# The Extent of Metaphysical Necessity

A lot of philosophers engage in debates about what claims are "metaphysically necessary", and a lot more assume with little argument that some classes of claims have the status of "metaphysical necessity". I think we can usefully replace questions about metaphysical necessity with five other questions which each capture some of what people may have had in mind when talking about metaphysical necessity. This paper explains these five other questions, and then discusses the question "how much of metaphysics is metaphysically necessary?", and each of its five replacements.

Every so often in philosophy, a technical term becomes mired in confusion. A range of substantive positions are contested using the relevant vocabulary, but there also seem to be terminological disputes that obscure what the real debates are; and, of course, it is controversial when a given difference is due to terminology or an underlying substantive disagreement. Pessimists may even think that this is the usual case in philosophy. Whether or not it is usual, it is what has seemed to have happened to "metaphysical necessity". Rather than chart all the different ways people have used this expression, I thought it better to try to chart what seem to be the best options for subject matters in the area that people seem to be aiming at by using the expression. So after some preliminary remarks about what it is that people want from "metaphysical necessity", I will discuss a range of options for answering what seem to me to be the interesting questions. My primary purpose is to clarify lines of debate, though I will also be indicating where my own leanings lie and giving some reasons for them.

Getting clear on metaphysical necessity should be desirable for everyone who uses the notion. But it will be particularly important if some conceptions of what metaphysics is up to are correct. For example, E.J. Lowe characterises the task of metaphysics as revealing what is, and is not, metaphysically possible (Lowe 1998 ch 1). If Lowe were right, talking past each other about metaphysical necessity and possibility would risk confusion about the central question of metaphysics.

## *What Are We Looking For?*

It is clear that metaphysical necessity is meant to be some sort of non-epistemic, non-

deontic, alethic[1] *necessity.* It is at least factive: when something is metaphysically necessary, it is the case. It is supposed to be a grade of necessity that characterises some interesting philosophical claims (particularly claims in metaphysics, one would suppose, but presumably only some of them). It is also supposed to be relatively absolute – it is not like the necessity that ensures I must spend more than five minutes to write 1000 words of useful philosophical prose, for example. Exactly how it relates to other putative forms of necessity like nomic necessity or logical necessity is one of the things that is controversial, at least according to many people.

It is relatively common ground that metaphysical necessity outruns theoremhood in familiar logical systems: that is, some claims are metaphysically necessary even if their negations have models. Whether all theorems of one's favourite logic are metaphysically necessary is not straightforward: many logics of indexicals or which include "actuality" operators will have theorems that are supposed to be contingent: "actually p iff p" is guaranteed to be true in the actual world, but in a world where grass is red, "grass is green" is false even though "actually, grass is green" will still be true, since that only depends on the colour of grass in the actual world. Some indexical logics have "I am here now" as a theorem, but hardly anybody thinks that there was some kind of necessity to me being here at the time of writing.

It is also very usual to treat metaphysical necessity as a "normal" modal operator: that is, the logic of the operator is at least as strong as Kripke's K. That in effect puts three constraints on us. The first is the principle of necessitation: that logical theorems are themselves necessary (including the theorems of modal logic itself).[2] The second is that metaphysical necessity obeys the K axiom: L(p->q) -> Lp -> Lq. This ensures that metaphysical necessity is closed under strict implication: if p (metaphysically) strictly implies q, and p is metaphysically necessary, q is

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[1] This use of "alethic" to signal a worldly necessity is widespread, especially in the UK, but it is not universal – some only use "alethic" to mean the class of necessities where necessarily-*p* entails *p*. This latter use would count many epistemic necessities as alethic, for example, if to be epistemically necessary is to follow from what is known, since known propositions are true.

[2] This rule of necessitation will be modified slightly if we think there are contingent logical theorems of the sort mentioned in the previous paragraph. For example, if "*p* ->actually *p*" is a theorem, then we had better not necessitate it!

metaphysically necessary as well.  The K axiom and necessitation together ensure that metaphysical necessity is closed under logical consequence:  When p I= q is valid, p->q is a theorem, and so necessary:  and so when p I= q and p is metaphysically necessary, q is metaphysically necessary as well.  The third constraint is on metaphysical possibility:  it obeys the usual interdefinition with metaphysical necessity, which is that something is metaphysically necessary iff its negation is not metaphysically possible.  I think we can also uncontroversially add the claim that metaphysical necessity obeys the T axiom of standard modal logics:  not only is metaphysical necessity factive, but when something is true, it is metaphysically possible as well.

So much should be largely uncontroversial.  Of course, there may already be people who have no use for such a notion as metaphysical necessity.  Modal sceptics are the most obvious group, or rather there are two sorts of views that might go under the heading of "modal scepticism" that will be suspicious of what has been said so far.[3] The first is the sort of view that doubts that there is any need for modal notions, or perhaps that we only need a handful of modal notions, or relatives thereof, without endorsing enough structure to get us metaphysical necessity.  Both kinds of views are associated with W.V. Quine's name:  the first would be motivated by the desire to purge the language of non-extensional machinery, or machinery that was associated with any notion of analyticity, and the second, for example, with the view that while we need some notion like validity of argument or logical theoremhood, which we might represent as "logical necessity", there is no need for a device that, for example, allows quantifying in.  I think the view that allows there are meaningful and potentially useful modal operators is closest to Quine's classic view:  see his "Three Grades of Modal Involvement" (Quine 1953), and his admission that the second grade, the "statement operator" view, is okay provided we keep in mind that it need not amount to more than a linguistic variant of the "semantic predicate" view, together with his view that the semantic predicate "Nec" can capture something

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[3] Another kind of view that deserves to be called "modal scepticism" is the view that modal questions are in good order, but we have very little knowledge of the answers.  They need not disagree that there is an interesting subject matter for debates about metaphysical necessity, even if they despair of making much progress in these debates.

"regularly needed in the theory of proof" (p 163). The more extreme view, that we should reject modal ideology altogether, is suggested in *Word and Object* (Quine 1960 pp 195-200): not only does he think it relies on to-be-repudiated analyticity, Quine seems there to suggest that it is modal logic that leads to the mistake, as he sees it, of quantifying in.[4]

The other group that may have little use for talk of metaphysical necessity are those who think that everything is possible. For if everything is possible, nothing is necessary, at least given the standard interdefinition. This view as developed by Mortensen 1989 seems to me in the end very similar to the second sort of modal scepticism: modal notions are not cutting any useful distinction between one class of propositions or statements and another.

Setting these views aside for current purposes (along with others who might disagree with what has been said so far, e.g. because they take most of logic to be contingent or they endorse non-normal modal systems), the next thing to explore is what sort of issues might be at stake in a dispute about what is, or is not, "metaphysically necessary". I do not claim to be listing all the issues that might come up – my hope is that I will seize on an interesting core of issues connected with the use of our notion, or notions, of metaphysical necessity.

## *Is Metaphysical Necessity Absolute Necessity?*

Sometimes it is claimed that metaphysical possibility is possibility in the most generous sense: if something is possible at all, it is metaphysically possible. Correspondingly, on that view, metaphysically necessity would be the most stingy: if something were metaphysically necessary, it would be necessary in every other sense as well. Whether to call this the "strongest" necessity, since it would imply all the others, or the "weakest" necessity, since it makes fewer propositions necessary than any other sort, is probably a matter of choice of metaphor. I will use the metaphor

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[4] Joseph Melia (Melia 2005 ch 3 and especially p 63) characterises Quine as this sort of sceptic in (Quine's) *Word and Object*: though Melia does not say why we should think Quine maintains this "Quinian scepticism" rather than the more generous view he appears to take in the more extended discussion in Quine 1953.

according to which if metaphysical necessity implies all the others, metaphysical necessity is *stronger* than the others.

