

LOGICAL PLURALISM IS COMPATIBLE WITH MONISM ABOUT METAPHYSICAL MODALITY

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Beall and Restall [2000], [2001] and [2006] advocate a comprehensive pluralist approach to logic, which they call Logical Pluralism, according to which there is not one true logic but many equally acceptable logical systems. They maintain that Logical Pluralism is compatible with monism about metaphysical modality, according to which there is just one correct logic of metaphysical modality. Wyatt [2004] contends that Logical Pluralism is incompatible with monism about metaphysical modality. We first suggest that if Wyatt were right, Logical Pluralism would be strongly implausible because it would get upside down a dependence relation that holds between metaphysics and logic of modality. We then argue that Logical Pluralism is *prima facie* compatible with monism about metaphysical modality.

I. Logical Pluralism and the significance of Wyatt's objection

Beall and Restall (hereafter B&R) [2000], [2001] and [2006] advocate a comprehensive pluralist approach to Logic,¹ which they call Logical Pluralism (hereafter **LP**). According to **LP**, there is not one true logic but many equally acceptable logical systems. On **LP**, for instance, classical, intuitionistic and relevant logics are not competitors but all equally viable, in the sense that they all count as genuine logics. For each of these systems provides a suitable analysis of the pre-theoretical notion of logical consequence. (We describe **LP** in more detail in the next section). B&R [2000] believe that **LP** is compatible with monism about metaphysical modality (hereafter **MMM**). The latter position – which

¹ We follow B&R [2000] in using ‘Logic’ to refer to the discipline and ‘logic’ to refer to a particular logical system.

B&R apparently endorse – says that there is only one correct logic of metaphysical modality (or necessity), which falls somewhere between S4 and S5. If **MMM** is true, there is a sense in which S4, S5 and possible intermediate logics genuinely compete and disagree. Against B&R, Wyatt [2004] contends that **LP** and **MMM** are incompatible. For ‘there is no way of accounting for genuine disagreement between S4 and S5 (or the posited correct logic lying between them) that is compatible with B&R’s assumptions’ [2004: 409]. If Wyatt were right, B&R would face a dilemma: dropping either **LP** or **MMM**.

What lies beneath this dispute is, to begin with, the question about the type of disagreement between logics that **LP** can allow. The worry might be that accepting **LP** would engender a form of *quietism* in the philosophy of modal logic that would make the hot debate about the acceptability of modal systems impossible or trivial. Another, perhaps more crucial issue lurking behind Wyatt’s objection concerns the *metaphysical* consequences of **LP**. Wyatt states that ‘the easy way out of this dilemma for B&R [i.e. dropping either **LP** or **MMM**] is simply to accept that there is more than one true logic of metaphysical modality’ [2004: 409]. We believe that this would be *no* ‘easy way out’ whatsoever. For if **LP** entailed that, say, S4 and S5 are equally acceptable logics of metaphysical modality, the long-lasting and on-going debate *in metaphysics* about the correct formal characterization of metaphysical modality would simply be obliterated by the acceptance of **LP**. For instance, the arguments by the combinatorialist purporting to show that S5 cannot model metaphysical modality but which do not disallow S4 to play this role (see for instance Armstrong [1989]) would become uninteresting and useless. For *both* S4 and S5 should count as equally correct models of metaphysical modality.

If Wyatt’s objection were conclusive the trouble would be not only that **LP** would engender pluralism (or relativism) about metaphysical modality – a position that many find abhorrent – but also that pluralism about modality would obtain, so to say, *by the wrong means*. The reason is this. A natural and indeed largely accepted view about a dependence relation holding between Logic and metaphysics of modality has been outlined by Burgess [1999] as follows:

The question Which is the right system of tense logic? is not one for the logician: the logician can indicate how this or that or the other system corresponds to this or that or the other theory of the nature of time, but which is the right theory of the nature of time is a question for the physicist. Similarly, the question Which is the right system of [metaphysical modality]?² would seem to be one not for the logician, but for the metaphysician.

