Inaugural Address

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W(h)ither Metaphysical Necessity?

I argue that a pragmatic scepticism about metaphysical modality is a perfectly reasonable position to maintain. I then illustrate the difficulties and limitations associated with some strategies for defeating such scepticism. These strategies appeal to associations between metaphysical modality and the following: objective probability, counterfactuals and distinctive explanatory value.

I

Quine Redux. Here, as I understand it, is how Quine left matters concerning two modal conceits of philosophy—analytic necessity and metaphysical necessity.[1] By applying the rationally mandated methods of charitable interpretation and explication, we *can* rescue each of these modalities from gratuitous associations that would leave them in a state of unintelligibility (by broadly scientific standards).

In the case of analytic necessity (or anything else that is supposed to be coextensive with it), the most promising basis for broadly cognitive significance is found in the *conduct* of science: it is epistemological. Specifically, the explication of analytic necessity is achieved by association (intended coextension) with apriority as the logical positivists understood it (see Putnam 1983), that is, as the immunity of statements from revision when we seek to manage our web of belief under the pressures of recalcitrant experience. Then there is good news and bad news. The good news is that the potential cognitive significance of this feature of statements is both evident and huge. If there are statements that we can reliably identify, and treat, as being immune from revision, we can make our attempts to minimize recalcitrance more efficient. For if certain revisions of belief (or theory)

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[1] The salient primary sources are Quine (1953a) on analytic necessity (analyticity) and Quine (1953b, 1976) on metaphysical necessity (the necessity that emerges from various constraints on providing a coherent intended interpretation for quantified modal logic). The present themes of Quine interpretation are developed and defended more extensively in Divers (2017a, 2017b).

are ruled out, fewer need to be considered and we can arrive at our best revisions more quickly. The bad news is that the history of science gives us no reason to believe that we can reliably identify any statements that merit designation as immune from revision. Accordingly, taking the first-person perspective of theory constructors, and practitioners of science, we ought to dispense with any concept—including that of analytic necessity—that seeks to earn its keep by association with such immunity from revision. Taking the third-person perspective of theory interpreters, we ought to regard others who deploy (or have deployed) such concepts as perpetrators of a heroic failure, or as victims of an explicable error. Other things being equal, we ought to treat those committed to analytic necessity as having false beliefs about the limits of rational theory revision.

In the case of metaphysical necessity, the most promising basis for broadly cognitive significance is found in considerations about the *content* of scientific theory. The necessity in question is supposed to be: (i) independent of language; (ii) non-relative, or absolute; and (iii) perhaps deserving in some other way of the characterization as 'metaphysical'. The most favourable explication of such a notion is that it is intended to figure, when represented as an operator of quantified modal logic, as an ideological primitive in Best Science, canonically formulated. Again, there is good news and bad news. The good news is that commitment to a logical vocabulary is an integral part of the scientific aim of characterizing all that there is in terms of an optimally stated Best Theory. So, if that is the aim of the play with metaphysical necessity, the aim is laudable. The bad news is twofold: (i) our best current conception of how to formulate Best Theory gives no obvious role to such modal operators; and (ii) the only clear conception that we have of a theory that may be so formulated is an Aristotelian version of physics. Accordingly, taking the first-person perspective of theory constructors, and practitioners of science, we ought to dispense with the vocabulary of metaphysical necessity when it comes to selecting our canonical notation. Taking the third-person perspective of theory interpreters, we ought to regard others who would deploy the vocabulary of metaphysical necessity in that role as (like our Aristotelian ancestors) pioneers whose science has simply been superseded or—in one way or other—having a false conception of the status that such modal vocabulary must play in science in order to merit a place in canonical notation.