The first caveat worth making here is that "possibility" and "necessity" here should be understood as to do with what could be the case in some relatively objective sense. This can be contrasted with epistemic possibility and necessity, for example, where "it's possible" in this sense is connected to things like "I can't rule it out" or "I don't know otherwise", though how exactly it is connected to these is controversial. Likewise, the family of "objective" modalities I am concerned with can be contrasted with deontic modalities, the "can" and "must" of obligation. Perhaps I am permitted to make my table in the shape of a square circle, for all that morality or legality have to say: but even though I can, in those senses, that does not reflect on the metaphysical possibility of me doing so. Perhaps there are other relatives of the deontic modalities: the modalities about what words can and cannot apply to, for example: the sense in which the word "vixen" can apply to an adult female fox, but not an adult female hyena. I am not going to try to exactly delineate what makes a modality one of the "objectively to do with what is the case" ones here, nor say how the epistemic/doxastic and deontic modalities are related to these ones. My purpose in mentioning the other families of necessities is only to signal that I want to set them aside: from now on, when I generalise about all kinds of necessity and possibility, consider me to be leaving aside epistemic/doxastic and deontic kinds.[5]

It strikes me that there are two ways metaphysical necessity could be the strongest. One is if metaphysical necessity corresponded to being true in *all* worlds or situations. This is the picture in David Lewis's work[6], for example Lewis 1986b: he thinks that the modal operators correspond to quantifiers over worlds, and while some of the restricted modalities might correspond to restricted quantifiers, there is a modality associated with the most generous quantifier over worlds. I suspect this is what Lewis

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[5] What makes things potentially even more confusing is that many moral claims, e.g. "stealing is wrong" are themselves candidates to be necessary truths, and there is an issue about what sort of necessity this is. That issue should be distinguished from the issue about the deontic sense in which you *must* not steal when stealing is wrong.

[6] For most of his work, anyway. For a possible very late exception, where he seems more favourable to the idea of absolutely impossible worlds, see Lewis 2004.

would identify as metaphysical necessity, though it is striking that Lewis rarely, if ever, uses that expression.[7]

If this line is taken, then there are no metaphysically impossible worlds. I think this is a problem – there seem to be plenty of ways we can specify that the metaphysical necessities would rule out.[8] On many conceptions of what possible worlds are (e.g. maximal co-possible sets of propositions), there are objects just like those except that what they represent is impossible (maximal sets of propositions that are not co-possible, for example). Furthermore, impossible worlds can play many of the theoretical roles that possible worlds do: for example, I have argued that we need impossible worlds to properly account for conditionals, and I am not the only one. (See Nolan 1997, Vander Laan 2004). I think we should be generous about what impossibilities there are – the ways things would go if various metaphysical truths failed seem many and various. Impossible worlds are also arguably important to characterise various belief states that could not possibly be correct, the contents of impossible fictions, and a range of other tasks. (I take it that the substantive debate between defenders of impossible worlds and opponents of admitting that there are (absolutely) impossible worlds turns on whether there are entities like possible worlds which play enough of the roles of possible worlds.) Since I accept a generous range of impossible worlds, I think that if the issue is what truths are true in any world whatever, the answer is "none". This is controversial, of course, and so we have our first recast controversy – for those who think that there are truths that obtain in every world, they may on occasion wish to wonder which truths those are, or dispute about the answer to that question.

Even if there are impossible worlds and situations, and even if we are as generous with them as I would like to be, there is still the second way in which one might maintain that metaphysical necessity is absolute necessity. There could be a dividing line between the situations or worlds that are impossible in every sense of impossible,

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[7] The only uses I could find in Lewis of the expression "metaphysical necessity" are scare-quotes uses. But, for example, on p 101 of Lewis 1986a he makes it clear he thinks that sort of necessity is absolute.

[8] Perhaps you want to reserve the word "world" for possible worlds. In that case, call these other things we can specify "situations" if you wish.

and the others. If there is a most generous sense of possibility (or, equivalently, a strongest sense of necessity), then where that line gets drawn will be the boundary of absolute possibility/necessity: to be possible at all is to fall within that boundary line. Of course, we might doubt that there is such a line: perhaps there are several generous characterisations of possibility that cross-cut each other, each counting as possible some worlds that one of the others counts as impossible. Or perhaps there are ever ascending levels of permissive possibility, each of which ruling some worlds out as impossible, but beyond every generous characterisation of possibility there is one still more generous.

I think we should not expect that either of these latter two models of how we could lack a most generous sense of possibility are correct, however. For it just seems too plausible that if we had a range of kinds of possibility as envisaged by either option, then the putative kind of possibility we got by combining them would also have a good claim to count as a genuine form of possibility. "Absolutely impossible" in the sense of falling under none of the kinds of possibility, seems to be an interesting and natural grade of impossibility. So equivalently, being possible in *some* good sense seems itself to characterise a perfectly good sense of possibility (not *utterly* ruled out). So I think that we should believe in a strongest sense of necessity (i.e. a most generous sense of possibility). Might metaphysical necessity be identified with this grade?

Before I address that question, I should perhaps say something about how I interpret this talk of different "senses" of necessity or possibility. When we distinguish nomic necessity from logical necessity from necessities imposed by limits to ability, it is implausible that "necessity" is literally *ambiguous* between these different usages – there is too much commonality in how it behaves, there does not seem to have to be different processes of acquisition of ability to use the term, and so on. It is a world away from cases like "bank" and "bank". Neither does it seem that these are rival accounts of the "true" meaning of necessity, as if the logician and the physicist must have a genuine metaphysical dispute about whether mass-energy conservation principles could be violated. Presumably, somehow or other, features of context fix some parameter on different occasions to allow the same sentence (e.g. "necessarily, solid gold is more dense than solid water") to express different propositions on

different occasions. I think this is usefully modeled by having a range of worlds, or situations, and counting more of fewer of them as "possibilities", relative to a world, depending on the context of utterance. (So a world where solid gold is less dense than solid water might be a logical possibility but not a nomic or technological one, for example.)

So I will go that far with a contextualist story about what I loosely call different "senses" of necessity and possibility. (A modified version of that story will also hopefully serve to explicate the relationship between the necessities being considered and epistemic or deontic ones.) There are two steps further that some, most famously Lewis 1986b, take to analyse this context-sensitivity, that I do not want to follow. The first is to hold that modal operators like necessity and possibility are literally quantifiers over possible worlds or situations (p 9-10, 19-20), and the second is that the way context produces different grades of necessity and possibility is by implicitly restricting quantifiers (p 7-8): when I am talking of what is nomically possible I am talking about what is going on in *all* worlds, but restricting that quantifier to the ones that obey our laws. (Just as normally when I say all the eggs have gone off, I quantify over all of the eggs in some restricted domain.) These extra commitments would help explain the contextual behaviour of natural-language modal talk, of course, but I do not think they are the only way to have a contextualist theory with the features mentioned in the previous paragraph. Of course, I am happy to allow that there are worlds, and that different grades of necessity and possibility correspond to different delineations of worlds: but I want to remove the suggestion that this is because I take modal operators to literally be quantifiers over such worlds, and to challenge any assumption that that is the only kind of framework that allows restricted modalities and divisions between worlds to go together in this way.

Returning to our question: is metaphysical necessity to be identified with "absolute" necessity, i.e. to the division between worlds that has all of the absolutely impossible worlds on one side and all of the in-some-sense-possible worlds on the other?[9] Of

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[9] A terminological note: I do not intend to be using expressions like "absolute necessity" in quite the way that e.g. Divers and Elstein 201x use the expression. It might be that they are offering one theory of "absolute necessity" in their paper and I disagree with that theory – or it might be that they intend

course someone could stipulatively use the expression in this way. (Stipulation is cheap.) And there is one strand of use where people who employ the expression "metaphysical necessity" have some sort of absolute necessity in mind: Stalnaker 2003 p 203 claims that "most" who talk about possible worlds at all believe that metaphysical necessity is "necessity in the widest sense", though I do not know whether there is much reason to believe this sociological generalisation. Whether or not most philosophers use the expression in the way Stalnaker prefers, I suspect not all of our usages of the expression "metaphysical necessity" sit very well with this picture.