[1999: 82].

If it is the metaphysician who assesses which logical systems get metaphysical modality right, it is reasonable to assume that pluralism about the logic of metaphysical modality can in principle be defended (if it can be defended at all) on the grounds of *metaphysical* arguments. But it appears quite wrong to assume that the same position could be substantiated on the mere grounds of the analysis of the notion of logical consequence. If Wyatt's contention that **LP** engenders pluralism about the logic of metaphysical modality were correct, **LP** would appear to many to be anomalous and untenable.

As a matter of fact, B&R [2006] do argue through examples concerning *non-modal* logics that if **LP** is implemented, there can still be genuine rivalry among logics, though 'rivalry enters at the level of *application*' [2006: 44]. Yet B&R have never countered – and indeed never considered – Wyatt's specific objection.³ We believe that this objection can be answered along the same general lines: if **LP** is implemented, genuine *modal* logics may still compete at the level of application – precisely, to model the *real* truth-preserving relations of metaphysical modality. In the next pages, we defend B&R's view that **LP** and **MMM** are compatible against Wyatt's criticism by articulating this reply in

² The question in the original passage is: 'Which is the right system of mood logic?'. Burgess calls mood logic the logic of metaphysical necessity or modality.

³ Chs 8 and 9 of B&R [2006] are dedicated to respond to more than twenty objections against Logical Pluralism. Yet Wyatt's criticism is not included.

detail. We endorse neither **LP** nor **MMM**. We argue that *if* one endorses **LP**, one can still accept (or reject) **MMM** without incoherence. Consequently, **LP** does not engender quietism or pluralism about the logic of metaphysical modality and it does not get upside down the dependence relation between Logic and metaphysics described before.

II. The framework of Logical Pluralism

B&R follow the mainstream in thinking of (deductive) Logic as the discipline that investigates the notion of logical consequence. B&R share Tarski's conviction that the task of the logician is to work out a clearer-cut version of the intuitive and blurred notion of logical consequence [cf. 2006: 7-8]. 'The chief aim of logic is to account for consequence, to say, accurately and systematically, what *consequence* amounts to, which is normally done by specifying which arguments (in a given language) are *valid*' [2000: 475]. B&R propose the following informal characterization of validity for an argument, which they consider to be sufficiently uncontroversial:

A *valid* argument is one whose conclusion is true in every case in which all its premises are true.⁴
[2000: 476].

B&R emphasize that this characterization gives however no complete account of the notion of validity and thus of logical consequence, for it leaves it undetermined what *a case* is. To construct a logic, we need a precise and systematic account of which arguments are valid, which involves specifying what a case is [cf.: *ibid.*]. As there are alternative and – according to B&R – equally acceptable ways to specify with accuracy what a case is, there exists more than one correct systematic account of which arguments are valid, and so more than one genuine logic. This is, in a nutshell, B&R's **LP**. 'Logical Pluralism is a pluralism about logical consequence. Crudely put, a pluralist maintains that there is more than one relation of logical consequence' [2006: 25].

⁴ As B&R indicate, this is Jeffrey [1991]'s informal characterization of logical validity.

Given that there are alternative ways to specify what a case is, according to B&R, the above informal characterization of validity can be reformulated in the terms of the following schema:

[**GTT**] An argument is $valid_x$, if and only if, in every $case_x$ in which the premises are true, so is the conclusion.⁵

[2006: 29].

In **GTT**, $case_x$ ranges over the possible precisifications of what a case is, and $valid_x$ ranges over the correlated precisifications of what a valid argument is. **GTT** can be seen as an informal generalization of Tarski's Thesis that a sentence A follows logically from a set A_1, \dots, A_n of sentences if and only if every model of the latter set is also a model of A [cf.: 2006: 29].

