



Indicative Conditionals and the Adoption Problem

Condicionales Indicativos y el Problema de la Adopción

Mariela Rubin

Universidad de Buenos Aires (UBA), Argentina / Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina

marubin@gmail.com | <https://orcid.org/0000-0002-9392-3618>

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Resumen: En este trabajo argumento que la lógica de los condicionales indicativos debe validar Modus Ponens. Primero, voy a argumentar, siguiendo a Birman (2015, 2024) y Kripke (2023), que Modus Ponens es una regla *inadoptable*, en el sentido del *Problema de la adopción* de ser “inadoptable”. Luego argumentaré que no solo es inadoptable sino que es *irrecapturable*. Es decir, que es imposible rechazar la validez de la regla pero aceptar como correctas las instancias no problemáticas de forma sistemática. Voy a mostrar que lo que la literatura señala como las instancias problemáticas constituyen tanto la forma de las reglas de inferencia así como la forma de los principios normativos que guían nuestro razonamiento cotidiano. De esto concluyo que si rechazamos Modus Ponens, no queda ninguna forma de instanciar ninguna regla de inferencia (en particular, ninguna regla para el condicional), así como también nos quedamos sin ninguna guía normativa sobre cómo razonar respecto de lo que dictamina la lógica.

Palabras claves: Modus Ponens, Condicionales Indicativos, Problema de la Adopción, Principios Puente.

Abstract: In this work I will argue that a logic for indicative conditionals has to validate Modus Ponens. First, I will argue, following Birman (2015, 2024) and Kripke (2023) that Modus Ponens is an unadoptable rule, in the Adoption Problem sense of being “unadoptable”. I will then argue that it is not only unadoptable, but it is also unrecapturable. That is, it is impossible to reject the validity of the overall rule while still accepting its non–problematic instances in a systematic way. I will show that what the literature pinpoints as the problematic instances constitute both the way inference rules and usual principles for normative guidance about reasoning are formulated. Therefore, if we reject Modus Ponens, we are left with no way of instantiating any rule of inference (in particular, any rule for the conditional), and we are left with no way to instantiate any principle that allows one to link everyday reasoning to logic.

Keywords: Modus Ponens, Indicative Conditionals, Adoption Problem, Bridge Principles.

1. A problem for Conditionals

Along these pages, I will argue that a logic for indicative conditionals has to validate Modus Ponens. First, I will argue that Modus Ponens is an *unadoptable* rule, where unadoptable is a technical term coined by Kripke (2023)—where being unadoptable roughly said, means that either you already use the rule or that adopting it is impossible—. The first goal of the article is to import the discussion from the literature on the revision of logic to the field of indicative conditionals. Once the well–known arguments are exposed, I will argue that it is not only unadoptable, but it is also *unrecapturable*, where roughly put to recapture a rule is to define a set of non–problematic instances that we can accept while still rejecting the overall validity of the scheme or the rule. I will do it by revisiting the two main arguments against Modus Ponens —MP from hereafter— for indicative conditionals: McGee’s and Kolodny and MacFarlane’s alleged counterexamples. I will show that what McGee points to be the problematic instances constitute the form of every general rule of inference. Therefore, if we reject the validity of MP because of these problematic instances, we are left with no guide on how to infer at



all. Then I will show that what Kolodny and MacFarlane signal to be the problematic instances of MP constitute the form of those principles that relate logic and reasoning, namely Bridge Principles. Therefore, if we reject the validity of MP because of these problematic instances, we are bound to reject the normativity of logic.

The literature on indicative conditionals is as vast as one's imagination, and one can find little to no consensus in it. There seems to be no agreement on whether conditionals have truth conditions and what's more, not even regarding the validity of MP. But MP is no minor issue, whether one is doing logic or semantics for indicative conditionals, eventually the question arises: does your theory of conditionals validate it? Maybe, the most famous case against MP was raised by McGee in the '80s:

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:

If a Republican wins the election, then if it's not Reagan who wins it will be Anderson.

A Republican will win the election.

Yet they did not have reason to believe

If it's not Reagan who wins, it will be Anderson.

(McGee, 1985:462).

McGee's point was that there seems to be good reasons to *believe* in the premises and not to believe in the conclusion of that argument.

If we think of a regular instance of MP, and by that I mean an argument where the main premise is a simple conditional (that is a non-nested conditional where no modal operators are involved) there seems to be consensus that $A \rightarrow B$ and A implies B . The discussion, at this point, mainly arises for the case of nested-conditionals as the example above shows. And it is usually framed in terms of beliefs. That is, the question that McGee raises is not if MP preserves truth from premises to conclusion, rather if MP preserves the warrant of belief or something of the sort. Meaning that if a conditional were to validate MP, then it has to be the case that if you have a high degree of belief in the premises, your degree of confidence in the conclusion has to be high.