### *If Metaphysical Necessity is a Restricted Modality, What Sort of Restricted Modality is It?*

Let us then examine some other conceptions of metaphysical necessity. If it is not absolute necessity, then I think there are two broad approaches one could take. One would be to take it to be a modality that is restricted by taking certain true propositions to be "fixed". To see what I mean, consider two tempting accounts of nomological necessity and temporal necessity respectively. When something is nomologically necessary, it is true on pain of there being a violation of the laws of nature. It is in this sense at least that it is impossible to violate a law of nature. One tempting analysis of nomological necessity, then, is to say that a proposition *p* is nomologically necessary provided that necessarily, either it is true or some actual law of nature fails to obtain.[10] (That is, it is strictly implied by the (statement of) the laws of nature.) Of course this analysis is uninformative until we are told what sort of "necessity" is meant on the right hand side of the analysis: but if we say that something is nomologically necessary iff it follows from the laws by *logical necessity*; or by *conceptual necessity*; or by *absolute necessity*; then we have an account of nomological necessity in terms of some other, hopefully antecedently

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the expression to stipulatively pick out the phenomenon, if any, that is characterised in the way they do: in the latter case I suspect we just mean slightly different things by the expression.

[10] Obviously I am talking here as if laws of nature are facts or things in the world. There is another usage according to which they are a kind of representation or proposition – a representation, perhaps, of the "laws of nature" in the first sense. Replacing "laws of nature" with "statements of laws of nature" should do for those who prefer to only use the second sense.

understood, kind of necessity.

Or consider temporal necessity.  There seems to be a sense in which the past is fixed, that it is not full of possibilities like the future is.  Some have wanted to build metaphysical castles from this intuition, but we go a long way to satisfying it just by treating temporal necessity as a restricted modality.  If we say that temporal possibilities are those possibilities compatible with our actual past, or equivalently that something is temporally necessary iff it is strictly implied by the conjunction of propositions about our past, then we get a sense of necessity in which the past is fixed, but there are still many possibilities about the future.  Again, this strict implication may have the strength of something like logical necessity, though sometimes people want to restrict consideration to worlds that share our past and our laws of nature, so they may either include the laws in what is "held fixed", or perhaps the necessity of the strict implication would be nomic and not just logical.

Finally, consider a necessity that most people would not want to invest with deep metaphysical significance (as philosophers have wanted to invest both nomic and temporal necessity with).  Consider our notion of technological possibility.  This seems to be a "contingent" modality:  more things could have been technologically possible today if we had spent more money on research, and fewer things would have been technologically possible without the rise of institutionalised science, for example.  Technical possibility changes over time:  manned trips to Mars were not technically possible in the 1920s, but are today (even if we have not yet built the equipment).  It also varies in other ways:  manned trips to Mars are technologically possible for the USA, but not for Chad.  Here is a tempting form of an analysis of technological possibility:  some accomplishment $X$ is technologically possible for a community at a time iff its non-obtaining is not strictly implied by a conjunction of the laws of nature, most of the facts about the past, facts about their technical expertise, resources, etc.  Obviously what counts in the body of information to be "held fixed" will be vague, and obviously I've underspecified it (some care would probably have to be taken to work out which limitations of ours are due to absence of technology rather than laziness, lack of desire, irrelevant interferences, etc.)  We get a restricted modality of technological necessity and possibility by treating a lot of features of the world as necessary that we would not if we were interested in nomic or

logical possibility.

In general, the most straightforward way to have a system of restricted necessities is to start with an absolute necessity (call it logical necessity for want of a name), and saying that we get a restricted necessity for any set of true propositions S: something is necessary in such a restricted necessity if it is logically strictly implied by the conjunction of the members of the set—that is, if we let $s$ be the conjunction of the members of S, then: restricted-necessary $q$ iff it is logically necessary that $s \rightarrow q$.[11] A proposition $q$ is restricted-possible if and only if its negation is not restricted-necessary, as usual. Call the members of S the propositions "held fixed" by the relevant restricted modality. Of course the restricted modalities we in fact use are not likely to have arbitrary collections of propositions held fixed: more likely, they will have some natural grouping, either explicitly or suggested by context. (Propositions that describe laws of nature for nomic necessity, for example, or propositions about the level of technological resources and know-how in different places and times for what is technically possible.) Of course we could have restricted necessities and possibilities even if there is no absolute necessity: the conditions could be stated directly by conditions on worlds, or by picking out the restricted necessity required for the strict conditional in one way and using the above formula with a suitable restricted necessity playing the role of logical necessity. Or one could say that what is restrictedly necessary relative to S is given by what are the logical consequences of S, provided one had a suitable notion of logical consequence.[12] One would likely extend this basic idea in several ways: one would be to allow S to vary in contents between possibilities, so that e.g. it is technologically possible, through research, to expand the

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[11] These restricted necessities are, near enough, what Bob Hale calls "relative necessities": see Hale 1996 p 93. The "relative necessities" of Smiley 1963 are perhaps the first formal treatment of this idea.

[12] If we treat restricted necessities this way, we should be careful about the problems pointed out in Humberstone 1981, due to Kit Fine. One solution is to not treat the principles governing necessity operators associated with restricted necessities as *axioms* of a multi-modal logic, but instead use only definitions and premises to produce the desired behaviour (For instance, define "it is physically necessary that p" as "L(N->p)" where "N" is a conjunction of the laws of nature, and further include "N" as a premise, rather than an axiom or as being entailed by any axiom. Humberstone explores another interesting response which keeps much of the spirit of the proposal in the text above. Thanks to Bob Hale for pushing me on this point.

limits of what is technologically possible.

Something like the straightforward view of restricted necessities is that of Lewis 1979 pp 246-7 who suggests these restrictions are usually supplied by context. Lewis frames it rather in terms of restrictions on sets of worlds, and it he appears to see it as of a piece with quantifier restriction (necessity is truth in all worlds, it is just that "all" sometimes is contextually restricted), though he chooses to put the point in terms of accessibility relations as well in Lewis 1986b pp 6-7. If we did endorse this picture in treating metaphysical necessity as a restricted modality, focus would switch to what sorts of propositions, exactly, should be held fixed when we are considering it.

Note that a "holding fixed" story should find room for restricted necessities de re as well. The easiest way to do this would be to "hold fixed" groups of propositions about an individual: when we ask what is physiologically possible for me we should hold fixed that I am human, and perhaps some general facts about my physiology. (I am physiologically unable to get pregnant, but this does not just follow from my being human.) One tempting view about essential properties, or at least the ones ordinarily ascribed, is that many of them are only restrictedly necessary for the things that have them (it is not a matter of logic or analyticity that I am human, for example, so perhaps it is not absolutely necessary). Inconstancy de re is often cashed out in counterpart theory talk, but it could also be cashed out in terms of restricted necessity de re: even if I am identical to my body, the necessity deployed when we say I could not survive brain-wiping may be different from the one deployed when we say my body could survive brain-wiping. This would require some of the propositions concerning this person to be distinct from corresponding propositions about this body: but it is independently plausible that "aboutness" is sometimes hyperintensional. I can spread a rumour about Robin Hood being the Sheriff in disguise without thereby spreading a rumour about Robin of Locksley being the Sheriff in disguise.

There is an alternative to this "holding-fixed" story: we could take facts about metaphysical necessity to be a sui generis: a basic, objective divide between possible states, or perhaps some objective fact about the world that gives rise to a distinctive divide between possible states. An analogy to consider here is a view of laws of nature and nomological necessity the reverse of the one considered above. Above, I

suggested an analysis of nomic necessity as the necessity we get when we "hold fixed" the laws of nature. An alternative account would be to take nomic possibility or necessity as primitive, and then analyse the laws of nature as whatever obtains in every nomically possible world. (See Pargetter 1984). This sort of account could be refined – perhaps it is only the logically contingent propositions among the nomically necessary ones that are lawlike, or perhaps some other special subset of the nomically necessary propositions correspond to laws. The crucial thing about this sort of account is that it takes nomic necessity as basic.