Precisely, **LP** follows from the acceptance of these tenets:

- (1) The settled core of *consequence* is given in **GTT**.
- (2) An instance of **GTT** is obtained by *a specification of the cases_x* in **GTT**, and a specification of the relation *is true in a case*. Such a specification can be seen as a way of spelling out *truth-conditions*.
- (3) An instance of **GTT** is *admissible* if it satisfies the settled role of consequence, and if its judgements about consequence are *necessary, normative* and [in some sense] *formal*.
- (4) A logic is given by an admissible instance of **GTT**.⁶

⁵ B&R [2000: 476] formulate **GTT** in a slightly different way.

⁶ The earlier formulation of **LP** by B&R [2000] did not mention the requirement of admissibility – a logic was defined as, simply, an instance of **GTT** (where the latter were formulated slightly differently). B&R [2006] introduce the constraint of admissibility because the relation of logical consequence is typically thought of as necessary, normative and, in some sense, formal. For a characterization of these notions see [2006: 14-23].

(5) There are *at least two* different admissible instances of **GTT**.

[2006: 35].

B&R [2006] give four examples of admissible instances of **GTT**; the same examples were given in B&R [2000]. These examples are meant to verify the crucial tenet 5.

The first case of an admissible instance of **GTT** concerns the Tarskian account of logical consequence [cf. 2006: 37-43]. On this account, cases_x are identified with set-theoretic models, and the truth conditions for the claims⁷ of the relevant formal language are given in the usual recursive fashion. On this instance of **GTT**, an argument in a formal language is valid_{TM} if and only if in every Tarskian model in which its premises are true, so is the conclusion. The notion of $\text{validity}_{\text{TM}}$ can be extended to cover natural languages (e.g. English) suitable to be turned into a formal language *via* the standard process of regimentation [cf. 2006: 39].

Another example interprets cases_x as possible worlds, where all cases_x coincide with all possible worlds and the notion of a possible world is informal and intuitive [cf. 2006: 36-7 and 40-3]. On this admissible instance of **GTT**, an argument expressed proves valid_{PW} if and only if in every possible world in which its premises are true, so is the conclusion.⁸ On this account – called the *necessary truth-preserving account* of logical consequence [cf. 2006: 37] – the truth-conditions of, say, negative, disjunctive and conjunctive claims are given as follows (where w is a possible world):

1. $\sim A$ is true in w iff A is not true in w .
2. $A \vee B$ is true in w iff A is true in w or B is true in w .
3. $A \& B$ is true in w iff A is true in w and B is true in w .

⁷ We follow B&R [2000] in using the term ‘claim’ to refer to a truth-bearer in general.

⁸ According to B&R, judgements about logical consequence based on this account are *formal* in the sense of providing constitutive norms for thought as such [cf. 2006: 41].

Further clauses can be added for claims that include other connectives and quantifiers [cf. 2006: 36-7]. The Tarskian and the necessary truth-preserving account of logical consequence are *different*. For instance, on the second account, the following argument is valid:

b is red, therefore *b* is coloured.

For in any possible world in which ‘*b* is red’ is true ‘*b* is coloured’ is also true. Yet the same argument proves *invalid* on the Tarskian account. For, *via* regimentation, we obtain an argument with this form: *Rb/Cb*.

There may be reasons for preferring one of these two accounts of logical consequence to the other. For the logical pluralist, an essential point is that ‘it is not fruitful to debate which of these [accounts] is *logic*’ [2000: 480]. Both are admissible specifications of **GTT**, so both of these things are logic [cf. 2006: 44]. ‘These two accounts of consequence are *different* but, with respect to the chief question of Logic (what arguments are valid?), they are not *rivals*’ [ibid.]. So for the pluralist ‘the proper answer to the question “Is the argument from *b* is red to *b* is coloured really valid?” is to say “Yes, it is necessarily truth-preserving, and *no*, it is not valid by first-order logical form”’ [2000: 480].

