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Postscript to "Probabilities of Conditionals and Conditional Probabilities"

Indicative Conditionals Better Explained

I retract the positive theory of indicative conditionals that I proposed in the paper. I now prefer the alternative theory advanced by Frank Jackson.[1]

The two theories have much in common. Both agree (1) that the indicative conditional has the truth conditions of the truth-functional conditional $A \supset C$, yet (2) its assertability goes by the conditional subjective probability $P(C/A)$, provided that we abstract from special considerations—of etiquette, say—that apply in special cases. Both theories further agree, therefore, (3) that there is a discrepancy between truth- and assertability-preserving inference involving indicative conditionals; and (4) that our intuitions about valid reasoning with conditionals

end p.152

are apt to concern the latter, and so to be poor evidence about the former. (As to whether "validity" should be the word for truth- or for assertability-preservation, that seems a non-issue if ever there was one.) Further, the theories agree (5) that the discrepancy between the assertability $P(C/A)$ and the probability of truth $P(A \supset C)$ is due to some sort of Gricean implicature, and (6) that an adequate account of this implicature must use the premise that the conditional has the truth conditions of $A \supset C$. I still hold these six theses.

But what sort of implicature is involved? Formerly, I thought it was predominantly a conversational implicature, akin to the implicature from "Here, you have a good point" to "Elsewhere, you mostly don't." According to Jackson, it is a conventional implicature, akin to the implicature from "She votes Liberal but she's no fool" to "Liberal voters mostly are fools."

I said, following Grice: if $P(A \supset C)$ is high mostly because $P(A)$ is low, what's the sense of saying $A \supset C$? Why not say the stronger thing that's almost as probable, not-A? If you say the weaker thing, you will be needlessly uninformative. Besides, you will mislead those who rely on you not to be needlessly uninformative, and who will infer that you were not in a position to say the stronger thing.

To which Jackson replies that we often do say weaker things than we believe true, and for a very good reason. I speak to you (or to my future self, via memory) in the expectation that our belief systems will be much alike, but not exactly alike. If there were too little in common, my attempts to convey information would fail; if there were too much in common, they would serve no purpose. I do not know quite what other information you (or I in future) may possess from other sources. Maybe you (or I in future) know something that now seems to me improbable. I would like to say something that will be useful even so. So let me not say the strongest thing I believe. Let me say something a bit weaker, if I can thereby say something that will not need to be given up, that will remain useful, even if a certain hypothesis that I now take to be improbable should turn out to be the case. If I say something that I would continue to believe even if I should learn that the improbable hypothesis is true, then that will be something that I think you can take my word for even if you already believe the hypothesis.

Let us say that *A* is *robust* with respect to *B* (according to someone's subjective probabilities at a certain time) iff the unconditional probability of *A* and the probability of *A* conditionally on *B* are close together, and both are high; so that even if one were to learn that *B*,

end p.153

one would continue to find *A* probable. Then Jackson's point is that one might say the weaker thing rather than the stronger for the sake of robustness. The weaker might be more robust with respect to some case that one judges to be improbable, but that one nevertheless does not wish to ignore.

If it is pointless to say the weaker instead of the stronger, how much more pointless to say the weaker and the stronger both! And yet we do. I might say: "Bruce is asleep in the rag box, or anyway somewhere downstairs." Jackson can explain that. There's point in saying the stronger, and there's point in saying the more robust, and they're different, so I say them both.

It could be useful to point out that one is saying something robust. One might say: "I am saying *A* not because I do not believe anything stronger, but because I want to say something which is robust with respect to *B*—something you may rely on even if, unlike me, you believe that *B*." But that's clumsy. It would be a good idea if we had conventional devices to signal robustness more concisely. So it would be no surprise to find out that we do. Jackson suggests that we have various such devices, and that the indicative conditional construction is one of them.

