Robustness in Assertions: A Defense for Materialism

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INTRODUCTION

In this paper, I will defend the account of Materialism as the correct analysis of the English indicative conditional by the use of assertion conditions as presented by Frank Jackson in his paper, ”On Assertion and Indicative Conditionals” (Jackson 1979). In the first section of the paper, I will introduce and explain what is meant by the ”indicative conditional” and ”Materialism”, and in section 2 I will introduce the apparent paradoxes with Materialism. Section 3 will be the theory of indicative conditionals as presented by Jackson, and section 4 will conclude the paper by resolving the paradoxes of Materialism presented in section 2 with Jackson’s approach as presented in his paper.

I. THE INDICATIVE CONDITIONAL AND MATERIALISM

Indicative Conditionals. The English indicative conditional is generally a sentences that can be expressed in the form of *If P, then Q* without losing their meaning. Here *P* and *Q* are propositions. They are sentences that *indicate* that if it is the case that *P*, then it will be the case that *Q*. This is different from what is termed the subjunctive conditional or ”counterfactual” conditional, ”counterfactual” meaning contrary-to-fact. An indicator for when a conditional is subjunctive is the use of the terms ”*were*”,”*would*”, or ”*hadn’t*” to preclude that the proposition that follows is contrary to what is actually the case. To illustrate the difference in the two types of

conditionals, I will offer some examples of a indicative conditional, and a subjunctive conditional.

Examples

1. **Indicative**
    a. ***If Oswald did not shoot Kennedy, then someone else did.***
2. **Subjunctive**
    a. ***If Oswald had not shot Kennedy, then someone else would have.***

As can be seen by the examples, (1) is true while (2) is not. That is, indicative conditionals have different truth conditions from their subjunctive counterparts. We will leave here with this distinction of the two conditionals as the goal of this paper is not to argue for a distinction of the two types of conditionals. Let → denote the material conditional. The material conditional can be defined by a truth-table. The material conditional is truth-functional, that is, the truth of the material conditional solely relies on the truth of the consequent and antecedent and not the content of each constituent proposition. I use *content* here vaguely to denote the meaning of a proposition. Here are the truth-conditions for the material conditional,

P	Q	$P \rightarrow Q$
T	T	**T**
T	F	**F**
F	T	**T**
F	F	**T**

Materialism. I will take the thesis that the material conditional "→", as just defined, is the correct analysis of the English indicative conditional, *Materialism*. This is the position I will defend in Section 4, specifically the position Jackson takes in the use of assertion conditions. As an example use of the truth-table for determining the truth of a conditional, take the conditional, *If it rains, then the street will be wet*. If it is true that, *it rained*, and it is true that *the street is wet*. Then under the material analysis of the conditional, it is true that, *If it rains, then the street will be wet*. This example makes use of the first line in the truth table. Another possible way for the conditional to be true is if is not the case that, *it rained* and it is the case that, *the street is wet*. As can be seen by the third line of the truth table, under the materialist account, the conditional, *If it rains, then the street will be wet* is still true.

II. PARADOXES OF THE MATERIAL CONDITIONAL

It may have been noted that the lack of consideration of the content of the antecedent and the consequent for determining the truth value of the conditional could be problematic, and many philosophers have given examples where such issues arise. In this section, I will cover some of the more well-known examples. The issues arising here are that the materially valid inferences do not align with our intuitive notions of validity, thus creating a disconnect between our formal logic and our reasoning faculties.

Examples

1. **Cooper's Intuitively Valid Inferences** (Cooper 1968, 297)
    a. *If John is in Paris, then he is in France. If he is in Istanbul, then he is in Turkey.*
    b. Therefore, if John is in Paris he is in Turkey, or, if he is in Istanbul he is in France.
2. **Van McGee's Counterexample to Modus Ponens** (McGee 1985, 462)
    a. Opinion polls taken just before the 1980 election showed the Republican Ronald Reagan decisively ahead of the Democrat Jimmy Carter, with the other Republican in the race, John Anderson, a distant third. Those apprised of the poll results believed, with good reason:
    b. *If a Republican wins the election, then if it's not Reagan who wins it will be Anderson.*
    c. *A Republican will win the election*
    d. Therefore, if it's not Reagan who wins, it will be Anderson.
3. **Sobel Sequences of Indicative Conditionals as Given by Lycan** (Lycan 1993, 415)
    a. *If Albert comes to the party, will be great.*
    b. *If Albert and Betty come to the party, it will be awful.*
    c. Therefore, the party will be great and the party will be awful.
4. **Switches Paradox** (Settle 1973, 421)
    a. *If you throw both switch S and switch T, the motor will start.*
    b. Therefore, either if you throw switch S the motor will start, or if you throw switch T the motor will start

The first example is a result of the material conditional being truth-functional. Since the material conditional does not take into account the content of the propositions, and allows for such paradoxes to be valid when they are intuitively invalid to us because of their contents. The second example, is an issue with the lack of our exterior knowledge being fully captured in our inference rules. (3) can be said to be a lack of precision of language while (4) is the famous switches paradox and again follows because on the truth-function nature of the material conditional.