Nevertheless, McGee's alleged counterexample to MP seems to be somewhat odd. After reading it, one has the sensation that something went wrong in the process. Of course, the hard challenge is to pinpoint exactly what is happening. In (Lo Guercio & Rubin, 2025) I contend that there is a mix of pragmatic phenomena that are doing the oddness job. In a nutshell, what we defend is that McGee's alleged counterexample shows that the two premises and the conclusion cannot be felicitously asserted altogether for two unrelated issues. On the one hand, we argue that there is an ambiguity in the indefinite determiner phrase "a Republican", namely it can receive a specific and a non-specific reading. Once they are disambiguated, the example loses its intuitive appeal: either it is an intuitively acceptable instance of MP or if one considers the overall content of the premises, including pragmatically conveyed information, it fails to be an instance of MP. On the other hand, the second problem is that the conditional conclusion "If Reagan doesn't win the election, Anderson will win" triggers the implicature that the speaker ignores whether Reagan will win the election, which contradicts the specific interpretation of the second premise. But when it comes to beliefs, besides McGee's alleged counterexamples all the reasons for believing the premises and not believing the conclusions are technical. By that I mean that the theories that invalidate MP for nested conditionals explain its failure by means of the model they are presenting, but they cannot raise any other intuition against it.

As a second contender against MP, Kolodny and MacFarlane present the so called *miners paradox*. Here is the paradox:

Ten miners are trapped either in shaft A or in shaft B, but we do not know which. Flood waters threaten to flood the shafts. We have enough sandbags to block one shaft, but not both. If we block one shaft, all the water will go into the other shaft, killing any miners inside it. If we block neither shaft, both shafts will fill halfway with water, and just one miner, the lowest in the shaft, will be killed. We take it as obvious that the outcome of our deliberation should be

We ought to block neither shaft.

Still, in deliberating about what to do, it seems natural to accept:

If the miners are in shaft A, we ought to block shaft A.

If the miners are in shaft B, we ought to block shaft B.

We also accept:
Either the miners are in shaft A or they are in shaft B.
But (2), (3), and (4) seem to entail
Either we ought to block shaft A or we ought to block shaft B.
And this is incompatible with (1). So we have a paradox.
(Kolodny and MacFarlane, 2010:1–2).

As one can see, in this paradox there are several inferential steps to impugn. Here the problem arises when conditionals meet “oughts” operators. In section 4 we will discuss this problem in depth, but for the time being it seems enough to recall that both the rule for disjunction introduction and which rules govern the behaviour of the oughts seem less intuitive than MP.

In what follows, I will argue that Kripke’s argument against revising classical logic can be (and should be) raised as an argument against the theories about conditionals that invalidate MP. I will argue, first following the literature about the Adoption Problem, that Modus Ponens is an unadoptable rule because of its self-governed nature. In section 2, I will revisit the original problem and translate the original argument into the indicatives realm. In section 3, I will argue against what I call the *accepting strategy*. In section 4, I will then argue that MP is also impossible to recapture, in the sense that we cannot accept just the unproblematic instances. This argument has two parts. In section 4.1, I argue that the rules for every logical connective are problematic instances. In section 4.2, I contend that one can raise a similar case against Kolodny and MacFarlane’s argument. This time because if the problematic instances of MP arise when indicatives interact with deontic operators, then there is no possible Bridge Principle that we can follow. I will start next section by explaining the Adoption Problem (AP from hereafter).

2. Adopting Modus Ponens

Following Kripke’s argument, Birman (2015) in her Ph.D. dissertation and later in (2024) introduces us to a peculiar character named Harry. Harry is a person who has never made an inference following Universal Instantiation or MP and does not know the principles at all. The question Birman asks is, what if we try to teach Harry to instantiate the universal or eliminate the conditional? That is, we try to get him to adopt the rules of Universal Instantiation —UI from hereafter— or MP. We can understand the concept of adopting a principle in the following way:

Adopting a principle: An agent adopts a principle if the agent didn’t infer according to it previous to that moment, the agent accepts the principle at that moment and they start inferring in *accordance* to that principle in virtue of having accepted it.

Now, suppose that we try to explain Harry how UI works:

— “Universal statements always imply all their instances”

— “Yes”, says Harry, “I understand”

We then proceed to test that he has in fact adopted UI. We ask “Did you know that all the animals in the movie Madagascar talk?”

— “No, but I believe you”

— “And did you know that Alex is a character in the film who is also an animal?”

— “No, but I believe you”

And then we ask him: “Does Alex speak?”

To which Harry replies: “I don’t know, I didn’t see the movie”.

This scenario is consistent with the premises of the mental experiment. If Harry can’t infer according to the UI rule, presenting him with an explicit statement of the rule is not doing any good, since in order to infer with the sentence “universal statements always imply all their instances” one has to instantiate a universal quantifier. The case is identical for MP. Birman reframes the problem this time for MP:

Assume Harry’s troubles are not with UI but with MP. If someone who has never inferred in accordance with the MP principle were told that “For any A and B, if A then B, and A, entail B” (or “ $p \wedge (p \supset q)$ entails q ” is correct), he wouldn’t be in a better position to perform a MP inference. For the principle to instruct him, he will need to infer in accordance with the MP pattern already, since he will only get to B from his premises by performing a MP inference on the instantiation of the principle itself. But that is exactly what he couldn’t do to begin with. (Birman, 2024:8).