If we are to seek to prove Quine wrong about the best explication of analytic necessity, metaphysical necessity or both, then, by Quine's own lights, we might yet do so without commitment to a metaphysical position of realism about any such necessity. For Quine, some of the questions of classical metaphysics can be explicated—they can charitably and profitably be addressed—by re-articulating them as questions about canonical scientific notation and its worldly significance. Classical metaphysical questions about the nature of fundamental reality, about the stuff of which everything is composed, and about the basis of all change, are questions to which we can give our best answers by considering the ontological and ideological commitments of an appropriately formulated version of scientific theory. That formulation is in a canonical notation and the theory so formulated is counted (by criteria I will not explore) as Best Theory. But I think that it is clear that what Quine has in mind is the canonical formulation of physics. Now let us put aside questions of ontology, these being settled by paying attention to those predicates of the privileged notation that characterize its bound variables. The explicable metaphysical questions that remain are those of ideology, these being settled by paying attention to other syntactic categories of expression in the privileged notation—notably, among others, the sentential operators. The primary question of ideological realism, then, is simply whether an appropriately intended operator earns a place in the privileged notation. And, accordingly, however we see the detail playing out, the proper sphere of a strict ideological realism will be very sparse indeed. For there will be very few types of sentential operator that will merit a place in the notation that Quine envisages. And, we might also add, there will be very few expressions to which we might extend our strict realism by courtesy through their being explicitly definable in terms of the primitive notation. We will have ideological commitment to the reality of what is represented by the Sheffer stroke (or the Quine dagger)—presumably a truth-function—and we can extend that by courtesy, if we like, to what is represented by expressions, such as the material conditional arrow, that may be introduced by explicit definition out of the former. But the further we move away from canonical notation and what can be introduced off the back of it, the more the question of realism is bound to lose its focus. For it will be prosecuted by paying attention to vocabulary that relates to that of canonical notation in a variety of indeterminate, interest-relative and pragmatically mediated ways.

Perhaps you think that (my) Quine gets 'the question of realism' wrong. Perhaps you think that what realism really (really!) is, or should be, is something other than what Quine, in my understanding, could most easily take it to be: a matter that arises primarily about the privileged notation and where he takes that privilege to be earned in a particular way. But bear with us. For what we can take from Quine is the idea that a properly charitable, and non-sceptical, explication of given modal concepts might arrive with or without realism. If analytic necessity, or some variant thereof, were to prove remediable by explication, it is clear that, for Quine, that will not be because the relevant modal operator is an element of the notation that he regards as metaphysically privileged. And yet an explicated analytic necessity operator could play a crucial—even indispensable!—role in the *conduct* of science. Some of the statements that we designate as analytically necessary (or at least the schematic representatives of these, such as logical laws) will be parts of Best Theory canonically stated. So we should be realists about some of that which is (designated as) analytically necessary; but that is not to say that we should be realists about analytic necessity. Yet we need not thereby be sceptics about analytic necessity. It is not only possible but entirely predictable that there should be ways of thinking about the world that are critical for the conduct and communication of science (or at least, human science), but which do not show up in the metaphysically privileged description of the world, the formulation of which is one of the aims of science. The problem with metaphysical necessity is that scepticism in that case seems to be a live and perfectly reasonable option even once we have taken the point about the possibility of a non-sceptical non-realism. It is simply not evident that metaphysically modal operators should be put beyond sceptical doubt, either because they merit a place in the canonical *content* of science or because they play some other identifiable and positive cognitive role in the *conduct* of science broadly construed. Again, this is not to say that we ought to entertain scepticism about any given non-modal statements which are supposed to be (in extension) metaphysically necessary—for example, theoretical identifications such as 'Gold is the element with atomic number 79' or 'Water is H_2O'. The scepticism focuses on the operator (and what it is supposed to intimate), not upon that on which it operates.

Later in this paper, I will comment on the prospects of three strategies for defeating establishing scepticism about metaphysical

necessity. But beforehand, I will attempt to strengthen my methodological platform by seeking to explain why I think a certain kind of scepticism about metaphysical necessity is a position that merits serious consideration.

II

A Reasonable Scepticism about Metaphysical Modality. When the prospect of scepticism raises its head above the parapet, it is apt to draw methodological fire. In particular, it is common to complain that the sceptic can only survive as long as it seems she is entitled to impose requirements and burdens on her credulous opponent that we come to appreciate, when we step back, as amounting to a quite unreasonable framing of the dialectic. I am sympathetic to that strategy for thwarting sceptics. Also—spoiler alert!—I am inclined to think that there is something that is at least close to the concept of metaphysical necessity and about which we ought not to end up being thoroughly sceptical. But I think that by giving scepticism about metaphysical necessity its due and by reflecting on what is 'metaphysical' about metaphysical necessity, what we do not end up with are grounds for being sanguine about the sustainability of a deep role for an unmistakably 'metaphysical' necessity in our hierarchy of cognitively valuable concepts—in particular, not a role for the logic of metaphysical necessity as *logic*, as we neo-Quineans would understand that. At least some of the following is implicit in what has been outlined in the first section of the paper, but I think it is worth making this—and more—explicit.

