Bennett's Ch 7: Indicative Conditionals Lack Truth Values

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§38. No Truth Value (NTV)

I. Main idea of NTV: Indicative conditionals have no truth conditions and no truth value. They are neither are neither true nor false. They are not propositions.

II. "Friends of NTV"	Notable Opponents
Ernest Adams *(founder)*	Jackson
Bennett	Lycan
Gibbard	
Edgington	
McDermott	

III. Requirements for joining "Friends of NTV"

- Reject horseshoe analysis. $A \to C \neq A \supset C$
- Believe that $A \to C$ has Ramseyan conditions for *acceptability.*
- Believe there's *nothing more* to $A \to C$ than these Ramseyan acceptability conditions.* End of story. (cf. Jackson, who believes $A \to C$ has Ramseyan 'assertability' conditions PLUS truth conditions).
- Bennett, in addition to the above, also accepts import/export (i.e., his "If-And") and has "zero-intolerance" (i.e., If $P(A) = 0$, then $A \to C$ is not assertable.)

* Bennett's claim that "there's nothing more to $A \to C$ than Ramseyan acceptability conditions" suggests that Ramseyan acceptability is *constitutive of the meaning of* $A \to C$. Bennett's remarks on this are not very illuminating:

- "$A \to C$ means *whatever it has to mean* such that $P(A \to C)$ is $P(C|A)$ . . . it means *whatever* satisfies the logic that has been built on this foundation" (p. 58, chap. 4, italics in original).
- "In Adams' theory, the Equation does not *assert* an equality; rather it *defines* $P(A \to C)$ as $P(C|A)$, telling us what a conditional probability is. ...On this account the equation does not embody a substantive claim" (p. 104, chap. 7)

§39. Embedding Indicative Conditionals (ICs)

I. No Free Pass.

A. NTV items do NOT get a "free pass" to be embedded inside larger truth-functional constructions (note: items *with* truth values do get free pass). The worry seems to be that if you imbed an IC, the whole proposition loses its sense. That is, not only does it not have a truth value, but it is also is meaningless. Each proposed form of embedding NTV items should be judged separately (Adams).

B. Although, on Jackson's view, ICs have truth conditions, he concedes that the Ramseyan assertability conditions of ICs do not survive embedding. So ICs aren't any more embeddable on Jackson's account than they are on Adams' account. Jackson says he never promised that embedding ICs would always generate a (conventionally) "meaningful sentence." (Bennett notes that this is a 6th way Jackson's Ramseyan feature differs from Jackson's other examples of conventional implicature—e.g., "but".)

II. Is restricted embedding a *merit* of the NTV theory or a *shortcoming*?

Bennett: "Intuitive evidence" that ICs are not freely embeddable suggests it's a merit.
Gibbard agrees: merit.
Lycan disagrees: shortcoming.

A. Gibbard's Linguistic Evidence

1. Many embeddings of ICs <u>don't make sense.</u> NTV can account for their senselessness. Example of a senseless statement with an embedded IC:

   `"Suppose I tell you of a conference you don't know much about, 'If Kripke was there if Strawson was, then Anscombe was there.' Do you know what you have been told?"`

   [Well, it seems to me we've been told the following: " If K was there b/c S was there, then A was there too." i.e., If Kripke was disposed to go to conferences Strawson was at, then Anscombe went too.]

2. Some embedded ICs <u>do seem to make sense</u>, but that's just because we read them a *special* way (a way not based on conventional meaning).

   Gibbard's CUP example: Someone knows a cup is being held 12" above a carpeted floor and she asserts the following:

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CUP: If the cup broke if it was dropped, it was fragile.
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   The material conditional (horseshoe) version of CUP would be

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MATCUP: (Cup dropped ⊃ Cup broke) ⊃ Cup is fragile
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   a. *Gibbard's CUP Challenge for Horseshoe People*
   Suppose each element in CUP is false (cup wasn't dropped, did not break, was not fragile). THEN the whole antecedent is T and the consequent is F, making the whole assertion False. But assertable falsehoods aren't allowed, so horseshoe people have a problem here.

   b. *Gibbard's CUP Challenge to Friends of NTV*

Non-horseshoe people also have a problem: If Friends of NTV are right that the embedded conditional (cup dropped→cup broke) has NTV, then the larger conditional [(cup dropped→cup broke)→cup is fragile] shouldn't be assertable. But it does seem assertable!