Analogously, we could hold that metaphysical necessity was a basic, primitive piece of theoretical machinery. If we did, no doubt we could locate some set of propositions which would strictly implicate all and only the propositions that are metaphysically necessary. But on this approach the direction of explanation would not be that a proposition is metaphysically necessary because it is strictly implicated by a set of propositions "held fixed". (Lowe 1998 p 18-19 is an example of a theorist who concedes that the metaphysical necessities are all and only those propositions that are the logical consequence of a particular set of statements M, but resists the claim that metaphysical necessity can be analysed in these terms – if anything, things go the other way, and we need to rely on our grip of metaphysical necessity to identify M.)

This kind of alternative, which would not require us to independently identify some body of propositions to hold fixed, would instead attempt to rely on objective difference between the metaphysically possible and the metaphysically impossible to determine what it is that is the same in all metaphysically possible worlds.[13] If we decide there is an independent, non-contextual metaphysical difference here, a "joint in nature" to be discovered, we could understand disputes about metaphysical necessity to not be a matter of different people legitimately holding different bodies of truth fixed, but of people genuinely disagreeing about what this distinctive metaphysical status applies to and what it does not apply to.

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[13] A slight variant of this would be to say that there was a fundamental natural accessibility relation to be discovered here, making for a direct and independent difference between the worlds metaphysically possible relative to ours and those that are not.

One might be dubious that it makes any sense to claim that one restricted modality rather than another has some metaphysical privilege. After all, all the divisions between classes of possible worlds are there, and they are all equally objective – it is not as if we literally divide worlds into the ones within one restriction and one without, but rather our thought and practice fixes on one rather than another of the pre-existing divisions. (All the sets of worlds pre-exist any notice we might take of them, at least for most metaphysical realists.) If all of the divisions are objective ones, what sense does it make to suggest that some are more "really there" than others?

One way to make sense of this is to say that some of the relative modalities are more "natural" than others, in something like the sense of Lewis 1983. If we add to this that this naturalness gives rise to increased "eligibility", so that this "joint in logical space" is more fit to be picked up as the semantic value of a use of "necessarily" or "possibly" than nearby divisions that fit usage similarly well, we get a story where a privileged metaphysical feature of the world can be referred to by people with quite different theoretical commitments, and where it is distinguished from the less natural, more "gerrymandered", though equally real, divisions that it is similar to. This sort of picture of metaphysically privileged, semantically eligible "meanings" in our logical vocabulary ("joints in logical space" or "reference magnets") is articulated in Sider 2001 xvi-xxiv, who is there primarily concerned with the meanings of quantifiers.

Some are dubious about this picture of metaphysical privilege, and I do not want to take on the burden of defending it here. (Though it should be pointed out that many of us want the world to do some of the work in determining which properties are associated with our natural kind terms, in sorting the gruesome from the well-behaved properties, and so on: whatever one says about these everyday cases of meaning selection might be able to be adapted to cover more esoteric issues about meaning like determining which restricted modalities are natural or eligible and which are gerrymandered or gruesome.) Those that do think there could be a genuine and deep metaphysical issue about what is, or is not, metaphysically necessary, may want to use this machinery to say how there could be a real issue to engage with here: how one restricted modality could be more important than similar restricted modalities in some

objective way. Of course, if they wanted to postulate such a natural distinction, a "joint in logical space" as it is sometimes put, they would also owe us an epistemological story about how we find out what that distinction, exactly, is: but modal epistemology is a challenge for everyone, so perhaps I should be wary of throwing too many stones on this count.

If a theorist wants to avoid analysing metaphysical necessity in terms of what follows from some suitable set of propositions which are held fixed, she is not thereby forced to appeal to a primitive natural distinction between possible worlds. There are presumably many alternatives here to a "holding fixed" account besides taking a distinction between metaphysically possible worlds and the rest to be primitive, and I will discuss one in more detail below <p Y>. In general, let me characterise the general alternative to the "holding fixed" view of metaphysical necessity as the view that some class of possible worlds are *special*, in some way to be specified independently of the holding-fixed account. This might be a matter of taking that distinction to be sui generis (as one might if one thought metaphysical necessity should be taken as primitive, for example), or it might be a matter of offering quite different characterisation of the metaphysical necessities than as those which are compossible with some independently specifiable set of metaphysical truths.

Once this option of treating metaphysical necessity as marking a special distinction between worlds, one soon notices that there are further complications that someone might want to endorse. What if there was not one sui generis natural demarcation, for example, but several? Then different necessities might have some call on our ordinary talk of "metaphysical necessity". Perhaps the expression "metaphysical necessity" is ambiguous, with different patterns of use latching onto different ones. Perhaps context determines which of the available "bright lines" is picked up by an occasion of use of the expression "metaphysical necessity" (we can keep that much of the first story I outlined about restricted modalities). Or perhaps ordinary uses are indeterminate between the different natural delineations of metaphysical necessity. Or there might be more than one kind of specialness in play – perhaps sui generis natural distinctions mark out some class of worlds, but other distinctions (not to be cashed out in holding-fixed terms) select others. Those who postulate "special" distinctions between worlds in this technical sense tell us if they think there is more

than one, and presumably if they think "metaphysical necessity" picks out a unique grade of necessity they should give us reasons to think that there is only one relevant one.

## *Is Much of Metaphysics Metaphysically Necessary?*

It is often thought that a lot of the deliverances of metaphysics are necessary truths: the nature of properties, or possible worlds, or propositions; or how objects relate to time and space, though since the triumph of relativity there have also been many voices saying that these latter matters are contingent. There may be little consensus about what "identity conditions" are, but there is a consensus that they are necessary. The principles of set theory, the principles of mereology, the nature of causation, what laws of nature are, what dispositions are, and many others are all taken to be matters of metaphysical necessity.

On the other hand, there are some recognizably metaphysical issues that many philosophers do think are contingent. Many atheists, at least, think it is a contingent matter whether any gods exist. Physicalists typically take their view to be contingent: just because there are no ghosts or ectoplasm does not mean there could not be. Presumably many anti-physicalists think the core of their view is contingent as well: perhaps minds or meanings need non-physical components of reality, but maybe there are possibilities where everything is physical – worlds of drifting hydrogen gas and little else, for example. Whether there is free will is presumably contingent: despite disagreement over what is required for a being to have free will, we could probably secure widespread agreement that it is possible for creatures to have it and possible for there to be no creatures with it. (This agreement would not be universal, of course: for example, some think the notion of free will incoherent and so would doubt whether it could possibly be instantiated. But universal agreement between philosophers about anything is rare!) There are many other examples of metaphysical questions which are apparently contingent.

It is natural to wonder where the line should be drawn between those metaphysical issues that are matters of necessity and those where the right answers are contingent.

Now that I have distinguished five different things that could be going on when people are discussing metaphysical necessity, we can see that there are a cluster of questions here about "the" line between necessity and contingency in metaphysics. So it seems that we have five questions in front of us to replace the original question:

*Which metaphysical truths are the same in all worlds whatsoever?*
*Which metaphysical truths are the same in any world that is possible at all?*
*Which metaphysical truths obtain in all the "special" possible worlds, if there is a distinction between the special worlds and the others?*
*Which metaphysical truths obtain within which groupings of worlds, if there are many kinds of specialness?*
*Which metaphysical truths are true in all worlds that preserve the "important" metaphysical truths?*

We have a few other questions of interest in the vicinity to consider as well. The original question has not gone away: even given answers to the above five questions, was there one in particular we wanted to know about when we originally wondered about necessary metaphysical truths? (This question is part of what we might try to settle with the arguments of the first half of the paper.) There is also the question of whether, among the truths of metaphysics that are not metaphysically necessary, there are interesting groupings of modal strength. Are there clusters that are relatively connected, so that the nearest worlds that lack one lack them all? Are there some that are entirely happenstance, while others hold in any "realistic possibility"?

