In Defense of Brogaard-Salerno Stricture[1]

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Brogaard and Salerno (2008: Counterfactuals and context, *Analysis* 68(1), 39–46) argued that counter-examples to contraposition, strengthening the antecedent, and hypothetical syllogism involving subjunctive conditionals only seem to work because they involve a contextual fallacy where the context assumed in the premise(s) is illicitly shifted in the conclusion. To avoid such counter-examples they have proposed that the context must remain fixed when evaluating an argument for validity. That is the Brogaard-Salerno Stricture.

The condition imposed by the Brogaard-Salerno Stricture—BSS, for short—seems to be 'a basic tenet of standard semantics'. Tristan Haze (2016: Against the Brogaard-Salerno Stricture, *The Reasoner* 10(4), 29–30), however, has recently objected that intuitively valid argumentative forms such as conjunction introduction do not satisfy BSS. He presents the following counter-example:

> (P1) If Mary had not had breakfast, she would have lunched sooner.
> (P2) If John had worn black shoes, he would have worn black socks.
> (C) Therefore, if Mary had not had breakfast, she would have lunched sooner, and if John had worn black shoes, he would have worn black socks.

The context—Haze suggests—does not remain fixed, since (P1) and (P2) involve different contextually determined background facts. But since the argument is still intuitively valid, BSS cannot be correct.

I'm not convinced by that argument. Haze's claim is that (P1) and (P2) have different 'background facts'. But they have different background facts just in virtue of being premises about different topics, and nothing in BSS prevents premises to be about different topics insofar as they can be part of a single and constant context. BSS solely poses a constraint upon shifting the context, i.e. upon using more than a single context when evaluating arguments for validity. This constraint is not violated in Haze's

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argument: the context we use to evaluate the truth of the conclusion is the same as the context used to evaluate the truth of the premises. Thus, it cannot be a counter-example to BSS.

For comparative purposes, let's put Haze's argument in a situation where a violation of BSS *does* occur. Suppose the context in which we evaluate the premises is composed by the following facts: Mary is on a special diet that requires her to have light bites every couple of hours; John has an OCD that propels him to always match his socks with his black shoes. Given these background facts, the premises are true. Now, suppose that the context in which we evaluate the conclusion involves slightly different facts: Mary has to fast the entire morning and John's OCD impels him to match black socks with his black shoes only on Sundays. If one now uses conjunction of introduction to draw an inference from (P1) and (P2) to (C), the argument becomes invalid. That is precisely what BSS would predict, after all no single context was kept fixed throughout our evaluation.

To what is worth, Haze is not denying that contextual restrictions need to be placed on argumentation. He does regard determining the proper contextual restrictions on argumentation an important task. His only concern is that BSS is not up to the task. However, as I tried to show, BSS seems to do a very good job when properly understood.

In fact, BSS does more than placing contextual restrictions on argumentation. It has further interesting consequences not usually acknowledged. First, as Brogaard and Salerno (2008: 41) show, BSS not only serves to block counter-examples to instances of unpopular argumentative forms such as contraposition, strengthening the antecedent and hypothetical syllogism that involve subjunctive conditionals. It is also the only way to avoid counter-examples to instances of the venerable *modus ponens*.

Second, as noticed by Lycan (1999: It's Immaterial (A Reply to Sinnott-Armstrong). *Philosophical Papers*, 28(2), 133–136), if we keep the context fixed when evaluating the validity of arguments, counter-examples to contraposition, strengthening the antecedent and hypothetical syllogism involving *indicative conditionals* all disappear. In fact, even counter-intuitive classical argumentative forms such as the paradoxes of the material conditional are valid when the context is kept fixed. For instance, from 'John will not drink sulfuric acid' it is legitimate to conclude that 'If John drinks sulfuric acid, he will gain super powers'. The conclusion is false only in a context where the antecedent is true; but I cannot assume the conclusion's antecedent is true without illicitly shifting

the context and disregarding that the antecedent was false in the premise. Thus, BSS seems to support argumentative forms from classical logic.

If the reasoning above is correct, it would give us a reason to accept the truth-functional hypothesis, according to which indicative conditionals of the natural language and the material conditional of classical logic have the same truth conditions. The fact that classical argumentative forms that involve indicative conditionals are valid under BSS provides a reason to think that indicative conditionals are material. After all, how else would we be able to explain this match between formal logic and natural language if indicative conditionals weren't material?

Perhaps even more interestingly, a similar reasoning to the above can be used to defend that subjunctive conditionals are material. After all, classical argumentative forms involving subjunctive conditionals are also valid under BSS, as shown by Brogaard and Salerno's discussion of some counter-examples to contraposition, strengthening the antecedent and hypothetical syllogism involving subjunctive conditionals. All suggests that a similar defense would work with the paradoxes of the material conditional involving subjunctive conditionals. The paradoxes of material conditional ensure that from the premise 'John will not drink sulfuric acid' it is legitimate to conclude that 'If John had drunk sulfuric acid, he would have gained super powers'. The conclusion is only false when the antecedent is true, but the premise is only true when the antecedent is false. Thus, there seems to be a promising route indicating that BSS also implies that subjunctive conditionals are material. Pursuing this route, however, is a task for another occasion.