- QUESTION: You might be wondering, what's the problem? Isn't CUP *itself* an indicative conditional (IC), which means it must have NTV *whether or not* we embed an IC within it? Further, it's having NTV can't be the problem, since Friends of NTV contend that statements with NTV are still assertable. So how does the IC embedded within the larger IC (which is CUP) make CUP unassertable?

- ANSWER: True, CUP is an IC and would have NTV <u>regardless</u> of whether there were a smaller IC embedded within it. The problem is that when you have nested conditionals (one conditional inside another conditional) within the antecedent, you can't apply the Ramsey test!

--------------Brief Interlude: Running the Ramsey Test on Nested Conditionals -------------

There are two types of nested conditionals: Nested Consequent: $A \to (B \to C)$
Nested Antecedent: $(A \to B) \to C$

It's fine to run a Ramsey Test on conditionals with a nested consequent, but it's impossible to run Ramsey on conditionals with a nested antecedent. Here's what happens in the two cases:

Running Ramsey on Nested-Consequent Conditional: $P(A \to (B \to C))$

$P(B \to C) = ?$		STEP 1: Assign $P(A) = 1$
Propagate to find value of $P(C)$	STEP 2: $P(B) = 1$	

STEP 1: Assign $P(A) = 1$. This gives us $P(B \to C)$. To find out what that is, we need to do a Ramsey Test on $P(B \to C)$ now.
STEP 2: Assign $P(B) = 1$. Now we can propagate and determine the value of $P(C)$.
Note: Doing Step 1 and Step 2 is the same as assigning $P(A\&B) = 1$.
Therefore, $P(A \to (B \to C))$ is equivalent to $P((A\&B) \to C)$.

Trying to Run Ramsey on Nested-Antecedent Conditional: $P((A \to B) \to C)$

$P(C) = ?$	STEP 1: Assign $P(A \to B) = 1$	
???	$P(B) = 1$	$P(A) = 1$

STEP 1: Assign $P(A \to B) = 1$. STOP. How do we assign P= 1 to a *conditional*?? The reason we're doing a Ramsey test in the first place is b/c we don't know how to interpret conditionals!
-- Can we just run Ramsey on $P(A \to B)$ now? Just assign $P(A) = 1$ and get $P(B)$?
-- NO! $P(B)$ already has a value of 1! We assigned $P(A \to B) = 1$, and the definition of the Ramsey test says $P(A \to B)$ = *the probability B has for you* after assigning 1 to $P(A)$ and 'propagating.' Sp $P(B)$ must also = 1.
--What does it mean to say $P(A \to B) = 1$ and $P(A) = 1$ and $P(B) = 1$? Which cases are *these*??

Not cases in which A has Prob=1.
Not cases in which B has Prob=1.
Not cases in which A&B has Prob=1.
So we're stuck. There's no way to find out what P((A→B)→C) means.

---Back to the OUTLINE---

- THE CHALLENGE: Friends of NTV seem to think the Ramsey test is *constitutive* of the meaning of the conditional! No Ramsey test, no meaning. So by embedding an IC within antecedent of *another* IC, the whole IC becomes meaningless. That's why Friends of NTV must say CUP is unassertable. But CUP seems to us like a meaningful sentence! How can Friends of NTV account for CUP seeming to have a meaning, given that the meaning is clearly not coming from the Ramsey test??

c. *Gibbard's own response to CUP*
Maybe we understand the antecedent "the cup broke if it was dropped" as meaning "the cup is disposed to break upon being dropped" (BASIS). So we understand CUP as meaning <u>BASIS→the cup is fragile</u>. BASIS is not a conditional, so reading the statement this way avoids having nested conditionals.

d. *Back to Kripke, Strawson, and Anscombe*
Without realizing it, we too were applying BASIS when we tried to explain how the K-S-A statement made sense! In our case
BASIS = "Kripke is disposed to go to all conferences Strawson goes to."

e. *Bennett's response to Gibbard's BASIS*
Bennett says that BASIS is a "(mis)understanding" of the conditional. It's not what we understand the conditional to mean. For BASIS to be of use, it has to work in *all* cases of nested conditionals that appear meaningful. But it doesn't. There are cases where BASIS does not seem to capture the meaning of the conditional (Bennett gives 1 ex on p. 97).

B. Lycan: ICs Embed in Longer (Meaningful) Sentences

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S: Marsha believes that John will leave if she does, and
Sharon dislikes John so much that if she concurs, she
will try to persuade Marsha to leave.
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1. Bennett says 4 things go on when someone "affirms" `S`: He *asserts* 2 propositions, *expresses* his own probability, and *asserts or expresses* (Bennett's not sure) the reason for his probability:

Asserts...

i. that M assigns a high probability to P(*J will leave* | *M will leave*) .
ii. that S greatly dislikes J.