I will not be trying to answer the questions of the previous paragraph here: part of my purpose is to sort out interesting issues, not to try to pronounce on every one we see. But one thing that might be true of these latter questions is that their answers may depend on context. If which possibilities are "close" or "real" and which are far-fetched is to some extent a matter of a contextually determined ordering on possibilities, as for example work on counterfactual conditionals in the Lewis tradition would suggest (Lewis 1973, Lewis 1986b), then there may not be a once-and-for-all story. This is not to say that there will not be objective answers, it may just be that what to say about the objective matters of fact may depend on the context of utterance. (Compare: Whether "It is over 20°C here" is true depends on the

context of utterance to determine where "here" picks out:  but that does not make it somehow a subjective or interest-relative matter whether it is over 20°C here.)

While my primary purpose is not to answer the questions raised, I will venture some answers, and some defence of them, to the italicised questions – even if the positions I stake out do not survive, they may provide a toothing stone for further debate to develop.  Sometimes my answers will only be partial, when even I cannot bring myself to be opinionated too quickly.  I have already committed myself to an answer to the first question, about what metaphysical claims hold in all worlds whatever.  Given my generous position on what impossibilities there are, I don't think any claims whatsoever hold in all worlds, and so a fortiori none of metaphysics does.  My arguments for that position are above <p X> and in Nolan 1997.

The question of what metaphysical truths, if any, hold in any world that is possible at all, is one that requires a less sweeping answer.  Presumably some of the questions metaphysicians would like the answer to are logical and conceptual truths.  We want to know whether there is any inconsistency in the world:  if the law of non-contradiction does not fail in any logically possible worlds, it may be a candidate for absolute necessity.  Part of the "analysis" metaphysicians engage in seems to concern analytic truths – presumably there are some putative theories that are to be rejected because they abuse language or if they are true of anything they amount to a change of subject.  Any examples are likely to be controversial, but maybe it is just analytically false that electrons are mere possibilities of sensation; or that God is a process of cultural development; or change requires a lack of truth value for future contingents.

Saying what the logical, and conceptual, and analytic truths are is no easy matter, of course.  (And not one I attempt here.)  Nor is it necessarily an easy matter to defend the view that logical, conceptual and analytic truths are necessary in some absolute sense, for all that it is orthodoxy.  A guiding thought is that the truth of these claims somehow depends entirely on the representation, and not on the represented, so in any possible arrangement of things to be represented, these truths would be the same.  But whether we can make any sense of this that is useful is doubtful.  It is especially doubtful that we can properly develop this thought once we realise we can describe, in

a sensible way, ways things would be that violate logical or conceptual principles (we can, after all, characterise what logical consequence would be were intuitionism correct). So even though we are actual representers, some situations (albeit impossible) do not conform to our logical and conceptual truths. (They do not conform in the sense that what is true according to them does not always respect these constraints – of course the situations themselves do not, by their existence, violate any logical or conceptual principles.)

Leaving such difficulties aside, if logical and conceptual truths are absolutely necessary, we have here one category of absolutely necessary metaphysical truths. On some metaphysical views, a great deal of interesting metaphysics may turn out to have this character. One interpretation of Kant is that his "synthetic a priori" truths, among which he wanted to count most interesting metaphysical truths, were somehow conceptual truths – they came from our conceptualisation of things, though they differ from analytic truths as not being cases of one concept being contained in another. Something similar might be defended if we were conventionalists or thought that metaphysical enquiry was a matter of discerning relationships between fundamental concepts in ordinary use (concepts of objects, events, causation, time, etc.).

There is also a good case to be made that some of the a posteriori necessities are, at base, logical or conceptual. Two putative examples are the necessity of identity and the "necessity of actuality" (for want of a better expression). It is widely held that when a=b, necessarily a=b. But of course it is often a posteriori whether a=b: the Sheriff of Nottingham cannot tell that Robin of Locksley is Robin Hood without investigating. However, the necessity at stake may still be logical or analytic. Perhaps there is a principle that has such a status that ensures that things that are identical share all their (non-hyperintensional) properties at every world, including properties like "being identical to Robin Hood". The only way this could fail at a world, given that RL=RH in fact, is if that world violated a logical principle about identity. That principle may ensure identities are necessary as a matter of logic, even the body of information identified as logic does not provide us by itself with what we need to detect the truth or falsehood of many identity statements. Another logical or analytic principle, arguably, is that whatever is actually true is necessarily actually true: since the function of "actually" is to signal what is true at the actual world, no

matter what world we evaluate it at. Of course, it is a posteriori that it is actually true that Australia contains marsupials: but the (analytic or logical) rule for "actually" means that the only way for a world to represent that "actually, Australia lacks marsupials" is for the analytic principle governing the behaviour of "actually", connecting how actually *p* is evaluated at a world and what is in fact the case, to be violated. Now, whether these principles about identity or actuality are even correct is not really my concern here, still less to defend them: but this understanding of them could lead us to think that the corresponding necessities are logical necessities, or analytic necessities (perhaps connected with the rules for "=" or "actually"), even if they are a posteriori. Or perhaps these deserve their own category, since they are importantly different from standard logical and analytic truths, but the argument for an absolute strength of necessity might still be run. If there is such a category, people might disagree about its extent. Some may try to put a lot of Kripkean necessities in this category, though I have only seen weak arguments for many of those assimilations. (But perhaps it is analytic that if in fact x has y as a parent, x has y as a parent in every possible world in which x exists? Analytic due to the meaning of "parent" or the concept of parenthood maybe? I don't think so, but perhaps some do.)

Are there any other metaphysical truths that are absolutely necessary, besides the logical and conceptual ones, and any others in the "identity" and "actually" camp? I think that apart from these there are no absolutely necessary truths that are not logical or conceptual. Many would disagree: they would hold that the truths of mathematics are neither logical nor conceptual but are nonetheless necessary, for example. The reason I think that absolute necessity is restricted to the necessity of logical and conceptual truths is that I think that there is a notion of "logical necessity" that is in good working order: it is a kind of necessity apparently of the same family as the ones about what is the case (rather than epistemic or deontic matters), and one that does not take metaphysical truths to be necessary.[14] There may even be a decent

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[14] My impression is that some philosophers would hold that if there is a notion of "logical necessity" that is thinner than metaphysical necessity, then it is epistemic after all: it comes to something like "necessities we know through logic", and logical possibilities might be propositions not ruled out by logic along. And some philosophers think there is not even a good epistemic notion of logical possibility: Peter van Inwagen, in asserting "there is no such thing as logical possibility – not, at least,

sense of "logical necessity" which is even narrower, and according to which it is not logically necessary that, e.g. all bachelors are unmarried (since after all there are standard models of our logic where "all bachelors are unmarried" fails to be a theorem.)

Some characterisations of logical necessity in use are in terms that would not even cover mathematical truth as conceived of by the orthodox platonist. For example: *p* is logically necessary iff its negation is not contradictory, where "contradictory" in turn is spelled out as being an explicit contradiction (of the form "*q* and not-*q*"), or alternatively an implicit contradiction, where this is being such that an explicit contradiction follows from the claim by logic or by logic plus conceptual/analytic truths. There does not seem to be any lurking difficulties with this practice of taking "logical necessity", so defined, to be a form of necessity – and if so, anything that is not logically necessary is not absolutely necessary in the sense of "absolute" I defined.