An indicative conditional is a truth-functional conditional that conventionally implicates robustness with respect to the antecedent. Therefore, an indicative conditional with antecedent *A* and consequent *C* is assertable iff (or to the extent that) the probabilities $P(A \supset C)$ and $P(A \supset C/A)$ both are high. If the second is high, the first will be too; and the second is high iff $P(C/A)$ is high; and that is the reason why the assertability of indicative conditionals goes by the corresponding conditional probability.

Jackson lists several advantages of his implicature-of-robustness theory over my assert-the-stronger theory. I will mention only one (which is not to suggest that I find the rest unpersuasive). I can say: "Fred will not study, and if he does he still won't pass." If the conditional is assertable only when the denial of its antecedent is not, as the assert-the-stronger theory predicts, then how can it happen that the conditional and the denial of its antecedent *both* are assertable? As already noted, Jackson can explain such things. The conditional was added for the sake of robustness, so that even if you happen to think I'm wrong about Fred not studying, you can still take my word for it that if he studies he still won't pass.

So far, I have just been retailing Jackson. But I think that one complication ought to be added. (Jackson tells me that he agrees.) Above, I

end p.154

introduced robustness by what was in effect a double definition: first in terms of probability, then in terms of what would happen if something were learned. Let us distinguish more carefully:

A is *robust* $_1$ with respect to *B* iff $P(A)$ and $P(A/B)$ are close, and both are high.

A is *robust* $_2$ with respect to *B* iff $P(A)$ is high, and would remain high even if one were to learn that *B*.

Robustness $_1$ is robustness as Jackson officially defines it; and it is the implicature of robustness $_1$ that explains why assertability of conditionals goes by conditional probability. But our reasons for wanting to say what's robust, and for needing signals of robustness, seem to apply to robustness $_2$. Most of the time, fortunately, the distinction doesn't matter. Suppose that if one were to learn that *B*, one would learn only that *B*, and nothing else (or nothing else relevant). And suppose that one would then revise one's beliefs by conditionalizing. Then we have robustness $_2$ of

A with respect to *B* iff we have robustness $_1$. In this normal case, the distinction makes no difference.

However, there may be abnormal cases: cases in which *B* could not be learned all by itself, but would have to be accompanied by some extra information *E*. Suppose *A* is robust $_1$ with respect to *B* alone; but not with respect to *B* and *E* in conjunction. Then *A* will not be robust $_2$ with respect to *B*. Example: *A* is "I'll never believe that Reagan works for the KGB"; *B* is "Reagan works for the KGB"; and *E* is not-*A*. My thought is that if the KGB were successful enough to install their man as president, surely they'd also be successful enough to control the news completely. So $P(A)$ and $P(A/B)$ are both high; but of course $P(A/BE) = 0$. Yet if I did learn that Reagan worked for the KGB, I'd *ipso facto* learn that I believed it—despite my prior expectation that the KGB would be able to keep me from suspecting. So *A* is not at all robust $_2$ with respect to *B*.[2]

When the two senses of robustness come apart in special cases, which one does the indicative conditional signal? What really matters is robustness $_2$, so it would be more useful to signal that. On the other

end p.155

hand, it would be much easier to signal robustness $_1$. Robustness $_2$ with respect to *B* amounts roughly to robustness $_1$ with respect to the whole of what would be learned if *B* were learned. (The two are equivalent under the assumption that the learner would conditionalize.) But it might be no easy thing to judge what would be learned if *B* were learned, in view of the variety of ways that something might be learned. For the most part, robustness $_1$ is a reasonable guide to the robustness $_2$ that really matters—a fallible guide, as we've seen, but pretty good most of the time. So it's unsurprising if what we have the means to signal is the former rather than the latter. And if this gets conventionalized, it should be unsurprising to find that we signal robustness $_1$ even when that clearly diverges from robustness $_2$. That is exactly what happens. Example: I can perfectly well say "If Reagan works for the KGB, I'll never believe it."

end p.156