III. ASSERTION CONDITIONS FOR DISJUNCTIONS AND CONDITIONALS

In his paper, Jackson argues that although these paradoxes that arise in the use of the material conditional are true, they are not *assertable.* That is, one is not justified in uttering these sentences on the basis of truth alone. In order for one to assert these true sentences, they must be *robust* with respect to new information and have a high probability. That is, upon acquiring new information one would still assert these sentences.

Asserting Disjunctions. For the assertion of a disjunction, it must be *robust with respect to the negation of both of its disjuncts*. I will use the examples like the ones Jackson gives in his paper, as I believe they illustrate the point quite well, but I will change the context a bit to make them more relevant. Suppose that, Kanye West and Bernie Sanders are running for office along with some other independent party candidate. Then suppose, that I am on Twitter and I read, to my dismay, that *Kanye West has won the election*. You see the look of dismay on my face and ask me who has won the election, and I respond with *"Either Kanye West won or Bernie Sanders won".* While this is true, Jackson would argue that the disjunction is not *robust* with respect to the negation of the first disjunct. That is, had I come to acquire new information that Kanye had

not won, I would no longer assert the disjunction. Now suppose a second scenario where I read from a news Twitter account that to no one's surprise, the independent candidate lost the election. This time when you ask me I say, *"Either Kanye West won or Bernie Sanders won"*. This, says Jackson, is assertable. As in hearing about either candidate winning the election, I will still believe the disjunction is true. That is, the disjunction is robust with respect to the negation of its first disjunct and is robust with respect to the negation of its second disjunct. Formally we can say this as, we are right to assert *"P or Q"*, when *Pr(PvQ)*, *Pr(PvQ|-P)*, and *Pr(PvQ|-Q)* are all high.

Asserting Conditionals. For the case of conditionals, Jackson gives assertability requirements in terms of conditional probability. That is, I can assert *"If P, then Q"* when *"If P, then Q"* is highly probable and robust with respect to *P*, meaning that *Pr(P v Q|P)* is also high. The motivation for this requirement is that one will only infer with *Modus Ponens* when such a condition is met. *Modus Ponens* is generally taken to be a valid rule of inference, but Jackson argues we must distinguish between *validity* and *utility*. While *Modus Ponens* is always valid, one would only use it when a conditional is robust with respect to its antecedent. Suppose that, it is the middle of summer in Las Vegas and I say, *"If it snows tomorrow, I will eat my shirt"*. If by some miraculous reason, it were to snow tomorrow, I would certainly not use *Modus Ponens* and infer that I will eat my shoe. Thus, while the conditional is materially true, it is not robust with respect to its antecedent, and thus I am not to assert it. On the other hand, take the sentence, *"If it rains tomorrow, then I will wear a sweater"*. Were I to find out that it will rain tomorrow, I would happily say that I will wear a sweater. This conditional is robust with respect to its antecedent and therefore assertable.

IV. UN-ASSERTABILITY OF PARADOXES

Utilizing Jackson's robustness approach one can revisit the paradoxes of the material conditional and make sense of them. Take example (1) given in section 2. The conclusion here is a disjunction, thus one must check if they satisfy the assertibility conditions explained earlier in this section. In order for a disjunction to be asserted, it must be robust with respect to the negation of each of its disjuncts. That is, one needs to check that $Pr(P \rightarrow T|\text{-}(I \rightarrow F))$ is high. Now in order to assess whether the probability of the conditional is high, the assertion conditions for conditionals must be checked. That is, whether $(P \rightarrow T)$ is robust with respect to P. The answer to this is clearly no because were I to find out that *John is in Paris*, I would certainly not infer by *Modus Ponens* that *John is in Turkey*. Therefore the conditional is not assertable, and therefore the disjunction is not assertable. An analysis of the same form explains the Switches Paradox (4). McGee's counterexample (2) to *Modus Ponens* can be explained directly by a failure of the conditional, *If it's not Reagan who wins, it will be Anderson,* to be robust with respect to the antecedent. If I were to acquire knowledge that Reagan did not win, then I would not say that it will be Anderson because I would believe it would be Carter since he is second in the polls. Now example (3), is not as straightforward. One can see that (3) can be explained by arguing that although one does accept both premises, one would not infer using both of them because that would be contradictory. This was the exact motivation for the robustness given by Jackson. Once I become aware of the fact that Albert and Betty will go to the party, the 1st premise is no longer robust with respect to its antecedent because I would not infer the part will be awful; I would infer by the 2nd premise that the party will be great.

Works Cited

Cooper, W. (1968), "The Propositional Logic of Ordinary Discourse," *Inquiry*, 11:1-4, pp. 295-320.

Jackson, F. (1979), "On Assertion Conditions and Indicative Conditionals," *Philosophical Review* 88:4 pp. 565-589

Lycan, W. (1993), "MPP, RIP," *Philosophical Perspectives*,7: pp 411-428

McGee, V. (1985), "A Counterexample to Modus Ponens," *The Journal of Philosophy*, 82:9 pp. 462-471

Settle, T. (1973), "The Switches Paradox: Which Switch?," *Philosophy and Phenomenological Research*, 33: 4 pp. 421-428