If we want to know what metaphysical truths are absolutely necessary, then even if it were established that only logical and conceptual truths are absolutely necessary, there is one more issue to deal with. How much of metaphysics is logical and/or conceptual? This is potentially a deep and controversial topic, but for the sake of setting out a position, I will say that not very much at all in metaphysics is logical or conceptual. The nature of properties, what objects have mereological fusions, the nature of causation—none of these are logical or conceptual matters. Our use of language and our concepts may provide some starting points for our investigations, but even then the "commonplaces" or "platitudes" that provide the starting point may just as well be pieces of folk wisdom as conceptual constraints. How the world is, in its fundamental structure, does not depend on the relations between our concepts (why

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if it really supposed to be a species of possibility" and "[l]ogical impossibility is an epistemological category" (van Inwagen 1998 p 71) seems best understood as asserting that we are confused into thinking there is a grade of possibility here by having distinctive epistemic access to some facts about possibility and impossibility. I can see little positive reason to think defenders of a distinctive grade of logical possibility are confused in this way, or that the modality picked out is at best epistemic: but I suspect a full discussion of this disagreement would require more discussion of e.g. the nature of logic than is appropriate here.

would *it* depend on *us*? Or if the concepts are somehow in an abstract third world, why would the rest of reality depend on *that*?), and even when sophisticated anti-realist strategies show us how they can coherently deny such dependence claims, it seems to me the spirit of the objection can also be recast so as to survive against these anti-realist accounts. Of course, in saying this, I am appealing to a realist spirit in metaphysics, opposed to the idealism (transcendental and otherwise) that until a few decades ago held such a privileged place in many strands of metaphysical thinking.[15] Since I don't propose to establish realism here, or even to make trouble for the people who think much of metaphysics is conceptual but who are nevertheless realists, perhaps it is best if I move on to the other issues that may be at stake when people ask how much of metaphysics is metaphysically necessary.

*Which metaphysical truths obtain in all the "special" possible worlds, if there is a distinction between the special worlds and the others?* I do not think there is any sufficiently good reason to suppose that there is a "special" distinction which is not to be captured by the "holding fixed" account. There is no need to suppose there is a sui generis natural distinction between possible worlds, for example, and I think considerations of simplicity are powerful enough to suggest that in this particular situation, given the lack of reason to believe in such a thing we have a reason to believe there is no such thing. Drawing such metaphysically basic distinctions between possibilities also, it seems to me, is in conflict with an "actualist" or "non-primitivist" intuition that many share, that the truths of modality are somehow to be explained or accounted for in terms of categorical truths about this world. Perhaps there is some way to square drawing "special" distinctions with this sort of anti-primitivism, but it is not obvious how. Of course, this reason to not like the "bright line" approach will have no appeal for modal primitivists, but it may appeal to others.

That is not to say that any restricted modality is as good as any other. There are some restricted modalities we engage with rather naturally (e.g. the example of

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[15] Perhaps it suits philosophy's institutional status as a discipline in the humanities to think that metaphysics is indirect psychology, ultimately providing us not so much theories of the world as remarks about our way of understanding it. No doubt this institutional pressure, if nothing else, will ensure that idealism in metaphysics is a constant temptation.

technological possibility, above), and others which seem very strange or gerrymandered (e.g. where the colour of red things, but not of blue things, is held fixed.)  Presumably uses of the expression "metaphysical necessity" often pick up one of the many somewhat eligible delineations.  Accepting this observation does not require us to endorse a "special" distinction between worlds.  A holding-fixed account can and should admit that some groupings of propositions to hold fixed are more available, more useful, and perhaps even more natural than others.  If we have to find objective similarities relevant for grouping to explain why some grades of modality seem sensible and some artificial and arbitrary, it seems more initially promising to me to find these similarities in matters of non-modal fact than, for example, trying to find them directly between different possibilities.  This is what I think happens with nomic modality:  the propositions associated with laws of nature are metaphysically privileged, and so holding them fixed gives us a natural grade of necessity.  This is assuming some sort of mind-independence of laws of nature – if whether or not a statement is a statement of a law of nature is something that is entirely up to us or depends largely on our interests, then presumably there is nothing particularly metaphysically significant about the propositions expressed by law statements as against other propositions.

The fourth question is "*Which metaphysical truths obtain within which groupings of worlds, if there are many kinds of specialness?*"  If I am right that we do not even need one kind of specialness, this question will receive whatever answer we should give to conditional questions with unsatisfied antecedents.  Of course, the question of whether we should believe in one or more "special" demarcations, important demarcations which are not to be analysed in a "holding-fixed" way, is still an interesting question – the fact that my preferred answer is un-exotic does not show that the question itself is not worth scrutiny.

The question is liable to be confused with another, related question.  The related question is whether there is a distinctive once-and-for-all distinction that talk of metaphysical necessity is latching onto.  One way for that to happen, of course, would be for there to be a sui generis "special" natural division among possibilities or possible worlds.  But one could allow for this in a "holding fixed" framework as well.  One might, for example, think that, by analogy to laws of nature, there were

"metaphysical laws" which somehow had whatever privileged status laws of nature have.[16] This view might be even more attractive if one antecedently believed there was some sort of hierarchy of laws of nature: those of physics, those of chemistry, and "below" them, the laws of special sciences. The laws of metaphysics might then be slotted into the hierarchy: perhaps at the top if it is a metaphysician deciding. I am not convinced there is any such hierarchy, and even if I was I would not see any reason to give putative "laws of metaphysics" some status distinct from the status of laws of nature. So while I note the conceptual space for this, it is not space I want to occupy. I think that if we are going to go in for "laws of metaphysics" at all, we should think they are just another kind of law of nature, and assign them the same status as we do fundamental laws in the sciences.

I said above that there are ways to think that metaphysical necessity corresponds to a "special" distinction among possibilities without adopting the view that the special distinction is a basic "joint in nature", a fairly basic natural division in something like the Lewis 1983 sense. One way, for example, would be to try to develop a projectivist conception of metaphysical necessity such as that outlined in Blackburn 1987 or discussed, but not endorsed, in section 2 of Divers and Elstein 201x. Since it would not be feasible to try to discuss every alternative to a "holding fixed" account, however, let me discuss in some detail one particularly promising alternative way I can see to do this, apart from the option of taking metaphysical necessity as more-or-less primitive (either by finding a "logical joint" between possible worlds, or having a primitive metaphysical modality in one's theory). In the end I think we should reject this alternative as well, but I would recommend it to someone seeking a further account of a "special" grade of metaphysical necessity.

Marc Lange (Lange 2005) has suggested that some bodies of propositions are *stable*, in the following sense: a set of propositions S is stable if and only if, the members of S are all true and for any of its members *m*, and for any propositions *p* compatible

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[16] Gideon Rosen suggests, and Jonathan Schaffer endorses, the view that what is metaphysically necessary is what follows from the laws of metaphysics. See Rosen 2006 and Schaffer 2010. See Stalnaker 2003 p 203 for an earlier discussion of "metaphysical laws" (Stalnaker rejects this way of thinking about metaphysical necessity).

with all of the members of S, the counterfactual "were it to be that *p*, it would be that *m*" is true.[17]  For example, Lange thinks that the set of propositions that are logically necessary is stable:  where *l* is a logical necessity and *q* is any logically possible proposition, he thinks *q->l* will be true.  This would be trivial on some theories of counterfactuals:  in David Lewis's system, any counterfactual with a logically necessary consequent is true (Lewis 1973), but Lange does not think that conditionals with logically necessary consequents are automatically true.

Lange also thinks (Lange 1999) that the nomic necessities form a stable set:  any conditional with a nomically possible antecedent and a nomically necessary consequent is true.  But not every conditional with a nomically necessary consequent is true:  "If gravity were to obey an inverse cube law, it would obey an inverse square law" is false, even if we presuppose that gravity does in fact obey an inverse square law, and as a matter of nomic necessity.  Perhaps metaphysical necessities are like this?  Perhaps there is a distinctive set of metaphysical propositions that is stable, in this sense, and so are fit to be treated as having a distinctive grade of metaphysical necessity?