Expresses...

iii. his own high prob. for P(*S will try to persuade M to leave* | *S concurs**)

Asserts/Expresses...

iv. his acceptance of (*ii)* as a salient reason for his own high probab. (in *iii*)

2. Bennett sees "nothing exotic" about mingling a truth-valued assertion with something NTV that is based upon it. (Cf: "She hit him so hard it wasn't funny!")

*Bennett is bewildered about what S "concurs in," but it seems pretty clear: She concurs (with M) that J will leave if M does. Like M, S assigns a high probability to P(*J will leave* | *M will leave*).

§40. A Special Case: A → (B→C)

I. Bennett's " If-And" Thesis (a.k.a. Importation / Exportation)

$$A \rightarrow (B \rightarrow C) \quad = \quad (A \,\&B\,) \rightarrow C$$

or

$$P\,(B \rightarrow C \mid A) \quad = \quad P\,(C \mid A\&B), \qquad \text{when } P\,(A\&B) > 0$$ *zero-intolerance*

II. This seems natural to Bennett. What could confirm one and not the other? Applying Ramsey test confirms the two are equivalent (he argues).

A. Lance and Stalnaker's Objection
The two Ramsey procedures can yield different results. Adding A to your stock of beliefs S_1, letting it ramify to produce new set of beliefs S_2, *and then* adding B to your stock of beliefs S_2 and letting it ramify, yielding S_3, could differ from the upshot of adding A&B and letting it ramify.

URN Example : We have two urns containing 100 balls each:

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Urn 1:  90 red iron balls and 10 green copper balls
Urn 2:  90 green iron balls and 10 red copper balls
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Agnes picks an urn at random, draws a ball out, and returns the ball w/o noting its color or composition. Then she draws a second ball from the *same* urn. Let

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R = the first ball she picked was red.
G = the second ball she picked was green.
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C = the second ball she picked was copper.
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Our probability for **(R&G)→C** should be **0.1** Why? Because adding the supposition of R&G to our stock of beliefs doesn't make either urn likelier than the other to be the one Agnes drew both balls from. And 1/10 of all the balls are copper (in both urns combined).

But our probability for **R→(G→C)** should be **0.9**. Why? Because when we add R to our stock of beliefs, *our probability that she drew from Urn 1 becomes 0.9*. Under the supposition she picked Urn 1, our probability for G→C becomes 1, since all green balls are copper in Urn 1. Under the supposition she picked Urn 2, our probability for G→C becomes 0, because there are no green copper balls in Urn 2. Our probability for R → (G→C) should then be 0.9 x 1 + 0.1 x 0 , which equals 0.9.

B. Bennett's Response to URN Objection

You must Ramsey first on R *and then on G.* When you add P(R)=1 to your stock of beliefs, you get a 0.9 "level of credence" that Agnes picked Urn 1. Into that frame of mind, you *then* introduce the supposition that P(G)=1. This causes further changes in your beliefs, including *a lowering of your probability for Agnes' having picked Urn 1.* Your new probability for Urn 1 becomes 0.5, meaning you are neutral between the two urns now. This leads you to P(C) = 0.1. So our probability for **R→(G→C)** should be **0.1**, the same as our probability for **(R&G)→C.**

Although you must freeze P(R) = 1 throughout the whole procedure above, you are not required to freeze every *credence level* that results from P(R) = 1; they are all revisable in further Ramsey steps.

C. Objection Bennett *Should've* Made

Bennett doesn't point this out, but Lance and Stalnaker have smuggled a horseshoe through the back door in attempting to show that **R→(G→C)** should be **0.9.** Recall, they said our probability for R → (G→C) should be 0.9 x 1 + 0.1 x 0. Well, where did they get the numbers 1 and 0 from?

R & Urn 1 entails (∀x) (Gx ⊃Cx) -----??----> P(G→C | R & Urn1) = 1

R & Urn 2 entails (∀x) (Gx ⊃¬Cx) -----??----> P(G→¬C | R & Urn2) = 0

But why should ⊃ give us →???

D. Another Problem for Bennett: See Brandon's "Stalnaker and Lance on Import-Export (IF-AND)

§40. A Special Case of Embedding: When A = C

I. Necessary Truth

A→(B→C)
C→(B→C) [from A=C, substitution]
(C&B)→C [from "If-And" rule]
A necessary truth

So what happens if B is *inconsistent* with C? How can (C&B)→C be necessarily true?