One of Kripke's conclusion is that there are certain rules that one simply couldn't adopt:

There are certain rules which you just couldn't adopt: you couldn't tell them to yourself, because if you told them to yourself without already using them, they would be useless; so they either don't help you or they were superfluous anyway. ((Kripke, 1974) quoted in Birman, 2015:112).

The main point of these authors is that both MP and UI are unadoptable principles because the very form of the rule already involves performing both a MP and a UI. Here it is worth making a stop to have a better grasp of what performing a MP into a MP means.

MP is a rule of inference that, as Fiore (2022) points out, can be understood either in a *normative* way or in a *descriptive* way. Here are two possible ways of presenting the rule according to this distinction:

(N–MP): For any sentences A and B, if you accept A and accept “if A then B”, then you should accept B.

(D–MP) For any sentences A and B, A and “if A then B” entail B.

(Regarding the way (N–MP) should be stated correctly there is a huge literature to which we will come back in section 4.) The important thing to note at this point is that (N–MP) tells us what we should infer from a conditional and its antecedent, while (D–MP) is simply a statement of what follows from what. When Kripke and Birman explain the concept of adoption they do it by appealing to the idea of inferring in accordance to something. But as Fiore (2022) explains, the notion of accordance has normative force in the sense that an agent infers in accordance with some principle as long as they make an inference that is required by the principle. Fiore's point is that this way of understanding accordance leaves out all descriptive principles, because they require nothing from noone, they are merely descriptive facts. In order to fix this problem, Fiore proposes a different way to understand the notion of accordance. Fiore describes it in the following way:

Accordance: an agent infers in accordance with a logical principle as long as the principle is normative and the agent makes an inference required by that principle or the principle is descriptive but the agent infers in accordance with some normative counterpart of it.

Once we see it like that, then we can think of an agent inferring in accordance to MP in the following way. Let's imagine a Tortoise who is familiar with UI facing the following argument:

- 1) For any sentences A and B, if you accept A and accept “if A then B”, then you should accept B. [Premise: N–MP].
- 2) If you accept “if two sides of a triangle are equal to a third one, then they are equal between each other” and “two sides of a triangle are equal to a third one”, then you should accept that “the two sides are equal between each other”. [By UI on 1].
- 3) I accept that “if two sides of a triangle are equal to a third one, then they are equal between each other”. [Premise].
- 4) I accept that “two sides of a triangle are equal to a third one”. [Premise].
- 5) I should accept that “the two sides of the triangle are equal between each other”. [N–MP on 1 to 4].

Notice that in order to infer in accordance to MP, the argument had MP (its normative version) as one of its premises, and one had to apply the rule on its premises (as well as UI). So, one could say that the successful realization of any inference involves using both a MP and a UI. Kripke takes it further, he says, it is reasonable to think that these two rules¹ are both fundamental and *unadoptable*. In the sense that either they were already part of our stock of rules or, if they are not, one will not be able to understand them by adding them explicitly. And furthermore, if one doesn't understand them, one would not be able to apply any inference rule successfully.

Another way to understand this problem is in terms of what Finn (2015) calls the self-governance of MP. She says:

Logical rules of inference are, very generally speaking, universals and conditionals in their structure. (...) Logical rules of inference take us from premises to a conclusion via a conditional (...) The antecedent of the conditional will name a situation when the rule is applicable, and the consequent of the conditional

¹He argues for some other rules like conjunction introduction too.

will name what one should do when faced with an instance of that situation. It is therefore written into the very nature of what it is to be a logical rule of inference that it is universal and conditional in its structure. So given that we have said that all logical rules of inference are universal and conditional in their structure, then those rules that govern or describe how to deal with universal or conditional structures (namely UI and MP respectively) will face problems by being of the structure that they themselves govern. Thus UI and MP will unavoidably govern themselves, due to always being logical rules with the structure that they themselves govern. (Finn, 2015:9–10).

The case for MP I think is even more critical than that of UI. While UI has the following form: “If you accept a universal statement, then you should accept each of its instances”, practically all interesting instances of this rule involve conditionals², since most universal statements involve restricted quantification³. So the situation is further aggravated: it is not just that the rules of UI and MP are self-governed rules, but to instantiate the universal in any interesting case you have to execute a MP within the rule.

Kripke’s argument is not about indicative conditionals in particular. He is arguing against Putnam and Quine about the possibility of revising classical logic. By the time he formulated the argument that logic (the one that invalidated MP) was hypothetical, yet it only took 5 years to appear. In 1979 Priest presents **LP**, the logic of paradox (Priest, 1979) where the connective that is interdefinable with the disjunction $\neg A \vee B$ works as a conditional. Priest himself accepts that that symbol is not a conditional because it invalidates MP. In his own words:

...we need only note that dialetheism disposes, once and for all, of “material implication”. The reason is simple. Any conditional worth its salt, \rightarrow , should satisfy the modus ponens principle: $\{a, a \rightarrow b\} \models b$. This is, indeed, analytically part of what implication is. Yet this principle fails for material implication as we saw (section 5.2, Fact 3). $\{a, \neg a \vee b\} \models b$ is not, in general, true. Hence material implication is not the conditional. (Priest, 1979:83).