B&R discuss two further admissible specifications of **GTT**. While the former two produce forms of classical logic, the next generate non-classical logics. B&R consider the interpretations of a case_x, in **GTT**, as a *situation* [cf. 2006: 49-59] and as *a stage of a construction* [cf. 2006: 61-74], where a situation is a part of the actual or a possible world, and a construction is a constructive proof or a procedure of verification.⁹ As situations may be *incomplete* parts of a world, each of them may leave the truth-value of some claim undetermined [cf. 2006: 50]. Similarly, constructions are potentially

⁹ An admissible specification of **GTT** that interprets cases_x as stages of a construction says that ‘an argument is constructively valid if and only if a construction for the premises provides a construction for the conclusion’ [2006: 61]. For clarification about the notion of construction see [2006: 62-8].

incomplete, in the sense that we should not expect to constructively prove, for any claim A , either A or $\sim A$ [cf. 2006: 66]. The result is that on the logics that stem from interpreting a case_x as a situation and as a stage of a construction – respectively, relevant logic and intuitionistic logic – the classically valid inference from B to $A \vee \sim A$ fails [cf. 2006: 53 and 70]. Furthermore, if cases_x are interpreted as situations some of which are *inconsistent* (i.e. as ways that things could not be), the resultant relevant logic invalidates additional classically valid arguments – notoriously, disjunctive syllogism; i.e. the argument from $A \vee B$ and $\sim A$ to B [cf. 2006: 56]. In this case, a motive of concern might be that disjunctive syllogism is *obviously* valid. B&R acknowledge it. They maintain that ‘of course there is a sense in which disjunctive syllogism is valid – and even obviously so. In any possible world in which the premises are true, so is the conclusion’ [2000: 411]. Yet, when cases are interpreted as *situations*, disjunctive syllogism can be relevantly invalid.

B&R do not maintain that the four instances of **GTT** considered above are the only admissible ones. They suggest that free logics and second-order logic are potentially admissible instances of **GTT** [cf. 2006: 75–8]. B&R [2000: 489] also assume that classical propositional modal logics are genuine logics. This requires interpreting cases_x as Kripkean possible worlds instantiating an accessibility relation.¹⁰

III. Logical Pluralism is compatible with monism about metaphysical modality

B&R emphasize that **LP** ‘is not a recipe for wholesale agreement’ [2000: 488], for it does not entail ‘that there are no disagreements about notions of logical consequence’ [ibid.]. One possible disagreement is about the true logic of metaphysical modality (or necessity). This is how B&R outline this disagreement:

¹⁰ It is *prima facie* plausible that these instances of **GTT** are *admissible* in B&R [2006]’s sense.

There are too many modal logics to hold each of them as the logic of broad metaphysical necessity. So, given a particular interpretation of each of the symbols in our formalism (including *consequence*) we can admit that there is a great deal of scope for rivalry. For the propositional modal logic of necessary truth-preservation, a logic somewhere between S4 and S5 may be a candidate for getting things *right*. If so, then anything else *gets it wrong* when it comes to metaphysical necessity.

[2000: 489].

This is a very condensed passage. But what B&R say here appears straightforward to us: there may be disagreement among formal modal systems if the latter are meant to describe, *via* the appropriate interpretation of the symbols in their formalisms, the truth-preserving relations of metaphysical necessity. For just one of these systems may reproduce these truth-preserving relations correctly. Modal logics may thus disagree at the level of application. Although B&R have returned to this issue in none of their subsequent papers, they have recently made a definite statement about the general nature of disagreement among logics licensed by **LP** that corroborates our interpretation of the above passage. B&R say that, as **LP** is implemented, ‘rivalry [among logics] enters at the level of *application*’ [2006: 44]. They give an example of it concerning classical and relevant logic [cf. 2006: 56-7]. Certain logically inconsistent theories – i.e. certain inconsistent sets of claims (in some language) closed under logical consequence – may *not* be meant to entail that *everything* is true. For instance, the naïve theory of truth appears inconsistent given the liar-paradox, but it is certainly not meant to entail that everything is true. Other examples concern fictions. Novels or stories are sometimes inconsistent and yet it is usually not the case that just everything is true in them. If classical logic is used to model the notion of logical consequence suitable to these inconsistent theories, given that inconsistent sets *classically* entail any claim, it follows that every claim is true. Relevant logic, on the other hand, does not allow inconsistent sets to entail every claim. So, relevant logic is better suited to model inconsistent