I think not, partly because I think Lange is wrong that even logical and nomic necessities form stable sets.  I think that in some contexts, the "closest" worlds where a logically possible antecedent is to be evaluated is an impossible world, and there may well be logically necessary truths that fail to obtain there.  (In other words, I think there are violations of what I have called elsewhere the "Strangeness of Impossibility Condition", that every possible world is closer to every other possible world than any impossible world is.)  So some conditionals with logically possible antecedents and logically necessary consequents are false, in at least some contexts.  See Nolan 1997, in preparation and Vander Laan 2004 for discussion.  I also think there are counterexamples to the analogous "Strangeness of Nomic Impossibility

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[17] For ease of presentation I have taken terrible liberties with use and mention in this characterisation. Lange also argues that in the case of logical necessity, we can replace the characterisation in terms of consistency with a non-modal characterisation of the relevant qs: namely, for all *q*s such that ~*q* is not a member of *m*.

Condition".[18]  This seems false:  "If krypton gas had started reacting with every atom it interacted with, it would have still been among the least reactive gases." Nevertheless, the antecedent is nomically possible (and not even vacuously, if every encounter of a krypton atom was an unlikely reaction with fluorine atoms), and the consequence is a nomic impossibility.[19]  Or, in a context where we are discussing the explanation of consensus among physicists, it might be right to say "if physicists were to come to agree that the neutrino is its own antiparticle, that would be because the neutrino was its own anti-particle" and also say "if physicists were to come to agree that the neutrino is not its own antiparticle, that would be because the neutrino was not its own anti-particle".  If we are scientific realists in such a context, it seems correct for us to deny "if physicists were to come to agree that the neutrino *is* its own antiparticle, then the neutrino would *not* be its own anti-particle" and mutatis mutandis for the other one.  One of these denials would be of a conditional with a nomologically possible antecedent, but a nomologically necessary consequent.

Examples like this convince me that contexts for counterfactuals can vary widely enough so that a "Strangeness of Impossibility Condition" will normally have counterexamples, no matter what kind of impossibility we are concerned with.  But perhaps something close to Lange's proposal is correct.  It is only rather unusual conditionals, and perhaps only certain contexts, which are counterexamples to Lange's claims.  Perhaps stability comes in degrees:  the highest degree would fit Lange's definition, but some sets propositions are closer to that "ideal" than others.  If this is so, then perhaps logical necessity and nomic necessity characterise sets of propositions that are close to stable.  Of course if we wanted to accept this, we would like a story about what the metric is of degree of nearness to stability – I do not have one to offer here.  If this weakened proposal does something like the job Lange wants stability to do, however, then maybe there is some restricted necessity in the vicinity

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[18] The Strangeness of Nomic Impossibility Condition (SNIC) is equivalent to the claim that nomic necessities are counterfactually robust for a closest world conditional, unless some very odd assumptions are made.

[19] Lange says of a similar case in Lange 1999 p 264 that he does not think that such a counterfactual is true (as opposed to one e.g. about what we might conclude if we discovered krypton behaving in that way).  But I think the judgment about the krypton case remains very natural even if Lange does not share it.

of what we think of as metaphysical necessity with this feature?

That is a lot of "perhaps"s and "maybe"s. I do not see good reason yet to think there is a distinctive restricted modality in the area of "metaphysical necessity" with the feature of near-stability. For those antecedently hoping to find a privileged restricted modality around here, though, I recommend investigating this weakening of Lange's approach as one suggestion about what might be special about a "privileged" restricted modality.[20]

As for the fifth question, "*Which metaphysical truths are true in all worlds that preserve the 'important' metaphysical truths?*", that turns almost entirely on the question of what the "important" metaphysical truths are. Almost entirely, for two reasons: one is that some of the unimportant ones will presumably hold at all of these worlds as well – most obviously if they are logical consequences of the important ones, but perhaps also if they have some high grade of necessity despite being unimportant. (Peripheral conceptual truths may be examples in this category.) The other reason why we might need more than a list of important metaphysical truths to understand the answer to this question is that we would like to know what it is for them to be important, in the relevant sense. 1This is particularly true if "important" is context sensitive, since we will probably have to rely on our understanding of the context to be able to provide varying answers to the question in the varying contexts in which we might be interested in it.

Perhaps there is nothing very general to say here: what is important to someone with one set of interests may not be important to someone with another, without either having any sort of shortcoming. (Though for an example of someone who does think there is something general to say on this point, see Sider, unpublished.) No doubt some metaphysicians will think that someone who does not agree with them about the important questions is thereby making some sort of mistake, and we should invite those metaphysicians to defend that view. (Another who might welcome this

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[20] It is not that Lange's approach could not be employed by someone using the alternative "holding fixed" approach, but that it does not seem to me to require it, and seems to me the best bet for someone who wants to employ this "bright lines" alternative.

challenge is Shaffer 2010 – as noted, he does seem to think there is a privileged set of metaphysical truths that are the "metaphysical laws", and these are what is to be held fixed.)

Even if there is nothing useful and general to say about this question, though, keeping it in mind can help us recuperate interesting issues from debates that seem to have bogged down about what is, or is not, metaphysically necessary. Suppose, for example, a philosopher thought that individual objects had rich essences, such that some of the everyday properties the objects had were had essentially, and some only accidentally. That philosopher might be in the habit of making pronouncements about what is metaphysically necessary: that people could not permanently lose consciousness without ceasing to exist, or that desks in fact made of wood could not have been made from ice, or that a restaurant cannot simultaneously change location and cooks, or whatever. Even if you think these claims are all false, because you think all of these things are possible in some generous sense, there is something non-modal that may be lurking behind our philosopher's remarks. Our philosopher might think that facts about what properties are had essentially are among the "important" ones, and so is restricting the modality (consciously or unconsciously) to only cover possibilities that do not differ with respect to a wide range of facts about essence. Even if we think it is possible for objects to have different essences than they in fact do, or even that objects could (in some generous sense) belong to familiar kinds while not having the essences that actual exemplars of those kinds share, we can recognize that there are questions about what essences people, or wooden desks, or restaurants have, and make progress on those issues without feeling the need to engage in a debate directly about "metaphysical possibilities".

In talking of facts about essences, do not take me to presuppose that there are once-and-for-all, objective essences with the sort of richness that philosophers in this Aristotelian/Kripkean tradition endorse. I am inclined to think that essences are at best relative to ways of characterising objects, and perhaps there are no very rich essences at all (as opposed to being essentially such that there are no true contradictions, for example: there are no true contradictions in any world where I exist, but even if it is essential to me it is not a "rich" essence in the same way that being essentially a person or essentially human would be.) Nevertheless, there are

facts about what objective, rich essences objects have even if there are no such essences: it would be a fact that *there aren't any*. Anti-essentialists like me will thus disagree radically with many neo-Aristotelians, and that debate will spill into what we count as metaphysically necessary – but I think it is possible and worthwhile to distinguish debates about what is metaphysically necessary arising from that source from debates arising from the main issues discussed in this paper, which are more about the nature of metaphysical necessity. My debate with the Aristotelian survives a resolution of what we mean by "metaphysical necessity", and, if we do decide to just keep fixed whatever metaphysical truths are important, whether essence facts are important.

Let me mention two other examples where I hope this framework might help clarify ongoing debates. One famous dispute in metaphysics is whether the laws of nature are metaphysically necessary.[21] Sometimes this debate is a special case of the one about essences: some think that the laws of nature are metaphysically necessary because they flow from the essences of properties that figure in them, and those essences are had of metaphysical necessity. (An example is Bigelow, Ellis and Lierse 1992.) Most people will agree that there is such a thing as "nomic necessity", which we get by including the laws of nature among what is "held fixed", but where we might allow ordinary facts about the past or present to not be held fixed. Some want to say that this is also metaphysical necessity. What might they be committing themselves to? I suppose that sometimes they want to say that if something is possible in any genuine sense then it is nomically possible. I have seen no argument for this that is persuasive to me – why there is no decent sense of logical or conceptual possibility according to which gold is homogenous, for example – but no doubt partisans on the other side are not worried by having nothing convincing to say to me.