But as we will see in section 4, other authors like Beall (2015) and Goodship (1996), defend that **LP**’s arrow can rightfully be called a conditional.

In any case, what it is important to remark at this point is that Kripke’s argument is about revising classical logic and accepting some possible contender. While Kripke might have thought that Classical Logic was the best logic to formalize the way we reason, and therefore that might have translated into an argument in favor of the material conditional, the problem remains untouched for those who care about indicative conditionals. And regardless of the original intentions under which the AP was written, I think this argument is of particular interest in the discussion about indicatives, because it’s a problem of which rules are at the base of the logic we use to think, the logic under which we make a logic, and those rules should be stated in terms of the conditional we use in our daily basis.

Going back to Finn’s argument, if a speaker can’t infer using MP, then she won’t be able to use any other rule for the conditional—whatever they may be—. Of course, someone could say that the conditional involved in the formulation of the rules of inference is not an indicative conditional but a material conditional. However, while it is true that when we do logic (and meta-logic) we think of the conditional with which the rules are formulated in terms of the material conditional, it is also true that the rules that determine the behavior of the logical connectives have a normative role—or intention—with respect to the way we infer in our everyday life (we will come back to this in section 4) and it would be enough for Harry to understand how to perform MP for some conditional for him to understand the rule. The problem for Harry is not that he doesn’t know the material conditional; rather, that we are presenting him with conditional-form statements and he cannot perform a MP, whatever connective that conditional is.

But even if we deny the normative role of rules and assume that the correct rules are those that describe the practice of speakers, we could argue that Harry is a *reductio ad absurdum* of people who don’t understand the conditional or the universal quantifier. Taking Brown out of context, we could say that “At any rate, the presumption is that through ignorance, mistake, or eccentricity he is not malting a standard use of his words.” (Brown, 1954:175). Brown here is talking about a close relative of Harry, the Tortoise from Lewis Carroll’s famous paper “What the Tortoise said to Aquiles” (1895). I will not dig into this discussion for reasons of space, but in a nutshell, the Tortoise is torturing Aquiles by accepting hypothetical statements of the sort “If A and B and A are true, then B is true” and accepting the truth of instances of the form “If A then B” and “A” but denying

² At least if we understand quantification in a classical way.

³ Restricted quantification: $\forall x(Px \rightarrow Qx)$.

the truth of “B”. Lewis Carroll’s intentions are different from Kripke’s, but Harry and the Tortoise share a problem, they cannot or they refrain from performing MP. If we think that knowing the meaning of a connective implies knowing how to use it, following the inferentialist spirit of Brandom (1994), Buacar (2015), Dummett (1991), Prawitz (2006) and Steinberger (2011) to name a few, then if one is unable to learn how to use the rule, one doesn’t know its meaning, and that is the first impression Harry and the Tortoise give to us.

There are two potential ways out of this problem that someone who wants to invalidate MP can take: (a) say that while we cannot adopt MP, we can reject it. That is, to make a distinction between *adopting* and *accepting* and to show that even if it is an unadoptable rule, it is a rejectable rule or (b) say that it is possible to reject the validity of the rule but to recognize and accept the non–problematic instances of MP and argue that within these instances are included those that make the rule self–governed. In what follows, I will argue that neither of these two strategies are possible when it comes to indicative conditionals. I will start by explaining what it means to accept a theory in Williamson’s terms in (2020) and arguing against this move in the case of the logic of indicatives. Then I will argue against the recapture strategy.

3. Accepting Modus Ponens

In 2010, Williamson makes a distinction between *adopting* and *accepting* a rule. Even if we accept that there are certain unadoptable rules, he says, it is possible to accept or reject them. For Williamson, the concept of adopting a rule is a voluntary act. In that sense, he grants Kripke and Birman’s objection that both MP and UI are unadoptable. However, we could think of another kind of involuntary action that governs our practices. He calls this action “accepting” a logic (a deviant logic). The idea is that an agent accepts a theory for theoretical reasons that are not necessarily consistent with the agent’s practice, and the act of accepting that theory generates that one gradually accommodates the practice to that theory.⁴

But is it possible to accept a theory of conditionals whose rules do not include MP? Accepting a logic involves not only defending that theory but eventually starting to infer according to what that theory sanctions. In Williamson’s words: “I mean something like believing it, relying on it, being disposed to apply it and act on the results, much more generally.” (Williamson, 2021:9).

But if we cannot adopt MP, how can we unlearn it in order to reject at least some instances after some theoretical considerations? After all we just said, unlearning it would be disastrous. If we go back to Finn’s argument, whatever rules of the conditional the theory sanctions, executing them involves inferring according to MP. An intuitionist will contend that one can adjust its practice so that in some relevant context one accepts $\neg\neg A$ but rejects A on the basis of certain reflections on the meaning of negation. However, one cannot adjust one’s practices so as to stop accepting that if $A \rightarrow B$ and A then B , since to do so would imply that one would have no basis for accepting the conclusions that follow from any other rule that does validate the theory.