theories. B&R stress that here ‘there is competition but only at the level of application; the two accounts of consequence do not compete as accounts of consequence’ [2006: 59].

Generalizing from this example, B&R appear to conceive of the application of a logic L to a given set S of already interpreted¹¹ truth-apt claims as the application of the notion of logical consequence qualifying L (given in terms of a specification of cases _{x} in **GTT** and of correlated truth-conditions) to the claims of S . The application of L is fitting (or appropriate) if and only if it reproduces the truth-preserving relations instantiated by the claims of S *independently* of the application of that logic.¹² Two logics L and L^* disagree when applied to the same set S of claims if and only if they give different descriptions of the truth-preserving relations independently instantiated by the claims of S . If L and L^* disagree at the level of application in this sense, it does not follow that, on **LP**, L and L^* disagree as accounts of logical consequence. For both L and L^* remain admissible specification of **GTT**; thus, both of them, according to **LP**, give viable accounts of logical consequence. This is why the existence of disagreement of this type appears *prima facie* compatible with **LP**.

Very plausibly, B&R’s claim that a logic between S_4 and S_5 may be a candidate for getting metaphysical modality right should be interpreted along the same lines. There may be competition

¹¹ ‘Interpretation’ is here intended in an intuitive and not technical sense.

¹² B&R [2000: 489-90] list four possible ways in which disagreement between formal logics can be understood. According to one of them, disagreement comes about as we try to *apply* different systems ‘to model the validity of real argument’ [2000: 489] (i.e. plausibly, to model the truth-preserving relations proper to a given area of discourse). Similarly, disagreement among different abstract geometries turns up by applying these geometries to model the same region of physical space [cf.: *ibid.*]. Although this would seem to be just the type of logical disagreement allowed by **LP**, B&R [2000] do not say it explicitly. Indeed, it is not even completely clear whether, according to B&R [2000], **LP** allows disagreement of this type.

among S4, S5 and intermediate systems, but only at the level of application – i.e. insofar as these systems are meant to model the (supposed) *objective* truth-preserving relations of metaphysical modality instantiated by modal claims independently of the application of these systems. This is why **LP** and **MMM** are *prima facie* compatible.

Wyatt [2004] does not believe this is true. She argues that ‘any way of characterizing the alethic modal logics as in genuine disagreement turns out to also be a way of characterizing classical, relevant, and intuitionist logics as in genuine conflict’ [2004: 409]. From this, she concludes that **LP** and **MMM** are incompatible. Wyatt analyses various ways of characterizing disagreement among modal logics, including the one sketched before (i.e. modal logics compete at the level of application but not as accounts of logical consequence). Let us focus on Wyatt’s argument that aims to show that *this* way of characterizing disagreement among modal logics is incompatible with **LP**.¹³ For, if this argument is inconclusive, Wyatt has not proven that **LP** and **MMM** are incompatible.