II. Gibbard Bites the Bullet
"C→(B→C) is a logical truth that would be accepted even by someone for whom C is assertable and B→C is not." Gibbard must accept the following as a logical truth:

`"If Andrew Jackson was President in 1836, then even if he died in 1835, he was President in 1836."`

III. Bennett Dodges the Bullet (?)
Appealing to his *zero-intolerance* rule, Bennett claims to escape this bullet. Zero-intolerance stipulates that *whenever* A is incompatible with B, no probability should be assigned to (A&B)→C. Consequently, no probability should be assigned to A→(B→C) either [based on "If-And" rule].

So the probability of A→(B→C) always equals the probability of (A&B)→C). If A and B are incompatible, then neither conditional has any probability.

IV. But Wait! Gibbard has shown elsewhere that if you accept the logical equivalence of A→(B→C) and (C&B)→C (i.e., you accept Importation/Exportation), THEN YOU MUST ACCEPT THE HORSESHOE!!! Bennett has no argument against this. Appealing to zero-intolerance won't help him

§41. Four Routes to NTV

I. NTV Accommodates Subjectivity (Ch 6).

In ICs, the speaker *expresses* but does not *report* a fact about her own state of mind. If nothing is reported, ICs aren't reports. Thus, they aren't propositions with truth values.

II. Edgington's Short, Direct Argument for NTV

Two Premises

(P1) Being certain that A∨C, without being certain that A, is sufficient for being certain that ¬AC.

#1 is an inference from perfect confidence in the disjunction to perfect confidence in the conditional [special case of the "or-to-if inference"]

(P2) It is not necessarily irrational to disbelieve A yet also disbelieve that AC.

Note: it *is* irrational to disbelieve A yet also disbelieve that A⊃C.

Proof

- Hypothesis: A→C is a proposition, so it *does* have a truth value.
- According to P2, A→C could be false while A is false, and thus while A⊃C is true.
- Likewise (by P2), ¬A→C could be false while A is false, and thus while ¬A⊃C is true.
- But then being certain that A∨C will not entitle me to be certain that ¬A→C, despite P1 saying it does.

Analysis

- #1 requires → to be stronger than ⊃
- #2 requires ⊃ to be stronger than →

Conclusion

- The hypothesis must be false. A→C is not a proposition. Therefore, NTV.

III. Unique Power to Protect the Equation from "Triviality" Proofs

A. Denial that A→C is a proposition is not sufficient to save Adams from Lewis's triviality proofs. Lewis writes,

> "it was not the connection between truth and probability that led to my triviality results, but only the application of <u>standard probability theory</u> to the probabilities of conditionals."

1. Adams also denies the probabilities satisfy the standard probability axioms. So he's safe from Lewis' proofs.
2. But Lewis adds,

> "if it be granted that the 'probabilities' of conditionals do not obey the standard laws, I do not see what is to be gained by insisting on calling them 'probabilities.'"

D. Adams' response: What Adams is calling 'probability' of A→C is a measure of the 'desirability of believing' A→C. This, Adams says, makes it appropriate to call them *probabilities,* whatever laws they satisfy. [huh??]

E. Bennett claims Adams' 'probabilities' *do* satisfy the standard axioms; it's just that Adams has restrictions on embedding—that is, on substituting expressions for sentential letters in the axioms. A fully axiomatized logic of probability permits substitution of a formula for a single sentential letter in any axiom. And THAT is what Adams rejects.

 PROBLEM: The standard probability axioms assume *closure!* Adams and Bennett have to deny closure, which means they have to reject the standard axioms.

F. Bennett concludes that the "ban" on embedding protects the Equation from Lewis' triviality proofs, Edgington's and Blackburn's proofs, Carlstrom and Hill's proof, Hajek's generalization of the latter, and Stalnaker's proof.

G. However, the ban doesn't work against Hajek's "Wallflower" disproof of the Equation, b/c that doesn't use embedding. Recall, Hajek said that the proposition A→C could be assigned a probability that is to be *matched* by a conditional probability: P(C□A). And the problem is, there aren't enough conditional probabilities to provide the needed matches.

H. Adams's defense against the Wallflower: Adams' theory doesn't assert the Equation as an equality; rather, it says the Equation *defines* P(A→C) as P(C□A). The Equation does not embody a substantive claim. It just clarifies the notion of the probability of an indicative conditional. And Adams adds that this is all there is to P(A→C), and that P(A→C) is *not* the probability of *truth* for a proposition A→C.