Someone might insist that while this is true, the fact that the rule is invalid does not mean that all its instances are incorrect. In particular, it is enough to be able to identify the problematic instances and refrain from using the rule in those cases. There are several philosophers who accept theories of conditionals that invalidate MP, such as Beall (2015, 2017), Egré et al. (2023) Goodship (1996), Kolodny and MacFarlane (2010) and McGee (1985) to name a few. The reasons are different in each case. For McGee and Egré et al. the problem arises for nested conditionals. For Kolodny and MacFarlane the problem arises when modal operators are involved. While for Beall and Goodship the reasons are related to semantical paradoxes. The discussion on semantic paradoxes usually doesn’t take examples (or evidence) from natural language and hardly interacts with the literature on indicative conditionals. At the same time, the problematic instances that make MP invalid here involve a language for first order logic extended with a transparent truth predicate. Saving some particular discussions on restricted quantification like (Belnap, 1970) or the relation between conditionals and compositionality as in (Huitink, 2010) the discussion on indicatives usually takes place for a propositional language. In this vein, I take it that the conditional that truth–theorists are seeking is not an indicative one, rather something to replace the material conditional. Furthermore, the possible solutions involve a huge amount of technicalities that take us far from our goal while the problems for indicatives are already at the propositional level and remain there without the need to extend the language with quantifiers or theoretical terms such as a Truth predicate. For these reasons, I will leave aside the problematic instances pointed out by the discussion on

⁴ Williamson is thinking about accepting a theory because he is defending an anti–exceptionalist view of logic, in which he argues that the methods for revising logic are continuous with those of empirical sciences. I will ignore this discussion for reasons of space, but a long compilation on the Adoption Problem and anti–exceptionalism has been published in *Análisis Filosófico* Vol 42, edited by Barrio and Birman. One can refer to several articles discussing this problem such as: Franceschini (2022), Galovich (2022) and Roitman and Marrero (2022).

theories of truth. Yet I start presenting the problem posed by Beall and Goodship in the context of adding a transparent Truth predicate to a first order language, because I will follow their recapture strategy, to see if we can save MP from the Adoption Problem by rejecting its validity and saving the non–problematic instances.

In the next section, I will argue that it is not possible to recapture the non–problematic cases for MP because the rules of inference involve nested conditionals and what we will call “Bridge Principles” involve both nested conditionals and the interaction between conditionals and deontic operators.

4. Recapturing Modus Ponens

In (2015) and in (1996), Beall and Goodship respectively defend the already mentioned logic **LP**. **LP** has a material conditional in the sense that $A \rightarrow B$ is equivalent to $\neg A \vee B$. But for this arrow, MP is invalid. As we saw before, for Priest this is a strong enough reason to reject this symbol as a proper conditional. Yet Beall and Goodship argue for the contrary: they hold to the idea that **LP** has a conditional that doesn't validate MP because MP is in fact an invalid inference for conditionals⁵. For them, there are contexts in which MP fails, namely those that involve semantic paradoxes as the Liar paradox (the sentence that says of itself that is false). They argue that nevertheless there are some contexts in which one can infer according to MP as long as they don't involve those elements that put one into risk of paradoxicality, that is, one can use the rule if one can pinpoint its non–problematic instances. This is a well–known strategy for the non–classical logician and it's called *recapture strategy*. Recapture is about finding a systematic way to identify unproblematic instances so that we can apply classical logic in those contexts. To understand the strategy I will summarize their argument in the context they present it and then I will translate it to our contexts of interest.

LP is a three–valued logic, with 1, $\frac{1}{2}$ and 0 as truth–values, where the designated values are 1 and $\frac{1}{2}$. In particular, this logic presents the following truth–tables for the conditional:

$A \rightarrow B$	1	$\frac{1}{2}$	0
1	1	$\frac{1}{2}$	0
$\frac{1}{2}$	1	$\frac{1}{2}$	$\frac{1}{2}$
0	1	1	1

So an inference $\Gamma \models_{LP} \Delta$ is valid if and only if for every valuation v if v gives 1 or $\frac{1}{2}$ to every premise in Γ , then v gives 1 or $\frac{1}{2}$ to some conclusion in Δ . MP is invalid in **LP** because it is possible to find a valuation such that it gives designated value to all premises and undesigned value to the conclusion. i.e a v , such that $v(A \rightarrow B) = v(A) = \frac{1}{2}$ and $v(B) = 0$. Nevertheless, **LP** validates the following inference: $A \rightarrow B, A \models B \vee (A \wedge \neg A)$ or with multiple conclusions: $A \rightarrow B, A \models B, A \wedge \neg A$.

What Beall and Goodship argue is that the reason we tend to infer B from $A \rightarrow B$ and A is because it is a valid inference and because we have an epistemic maxim that tells us that in normal contexts we should reject contradictions. Non–normal contexts for these authors, as I mentioned before, are contexts involving pathological sentences such as the Liar paradox. For them, the recapture strategy run along the lines of accepting MP when no truth predicate or no paradoxes are involved⁶. As we saw in the examples at section 1, the problem with indicative conditionals and MP runs before we add truth predicates to the language, so I want to reconstruct how Beall and Goodship's argument would go if we were looking at the problematic fragment for the discussion about indicatives. That is, try to recapture according to which are the problematic contexts that

⁵ Beall's argument is about disjunctive syllogism, not MP, but because in this logic the arrow is interdefinable with the disjunction both inferences stand or fall together.