¹³ Indeed, Wyatt considers only two further alternative characterizations of disagreement among logics [cf. 2004: 413-19]. One is this: ‘Once you specify what kinds of cases you are going to consider, two logics can disagree about what consequence relations obtain given those cases... this could happen ... if the two logics in question disagreed on the truth conditions of the sentences of the language, since a combination of cases and truth conditions just is a logic’ [2004: 413]. Wyatt argues that disagreement of this sort cannot concern S4 and S5. For S4 and S5 presuppose two different notions of a case: ‘S4 admits models (e.g. ones in which the relations between worlds are reflexive, transitive, but not symmetric) that S5 doesn’t’ [ibid.]. We agree that disagreement of this type does not apply to S4 and S5. But this is certainly *not* what B&R have in mind when they say that modal systems may compete. The second alternative characterization of disagreement among logics (in particular, modal logics) analysed by Wyatt is this: B&R might assume that ‘in our ordinary reasoning practices, we have multiple kinds of domain independent reasoning, and associate consequence relations’ [2004: 415].

According to Prior, alternate *tense* logics are in conflict if both are taken to model the *real* time, i.e. the time we live in. Wyatt suggests that, by analogy, alternate modal logics may be seen as in conflict if interpreted as models of ‘real metaphysical necessity’ [2004: 414]. Wyatt is persuaded, however, that the logical pluralist cannot take this stance. For ‘to do so would undermine [the logical pluralist’s] case for the view that necessary truth preservation and classical logic [i.e. the Tarskian account TM] do not conflict’ [ibid.]. More precisely, if the question about the correct logic of metaphysical necessity is interpreted as ‘a question about what class of cases is the “real” one’ [ibid.], the same should apply in principle to any other logic. The problem is that:

The formalist advocate of classical logic and the defender of necessary truth preservation can each claim that their set of cases is the one applicable to real first-order consequence, just as the defender of the correct modal logic can claim that their set of cases is the one applicable to real

B&R might thus impose that ‘anything that counts as a logic must spell out **GTT** in a way that models one of these actual consequence relations’ [ibid.]. If this were a constraint accepted by B&R for counting something as a logic, the claim that there is just one correct logic of metaphysical necessity might be interpreted as stating that just *one* logic models our ordinary reasoning about the notion of metaphysical necessity [cf. 2004: 416]. A problem would however be that ‘Even the briefest tour of the history of philosophy makes clear that ... there is more than one pattern of domain independent reasoning regarding metaphysical necessity and possibility ... Perhaps none of these correspond to S4, and so perhaps S4 is not a logic, but it seems highly unlikely that there is just one modal logic’ [2004: 417]. We are with Wyatt on this. Wyatt eventually admits that this interpretation of B&R’s claim that there may be just one logic of metaphysical modality is implausible. For it does not harmonize with the constraints for counting something as a logic accepted by the logical pluralist [cf. 2004: 418]. We agree with Wyatt.

metaphysical modal consequence. The two claims are on the same footing, and if one is genuine disagreement then the other is also.

[Ibid.].

In sum, if the logical pluralist allowed modal logics to compete as models of real metaphysical modality, the logical pluralist would be committed to accepting that classical logic and the logic of necessary truth preservation can conflict as models of real first-order consequence. Wyatt considers this commitment incompatible with **LP**.

Wyatt is probably right in contending that if the logical pluralist maintains that modal logics may compete as models of real metaphysical modality, then the logical pluralist is committed to holding that logics in general may compete as models of *something*. For, if a logic can function as a model, plausibly, also other logics can. Consequently, the logical pluralist should probably accept that, if modal logics may compete as models of real metaphysical modality, classical logic and the logic of necessary truth preservation might in principle compete as models of real first-order consequence, supposing that there is something like real first-order consequence and for *certain* conceptions of real first-order consequence. The latter remark is crucial. The logical pluralist is in fact committed to rejecting any conception of real first-order consequence implying that classical logic and the logic of necessary truth preservation may compete *as accounts of logical consequence*. For both these logics are admissible instances of **GTT**. Consequently, for the logical pluralist, *both* of them are correct accounts of logical consequence. Wyatt has given no reason to believe that the logical pluralist would be committed to a conception of real first-order consequence (whatever it might be) implying that these two logics compete as accounts of logical consequence. Wyatt's reduction is thus inconclusive. Wyatt would like to show that, if the logical pluralist accepts that modal logics may compete as models of real metaphysical necessity, she has to endorse a statement incompatible with **LP** – namely, that classical logic and the logic of necessary truth preservation may compete as models of real first-order

consequence. Yet the logical pluralist would be committed to the latter statement only insofar as it is interpreted in a way that makes it *compatible* with **LP**. We see no immediate way to salvage Wyatt's reductio. In conclusion, Wyatt has not proven that **LP** and **MMM** are incompatible.

