < \epsilon$. The proof is instructive (I'll present it).
  1. Bennett: how does the *implicature* of '$A \to C$' do any Jacksonian work?

     When I tell you 'If (A) Nixon's top aides were not blackmailing him into defending them, then (C) he gave them more loyalty than they deserved', I signal to you that my $P(C \mid A)$ is high. I signal this to you . . . because this may help me to get across the belief I am primarily trying to communicate, namely that *either Nixon's top aides were blackmailing him into defending them or he gave them more loyalty than they deserved*. The conventionally implied robustness will improve your chances of acquiring precisely this belief rather than being distracted by irrelevant side-issues.

Bennett asks rhetorically: "*What* irrelevant side-issues? What are the threatening distractions, and how does the implication of robustness remove them?" There seem to be no answers forthcoming from Jackson. [Lewis provides a different motivation for asserting '$A \to C$', in cases where the speaker disbelieves A and believes C: to get the hearer to believe C even if he – unlike the speaker – believes A. This doesn't lend aid to Jackson here – it is more Adamsian. We'll discuss this later.]

  2. There is also a *formal* disanalogy between 'but', 'nevertheless', 'yet', 'anyhow', and 'however' on the one hand, and 'if' on the other:

     When W links two sentences, it can be replaced by 'and' without affecting the truth conditions of what is asserted; when used as an operator on one sentence, it can be deleted without affecting said truth conditions.

     This property is shared by all the 'but'-like operators W (for which Jackson has compelling examples of the role of conventional implicature). But, 'if' does not have this property. This is further evidence of disanalogy.

- The main problem is that Jackson (like Grice) doesn't look at a sufficient amount of 'if'-data, and he relies too much on the unmotivated 'but' analogy.

§18: The "Or-to-If" Inference [Take 2]

- I'm skipping §17, but one comment on it is in order. Bennett thinks that Jackson didn't go *far enough* toward a Stawsonian ("thick") account of →. He thinks the Ramsey Test contributes to the "*core* of asserted content". [Note: be careful not to read this as *truth conditions*! More on this later.]
- Bennett: there are two problems with the *abductive* "Or-to-If" Inference:
  - There are other (good) explanations of the facts about assertibility (and acceptability) in the story, which do not presuppose the ⊃-analysis, and
  - The ⊃-analysis *does not even explain* said facts in the first place.
- On the first point, one can use Grice + Ramsey (*without* ⊃) to explain why it was "all right for you to say" '$\neg P \to Q$' after Vladimir told you '$P \vee Q$'.
- On the second point, the ⊃-analysis *doesn't even explain* why it was "all right for you to *say*" '$\neg P \to Q$' after Vladimir told you '$P \vee Q$'. [Presumably, it *would* explain why it was "all right for you to *accept*" $\neg P \to Q$.] Bennett:

  - Vladimir was behaving badly unless he was more confident of the disjunction than of either disjunct [$\therefore \Pr(P) \neq 1$]; and Grice's theory about conversational implicature explains why. If he was not misbehaving, therefore, he accepted the disjunction independently of whether one disjunct (either one) turned out to be false; so for him Q is robust with respect to $\neg P$ [$\because \Pr(P \vee Q \mid \neg P) = \Pr(Q \mid \neg P)$, if $\Pr(P) \neq 1$]. That would make it all right by the Ramsey test for him to assert $\neg P \to Q$; and your trust in him makes it all right for you to assert this also.
  - Anyway, whether or not some rival to the horseshoe analysis does explain the acceptability of the or-to-if inference, the analysis itself does not. It contributes only the thesis that $P \vee Q$ entails $\neg P \to Q$, and thus that the truth of what Vladimir told you guarantees the truth of what you told Natalya. But it is a famous fact that a true material conditional may be an absurd thing to say; so this entailment thesis does not imply or explain the fact that if you accepted what Vladimir told you, then it was all right for you to say what you did to Natalya.
- This reads the or-to-if inference as an *abduction*, where the *explanandum* is that it was "all right for you to say" '$\neg P \to Q$' to Natalya after Vladimir told you '$P \vee Q$', and the *explanans* is that the ⊃-analysis is correct. Is IBE *valid*?