Other times, defenders might argue that there is no need for a distinctive modality between metaphysical necessity and actuality – no "contingent necessities".[22]

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[21] Defences of the view that laws of nature are absolutely necessary can be found in Shoemaker 1984, Swoyer 1982, Bigelow, Ellis and Lierse 1992, Ellis and Lierse 1994, Elder 1994, and elsewhere.

[22] I believe I first heard this form of argument from George Molnar.

Perhaps this can be reconstructed as an argument that nomic necessity is a distinctive "logical joint", and there are no competitors, so we should think metaphysical necessity lines up there. I think such an argument would need to also tell us why we should seek a "logical joint" for metaphysical necessity, but with that supplement (and support for the main premise as well), we are on the way to an argument. Or perhaps this sort of argument presupposes that "restricted modalities" do not work in the fairly free way I have sketched, where context allows us to take all manner of things as "fixed", in which case our dispute turns to that question (largely a philosophy of language question, I would have thought). Finally, perhaps in saying laws of nature are metaphysically necessary the proponents are saying something correct in their mouths simply because they hold that laws of nature are metaphysically important. I need have no quarrel with that, nor may many who would ordinarily say that laws of nature are contingent.

Another debate that is starting to boil is whether principles of mereology – the axioms that capture the behaviour of the part-whole relation – are necessary or contingent.[23] This debate can be clarified somewhat, I believe, by finding out where in the five replacements dispute might be occurring. One might dispute whether mereological principles are absolutely necessary. I suspect some people think that the principles governing mereology have the status of logic – whatever that is – or of conceptual truths. That belief, together with some sort of argument for the absolute necessity of logic or conceptual truths, would provide the conclusion that mereological principles are necessary. Or, if one is chasing a unique, especially suited, joint in logical space, then one might hold that the corresponding class of worlds all satisfy mereological principles. Whatever *gnosis* is supposed to deliver information about such a special distinction among worlds may also deliver secret wisdom about how mereology fares in those worlds, I suppose. Or perhaps the debate is rather prosaic – if one side feels that the principles of mereology are important metaphysical principles, and the other thinks that only some are important and some are unimportant, they may not be disputing about any matter that is important for metaphysics – at least unless "importance" has been tied to some other issue of importance.

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[23] See Cameron 2007, Parsons 2006 and Schaffer 2007 for three recent defences of the contingency of the axioms of mereology.

In the cases of the metaphysics of essence, the modal status of laws of nature, and the modal status of principles of mereology, we get clearer on the grounds of debate by substituting my questions. Indeed, I hope that some debate will be shown to be at cross purposes if we do that substitution. If one person defends the contingency of mereology on the grounds that mereological principles are not logical or conceptual, and another defends the necessity of mereology on the grounds that those principles are just as metaphysical as important truths about time or mathematics, then once their views are clarified, they may find themselves in substantial agreement. (Many others will still wish to disagree with both of them, of course.)

Some readers might get the impression from this discussion that I have a rather deflationary picture of debates about metaphysical necessity: that there is not an interesting question about whether the laws of nature are metaphysically necessary, or whether principles of composition are metaphysically necessary, or whether properties identified as "essential" are had of necessity, and so on. In one sense this might be right: I think debates over some of these issues produce more heat than light, and insofar as there is a debate worth having after my view is adopted, the ground shifts somewhat. Again to use the example of mereology, if one person thinks that the principles of mereology have the status of logic, and another the status of laws of nature, then we have a genuine debate, but one that need not proceed in terms of "metaphysical necessity". I want to agree that much is resolved once my view is adopted, but I would want to resist a little the charge that I am deflationary about these debates. It seems to me that there is a real (inflated?) debate to be had about whether my take on the five questions is *correct*, and e.g. if I am wrong and there is a unique "logical joint" deserving of the name "metaphysical necessity", then it may indeed be an irreducibly significant matter whether or not e.g. mereological principles have that status. So the question of whether mereological principles hold in all the worlds that belong to the distinct class of worlds deemed possible by a unique logical joint is not a deflated matter: it is just that *if* we accept that there is no such unique joint, it has a very quick answer. It is also not that these issues dissolve or cannot be made out in the first place: it is just that, on my understanding (and so, I hope, the correct understanding) sometimes the debate that swirls around these issues rests of false presuppositions so that several of the parties of the debate are wrong even before

we get to the details.

## *Conclusion*

In a certain sense, I want to maintain that questions about metaphysical necessity can often be usefully replaced by questions about one or more of the five other things I have mentioned. Instead of "is *p* metaphysically necessary?", we can ask and answer the questions "Is *p* true at all worlds whatever?", "Is *p* true at all worlds that are *possible* whatever?", "Is *p* true at all the worlds picked out by a certain ("special") distinction in logical space?", "Which, if any, of the classes of worlds determined by different logical joints is such that *p* is true at all of the members of that class?", and finally "Is *p* true at all worlds where we hold fixed the important metaphysical truths?". When we have asked and answered those replacement questions, we have captured most of what we wanted from our initial question, and done so more clearly.

I do not want to say that the original question "Is *p* metaphysically necessary?" did not make sense. And I can envisage that some people may want to argue that only one of my replacement questions is *really* what the original question amounted to, and the others reflect mistakes or confusions by some who currently dispute about metaphysical necessity. Others may even wish to argue that if these replacement questions are the best we can do, then we should be error theorists about "metaphysical necessity" itself, and think we have only these somewhat deflated replacements. Neither of these is my own view: I think there is a good deal of linguistic variation and some indeterminacy about what philosophers in general currently mean by "metaphysical necessity". These debates about what the expression "metaphysical necessity" means in common Anglo-American philosophical discourse in the eighties, nineties and noughties can continue, and to the extent that they are debates about metaphysical necessity, they are debates that are not resolved by answering the five questions I have suggested instead.[24] For the practicing metaphysician, though, I think *those* terminological debates will rightly be seen as being of secondary importance.

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[24] Surely in some sense they are about metaphysical necessity: the answer to the question "what is metaphysical necessity?" may go differently depending on what that question means, so the meta-linguistic question "what does "metaphysical necessity" pick out?" is the formal-mode equivalent of one way of understanding the material-mode question "what is metaphysical necessity?".

Of course, the wording of my five replacement questions can be modified somewhat without losing the important points of the different questions. The terminology of possible worlds could be replaced with other ways of talking about nested grades of necessity, for example. And if we think of metaphysical necessity as a restricted modality, there is the question of whether there are any other principled restrictions on what is "held fixed" besides those I have mentioned. I do not know of any, but I could be convinced that there was a robust enough pattern in what is being held fixed when people have beliefs about metaphysical necessity so that other options could be added to my list here.

With our questions distinguished, I offered the answers I currently favour to the five versions of the question "how much of metaphysics is metaphysically necessary?". I suspect that only the logical or analytic parts of metaphysics are absolutely necessary, and see no need for "special" variety of metaphysical necessity, so I would want to claim that many of the things claimed to be metaphysically necessary are metaphysically necessary only in the sense that they are strictly implied by a group of interesting metaphysical truths. Of course, this leaves open what important groups of metaphysical truths there are: but that question is largely a non-modal one. Of course, those positions are controversial, and I presume will be controverted. But the suggestion that questions about metaphysical necessity can be sorted out in the way I suggested does not stand or fall with the particular answers I offer: no matter what you are inclined to think is metaphysically necessary, or what you think the answer is to any of the five questions I distinguished, positions and lines of debate can be clearer if we spend some time engaging in replacement debates like the ones I have offered and not merely about "metaphysical necessity".

Legislating about what people should, or should not, argue about is futile as well as unhelpful. So I have not purported to do any such thing here. But I think if people take care to set things up in accord with the framework outlined in this paper, or alternatively to argue why the framework is mistaken or inapplicable, we can isolate clearer questions to disagree about, and hopefully therefore make better progress with

them.[25]

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