Some final remarks will refine our contention that **LP** and **MMM** are compatible. B&R assume that there may exist an objective notion of metaphysical modality, and so objective truth-preserving relations of metaphysical modality. It is perhaps more immediate to speak of objective *logical truths* rather than objective truth-preserving relations. For instance, suppose S5 is the correct system of metaphysical modality. On this supposition, an objective truth-preserving relation of metaphysical modality is given by the fact that $\Box\Diamond A$ is a logical_{S5} consequence of $\Diamond A$ (where \Box and \Diamond are, respectively, the necessity and the possibility operators). This truth-preserving relation corresponds to the logical_{S5} truth Axiom 5, i.e. $\Diamond A \rightarrow \Box\Diamond A$.

B&R acknowledge that the logical pluralist is committed to pluralism about *logical truth* [cf. 2006: 100]. Briefly, given that the relation of logical consequence is defined, according to **LP**, on the class of cases_x, 'the logical_x truths are those that are true in all cases_x' [ibid.]. For the logical_x truths can be seen as those claims that are consequences_x of the empty set of premises. The result is that some claim may be logically true for a given logic but not for another – e.g. $A \vee \sim A$ is a classical logical truth, but no intuitionistic logical truth.¹⁴ This might appear at odds with the assumption that there may exist *objective* logical truths qualifying metaphysical modality. But there is no real clash here. For **LP** does not entail pluralism about *truth*, as the logical pluralist can take 'that what is true is what is true in the *actual case*' [cf. 2006: 101], where the actual case is the 'case in which all and only those things which are true are true' [2006: 101, note 15]. The logical pluralist can thus assume that a claim logically_x true

¹⁴ B&R stress however that on an alternative characterization of logical truth – precisely, a claim is a logical truth (without subscripts for a specific logic) if and only if it is a logical_x truth for some logic x – the logical pluralist is no pluralist about logical truth [cf.: 2006: 101 and 102].

is also true – i.e. *objectively* true – if and only if it is true in the actual case [cf. 2006: 101].¹⁵ Although B&R do not say it, the logical pluralist could perhaps assume that the actual case also includes the logical truths that define real metaphysical modality. Alternatively, the logical pluralist could perhaps characterize the notion of a case, parallel to the notion of the actual case, in which all real modal truths and only those truths are true. What should be noticed is that the logical pluralist can take the modal logical truths qualifying real metaphysical modality as *given* to the logician. **LP** appears compatible with the quite natural assumption that it is the metaphysician, and not the logician, who investigates which logic gets metaphysical modality right.

To conclude, Wyatt has argued that **LP** is incompatible with **MMM**. We have suggested that, if **LP** were so, it would prove objectionable in different respects: it would produce modal quietism and modal pluralism, which are unpalatable to many, and it would get upside down a dependence relation that holds between metaphysics of modality and Logic of modality. This would make **LP** seriously objectionable. We have shown that Wyatt’s argument is inconclusive. **LP** appears *prima facie* compatible with **MMM**. Accordingly, none of the pernicious consequences listed above follows from **LP**.¹⁶

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¹⁵ What B&R literally write is: ‘what is logically_x true is *actually* true if the actual case is one of the cases_x’ [2006: 101]. This statement is problematic. For example, it is intuitive that many logical_x truths are also actually true both when cases_x are informal possible worlds and when cases_x are set-theoretic models. Yet it is unclear how the very same actual case could at the same time be one of the informal possible worlds and one of the set-theoretic models.

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