⁶ The concrete way to do this is not so simple and I will leave it out of this work because it would take us far from our goal. To see an example see Fiore and Rosenblatt (2023).

usually arise when working with indicative conditionals and see if it is possible to reject MP in general terms but to keep the non-problematic instances.

4.1. Republicans against Modus Ponens

As we saw in McGee's counterexample, the problematic contexts of the rule are those that contain nested conditionals. In particular, right-nested conditionals of the form $A \rightarrow (B \rightarrow C)$. The main problem with this proposal is that the recapture rule for MP is itself a nested conditional that tells us that:

N-MP1: If you accept if A then B and accept A, then you should accept B.

Or alternatively that:

N-MP2: If you accept if $A \rightarrow B$, then if you accept A, then from that follows B.

If we were to restrict the use of rules to cases of non-nested conditionals, we could never use the MP rule. One could argue that the " $A \rightarrow B$ " of the antecedent is simply being mentioned and not used and maybe we can bite that bullet and reconstruct N-MP1 as:

Abstracted Rule: If these two propositions hold, then infer this other proposition.

And I think that might be true. But the problem reappears when we look at the recapture rule itself, because it also involves a nested conditional. To wit:

Recapture Rule: If you accept $A \rightarrow B$ and B, then if neither A nor B have nested conditionals, then you should accept B.

A possible counterargument is that the " $A \rightarrow B$ " in the antecedent is of a different nature than the main "If... then". Meaning something like " $A \rightarrow B$ " is an indicative conditional while "If... then" is material. But I don't think this is a reasonable argument, in the sense that we are looking for rules that actual human beings can follow, and recapture rules should be at disposal of people that might not know the material conditional. At the same time, the mention/use strategy here wouldn't work because we are still left with a nested conditional:

Abstracted Recapture Rule: If this and this propositions are the case, then if neither of these other propositions have nested conditionals, then we can infer that this other proposition.

A possible reply is that we should not be banning every instance of any nested conditional, rather instances of right-nested conditionals as it is the case of McGee's counterexample, and this N-MP1 or N-MP2 are left-nested conditionals. Yet this is not the case for the Recapture and the Abstracted Recapture Rule. Finally, a possible way out is to argue that there are other ways to formulate the recapture rule that don't involve nested conditionals. But even if one accepts this strategy, we are left with the normativity problem, because normative statements that tend bridges between logic and reasoning are nested conditionals that also involve deontic operators.

In the next section, I will show that Bridge Principles are a reloaded version of this problem, because these sentences don't only involve nested conditionals but also make deontic operators interact with them. To understand the problem, I will first explain why Kolodny and MacFarlane's paradox experiment poses a problem to MP, then I will explain what are Bridge Principles and finally I will show why the recapture strategy also fails.

4.2. Miners against Modus Ponens

The *miners paradox* was presented by Kolodny and MacFarlane in 2010 as another case against MP. The miners paradox, unlike McGee's counterexample, involves several assumptions other than the context given by the authors⁷. This is to recall that one can reject its impact against MP using several strategies. First of all, to run the paradox one has to accept that the logical form of the argument can be extracted straight-forward from the premises. This means that one has to agree with the authors that there are no dyadic modal operators such as "ought to do A given B", or that the scope of the "ought" is narrow. That is, to accept that the form of premises (2) and (3) is "If p, then Oq" rather than "O(if p, then q)". Secondly, a reader familiar with propositional logic can check that to derive the paradox one has to use more than MP, in particular disjunction introduction and elimination. So one has to accept the validity of the three rules of inference. And finally, there is also some assumptions about the nature of the "ought"s that appear in the premises and the conclusion: in short, there is a non-trivial discussion on whether all the modalities in the argument are objective or subjective and determining this can make some of the premises false or just ambiguous. I will not dig into this discussion because it would lead us really far from the goal of this article. Again, I just want to point out that the miners paradox can be blocked in many ways other than by rejecting the validity of MP. And I say this, because I want to argue that if we reject all the other possible solutions and decide to argue that the problem here is posed by

⁷ At the same time, it is important to note that unlike McGee's counterexample, the miners paradox threatens truth preservation of MP.

MP, then we have to reject any theory of normativity of logic that involves Bridge Principles or something similar in form. That is, given that the form of every Bridge Principle (as we will see in short) involves an instance of MP in which indicatives interact with deontic and epistemic operators, then if we accept that the problematic instances of MP are those signaled by the miners paradox, whichever Bridge Principle we chose, we won't be able to use it, because using it involves executing a MP.

In what follows, I will recapitulate the problem of Bridge Principle and the normativity of logic, to later show how the Adoption Problem replicates for this phenomenon.