 PROBLEM: Doesn't Bennett himself reject H? Doesn't he believe the equation IS an equality?

IV. Richard Bradley's Route to NTV

A. Two Premises

(P1) For any 3 propositions A, B, C, such that neither A nor B entails C, it can be that P(A)>0, P(B)>0, and P(C)=0. A Venn Diagram proves this.

(P2) It is always wrong to assign P >0 to A and to A□C while holding that P(C)=0.

B. P1 and P2 conflict.

 Substitute A→C for B in the first premise above.

C. Bennett says "most plausible escape" is to keep A→C outside the scope of P1 by denying that A→C is a proposition.

 PROBLEM: Doesn't matter whether it's a proposition. You could do this proof with sentences instead of propositions. Neither Bradley nor Lewis rely on using *propositions* for their arguments to work.

§42. NTV and Moral Expressivism

I. Moral Expressivism = the thesis that moral judgments lack objective truth values and serve only to express certain of our attitudes.

II. Compared with NTV

A. Both are semantic theses, though the semantics of expressivism serve the <u>metaphysical</u> thesis that there are no objective moral facts or properties, whereas the semantics of NTV do not serve any metaphysical thesis.

B. Expressivist: the thrust of moral judgment comes purely from speaker's attitudes. The judgments don't *report* the speaker's attitudes; they *express* them without saying what they are.

C. NTV Theorist: conditionals are not reports on one's subjective probabilities. Rather, in asserting A→C one expresses his high probability for C given A, without actually saying that this probability is high.

D. In both, we learn something about the speaker's attitude. When you convince me that the elimination of all pain would be bad, you let me know of your adverse attitude toward eliminating all pain and you bring me to share it. When you convince me that A→C, you let me know your high probability for C given A and you bring me to share it.

§43. The Salutary Limits of NTV

I. Expressing One's State of Mind vs. Reporting it: ICs are not Self-Descriptive

A. Bennett: When you assert A→C, I get information about your epistemic state. I learn that your probability for C given A is high.

B. So why not say my assertion of A→C *is* my report on my conditional probability for C given A? Then it could retain a truth value....

C. Bennett's reply: Your assertion of A→C *is not* a report on your state of mind (which includes your conditional probability for C given A) because neither of us treat it that way.

1. I ask, "Are you sure?" You say, "Yes, fairly sure." When you say this, you are NOT assuring me that your probability for C given A is high. Rather, you are *expressing* your confidence in that high probability.
2. Abundant linguistic evidence shows that notions of confidence (doubt, indecision, certainty, etc.) when applied to ICs *all always* relate to the height of the person's

conditional probability for C given A, and *never* to the person's confidence about what his or her probability for C given A is.

3. Analogous to the difference b/w "That is funny" and "That amuses me."

II. NTV Clashes With Deflationism About Truth (or "True")

A. Deflationism: Calling something 'true' is equivalent to repeating or endorsing it. Since one can repeat an IC, don't deflationists have to say those ICs are true?

B. Bennett: No. Deflationism is a doctrine about all uses of 'true' and NTV is essentially limited to only certain cases.

C. Bennett's Shallow Save: Deflationism thesis should be stated as "*for every S that can properly be said to be true*, saying that S is true is equivalent to affirming it." [Not a very convincing response, Bennett.]

§44. Meaning and Expression

I. Jackson and Pettit's "Problem for Moral Expressivism" AND for NTV

A. "Friends of NTV" assert 2 things they cannot reconcile:

1. $A \rightarrow C$ does express a subjective conditional probability.
2. $A \rightarrow C$ does not report the existence of such a probability.

B. The question of what someone means by an utterance depends on what he intends to bring about by making it,

C. The intention is always to produce some change in the hearer.

§45. 'If' and 'When': A Short Dialogue

Lycon: "Friends of NTV" had better explain how *if* and *when* could have very similar syntax but yet very different semantics.

Bennett: It's because *if* ranges over a range of possibilities whereas *when* does not. A speaker *expresses* his epistemic state in using *if* but does not assert it.

Lycon: They are so semantically alike that it's incredible "I will leave *when* you leave" has a truth value but "I will leave *if* you leave" has NTV. And what happens when we combine them and say, "If and when she submits a paper, we'll read it within a month"? Are you going to tell me that has NTV also?

Bennett: Yes. "If and when" has NTV. Your sample sentence *means* "If she submits a paper, we'll read it within a month of the time *when* she submits it." So it's really an "if" sentence, not a "when" sentence.