4.3 Normativity of logic and Bridge Principles

There is an important discussion on what is the normative role of logic if any. The discussion goes along the following lines: logic is said to provide norms for thought. MacFarlane himself says about it:

“Why do we bother studying this notion at all? Surely it is because we think there is some connection between logical validity and the evaluation and criticism of reasoning. If we could get clearer about this connection, we could transpose questions about logical validity into questions about how we ought to think.” (MacFarlane, 2004:2–3).

The rough idea is that if logic is normative for reasoning then it has to provide an account of how validity connects to actual reasoning. This, of course, is not a truism. And one can find defenders like MacFarlane, Steinberger (2011), Field (2009) Priest (2006), Tajer (2024), and many others and one can find its detractors, like Russell (2020) or Stei (2020), being Harman (1983) its main figure.

Normativity of logic is not an easy topic and it has to face many challenges, but if one is ready to defend it, it is usually done by some kind of principle that builds a bridge between logic and reasoning. Those sentences are called “Bridge Principles”—BP from hereafter—, and they have the following form:

Basic form of a BP: If Γ logically imply A , then (normative claim about believing all the γ s in Γ and A).

These normative claims are built with a deontic operator for which we have to decide on the scope (as well as the polarity of the belief operator--- that is if we are talking about belief or disbelief). Here are some examples for illustration:

- If Γ logically imply A , then if you believe all the γ s in Γ , you ought to believe A .
- If Γ logically imply A , then if you believe all the γ s in Γ , you have reason not to disbelieve A .
- If Γ logically imply A , then if you may believe all the γ s in Γ , you may believe A .
- If Γ logically imply A , then you ought to see to it that if you believe all the γ s in Γ , you do not disbelieve A .

As it is immediate to see, BPs are right-nested conditionals, and they have nested conditionals inside nested conditionals. So we already have a problem if we want to execute a MP for any instance of any BP. But even if one were to deny that nested conditionals are problematic instances, or one were to argue that BP can be restated without nested conditionals, we still have the problem of the interaction between the conditionals and the deontic operators.

Someone can argue that the conditionals involved in BPs are material instead of indicatives. Once again, I don't think this is a fair assumption. If we are looking for a guide on how to reason with logic, we need to formulate those rules with a conditional that people use when talking.

This might not seem like a conclusive argument in favor of MP, because one can reject that logic is normative for thought. But it seems that the reasons to believe that logic is not normative for thought should be independent of the validity of MP. That is, rejecting the normativity of logic because one is unwilling to accept the validity of MP seems like an unjustified price for being philosophically coherent.

At the same time, even if we reject the normativity of logic, note that MP itself when seen as a proof-theoretic rule also involves deontic operators:

- **Deontic MP 1:** If you are licensed to write $A \rightarrow B$ and A , then you are allowed to write B .
- **Deontic MP 2:** If you have a proof of $A \rightarrow B$ and A , then you are allowed to infer B .

Of course again someone might argue that this rule can be stated with another logical form. Yet at this point I don't think this argument can run so smoothly. In the case of nested conditionals, I think the reason one can have to accept this critique is that nested conditionals are hard to understand, so maybe there is a simpler way to present the rules and we guide ourselves in reasoning by translating those nested-conditionals into their simple version. But unlike the cases of nested conditionals, here these sentences are as clear as water. It sounds weird to argue that when we accept *B* because we were licensed by Deontic MP 1, we were actually thinking of a different sentence that happens to be a non-problematic instance of MP.

All in all, the point to be made along this section is that the recapture strategy is not allowed for MP, because both the inference rules of MP and the BP are problematic instances themselves. This argument plus the fact that there are several ways to resist these two alleged counterexamples, such as arguing that the problem in McGee's argument is pragmatic such as I did in (Lo Guercio & Rubin, 2024) or explaining the miners paradox in one of the many ways available. As well as the fact that there seems to be no other counterexample in sight and most of all the inferential importance and its intuitive appeal as meaning conferring seem to be good reasons to think that as a matter of fact Modus Ponens is a valid inference for indicative conditionals.

5. Conclusions

Along these pages I argued that MP has to be valid for indicative conditionals. The strategy was to import Kripke and Birman's Adoption Problem to the literature on indicative conditionals. I argued that MP is not just an unadoptable rule, but it is also unrejectable. At the same time, I contended that the recapture strategy is not available for this rule. I showed that what the literature pinpoints as those possible problematic instances, meaning nested conditionals or the interaction between indicatives and deontic operators, are constitutive of the way inference rules and BP are formulated. Therefore, if we reject MP, then we are left with no way of instantiating any rule of inference and in particular we cannot instantiate any instance of MP. But also, we have to reject the normative role of logic. The cost of rejecting MP then is too high because then we have no guide for relating logic to reasoning and we no way to infer anything from any rule at all.

References

- Beall, J. (2015). Free of detachment: Logic, rationality, and gluts. *Noûs*, 49(2), 410–423.
- Beall, J. (2017). There is no logical negation: True, false, both, and neither. *The Australasian Journal of Logic*, 14(1), 1–29.
- Belnap, N. (1970). Conditional Assertion and Restricted Quantification, *Noûs*, 4, 1–13.
- Birman, R. (2015). *What the tortoise said to Kripke: The adoption problem and the epistemology of logic*, [Tesis doctoral. City University of New York].
- Birman, R. (2024). The Adoption Problem and the Epistemology of Logic. *Mind*, 133 (529), 37–60. <https://doi.org/10.1093/mind/fzad009>
- Brandom, R. (1994). *Making it explicit: Reasoning, representing, and discursive commitment*. Harvard University Press.
- Brown, D. (1954). What the tortoise taught us. *Mind*, 63(250), 170–179.
- Buacar, N. (2015). *La justificación de la deducción* [Tesis doctoral. Universidad de Buenos Aires].
- Carroll, L. (1895). What the tortoise said to Achilles. *Mind*, 4(14), 278–280.
- Dummett, M. (1991). *The logical basis of metaphysics*. Harvard University Press.
- Edgington, D. (1995). On conditionals. *Mind*, 104(414), 235–329.
- Edgington, D. (2020). Indicative Conditionals. En E. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy*. Metaphysics Research Lab, Stanford University.
- Egré, P., Rossi, L. y Sprenger, J. (2025). Certain and uncertain inference with trivalent conditionals., *Australasian Journal of Philosophy*.
- Egré, P., Rossi, L. y Sprenger, J. Gibbardian (2023). Collapse and trivalent conditionals. En *Conditionals: Logic, Linguistics and Psychology* (pp. 37–71). Springer.

- Egré, P. y Rott, H. (2021). The Logic of Conditionals. En E. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy*. Metaphysics Research Lab, Stanford University.
- Field, H. (2009). What is the normative role of logic? *Aristotelian Society Supplementary Volume*, 83, 251–268. Wiley Online Library.
- Finn, S. (2019). The adoption problem and anti-exceptionalism about logic. *Australian Journal of Logic*, 16(7), 231.
- Fiore, C. y Rosenblatt, L. (2023). Recapture Results and Classical Logic. *Mind*, 132(527), 762–788.
- Franceschini, E. (2022). Problema de la adopción: ¿un problema para un pluralismo respecto de la negación lógica? *Análisis Filosófico*, 42(2), 229–248.
- Galloovich, C. (2022). Aplicación y adopción de reglas lógicas. *Análisis Filosófico*, 42(1), 105–125.
- Goodship, L. (1996). On dialethism. *Australasian Journal of Philosophy*, 74(1), 153–161.
- Grice, P. (1989). *Studies in the Way of Words*. Harvard University Press.
- Harman, G. (1983). Problems with probabilistic semantics. En A. Orenstein y R. Stern (Eds.), *Developments in Semantics* (pp. 237–243). Haven.
- Huitink, J. (2010). Quantified Conditionals and Compositionality. *Language and Linguistics Compass*, 4, 42–53.
- Jackson, F. (1979). On assertion and indicative conditionals. *The Philosophical Review*, 88(4), 565–589.
- Kolodny, N. and MacFarlane, J. (2010). Ifs and oughts. *Journal of Philosophy*, 107(3), 115–143.
- Kripke, S. (2023). The question of logic. *Mind*, 133(529), 1–36.
- MacFarlane, J. (2004). In what sense (if any) is logic normative for thought? [Manuscrito no publicado].
- McGee, V. (1985). A counterexample to modus ponens. *The Journal of Philosophy*, 82(9), 462–471.
- McGee, V. (1989). Conditional probabilities and compounds of conditionals. *The Philosophical Review*, 98(4), 485–541.
- Prawitz, D. (2006). *Natural deduction: A proof-theoretical study*. Courier Dover Publications.
- Priest, G. (1979). The logic of paradox. *Journal of Philosophical Logic*, 219–241.
- Priest, G. (2006). *In contradiction*. Oxford University Press.
- Roitman, R. y Marrero, A. (2022). Revisando los límites del problema de la adopción. *Análisis Filosófico* 42(1), 127–143.
- Russell, G. (2020). Logic isn't normative. *Inquiry: An Interdisciplinary Journal of Philosophy*, 63(3–4), 371–388.
- Sanfilippo, G., Gilio, A., Over, D. y Pfeifer, N. (2020). Probabilities of conditionals and previsions of iterated conditionals. *International Journal of Approximate Reasoning*, 121, 150–173.
- Steinberger, F. (2020). Non-normative logical pluralism and the revenge of the normativity objection. *Philosophical Quarterly*, 70(278), 162–177.
- Steinberger, F. (2011). Why conclusions should remain single. *Journal of Philosophical Logic*, 40, 333–355.
- Steinberger, F. (2019). Three ways in which logic might be normative. *Journal of Philosophy*, 116(1), 5–31.
- Tajer, D. (2024). Derivative normativity and logical pluralism. *Asian Journal of Philosophy*, 3(2), 1–14.
- Williamson, T. (2020). *Suppose and tell: The semantics and heuristics of conditionals*. Oxford University Press.
- Williamson, T. (2021). Accepting a logic, accepting a theory. *Saul Kripke on modal logic*. Springer.