I do not wish to promote a scepticism about metaphysical necessity that relies on any allegation of unintelligibility. The scepticism envisaged is a resolutely pragmatic scepticism rather than a semantic scepticism. Intelligibility (relative to whatever standards and purposes are appropriate) is a condition that is envisaged as having to be met for the pragmatic inquiry to take place, and in this case it is stipulated as having been met. I do not deny that any of us who are familiar with the concept of metaphysical necessity (*locus classicus*: Kripke 1980) could do enough mental work, by whatever name it deserves, to get right quiz questions across a decent range of cases (for example, 'Water is H$_2$O' versus 'Water covers most of the

Earth'). This is good evidence that the concept of metaphysical ne-
cessity is serviceable; but it is not evidence that we ought to persist at
all costs in deploying it. For with deployment comes various respon-
sibilities to locate the concept in the bigger picture of our world and
our place in it. And it would be prudent to gather some assurance
that there is something in it for us if we are to take on that theoreti-
cal responsibility.

I do not wish to promote scepticism about metaphysical necessity
that relies on unreasonably high standards for the award of cognitive
accolades and adjectives. I want to take out of the equation any
question of whether talk of metaphysical necessity should rightly—
in virtue of its having any *specific* role—be apt for the cognitive
accolades of belief, justification, truth or knowledge. For my pur-
poses (and, to be honest, reflecting my minimalist sympathies) I will
allow that if talk of metaphysical necessity has any broadly cognitive
role then such 'propositional' characterizations are not out of place.
Accordingly, the scepticism about metaphysical necessity that I wish
to entertain is not vulnerable to blunt cognitivism in any of its forms.
I am not averse to accepting any of the following variants on my
question. What is the purpose (or function) of metaphysically modal
judgement? How would matters go worse for us if we did not make
these judgements at all? How would matters go worse for us if we
made the wrong judgements in this sphere? But I am averse to
accepting the following answers to those questions. The purpose of
the judgement is to detect the modal facts. If we did not go in for
such judgements we would be the worse for being unable to state the
modal truths. If we made the wrong judgements in this sphere we
would be the worse for having false beliefs and for missing modal
knowledge. These responses fail to engage with the presently envis-
aged dialectic. For one thing, the fact that this form of response is
available everywhere makes it look glib and undiscriminating. For
rhetorical effect, it might be pointed out that such a response might
be made to a challenge to the cognitive utility of talk of the lucky,
the racially inferior, the demonic or the astrological. And the reason
that such a response is deemed unacceptable in those cases (as I pre-
sume it would be) is that it counters a legitimate search for the
advantages of getting it right by insisting, in effect, that there is the
advantage of getting it right. It is appropriate to emphasize, at this
point in the dialectic, that it epistemically might be the case that all
of the above, bluntly cognitive, responses to the various questions

about judgements of metaphysical necessity are correct. If there is a decent, on balance, case for indulging in this way of speaking at all, it is immediately on the cards that the right to award truth, knowledge, facts and other cognitive accolades will follow. My question concerns the satisfaction of that sufficient condition.

I do not wish to promote scepticism about metaphysical necessity that relies on failure of reducibility. It may well be that the conduct of science (by humans) requires us to think and speak in terms of (for example) laws, causation, dispositions and natural kinds *even if* we are confident (a) that none of this language will be a feature of the canonical statement of Best Theory, and (b) that there is no viable programme of reduction that takes us from one way of speaking to the other. If metaphysical necessity can be placed on the same sort of footing as these other concepts, and if that requires eschewing all reducibility, then—as far as I am concerned—scepticism about metaphysical necessity will have been adequately resisted.

I do not wish to promote scepticism about metaphysical necessity that is based on an unduly demanding standard of indispensability. As intimated, it may well be that the conduct of science (by humans) requires us to think and speak in terms of laws, causation, dispositions, etc. For perhaps if we did not think in these terms there are plainer truths that can be stated without appeal to these concepts and which we would miss. In any event, the evolution, ubiquity and entrenchment of these concepts gives compelling evidence of there being of *some* use. That being so, we ought to presume that such concepts are, we might say, Field-indispensable (as per Field 1980, 1989 on the mathematical): that they have a pragmatic value such that the successful pursuit of science in practice depends on our deploying them. As long as concepts prove Field-indispensable we cannot seriously be pragmatic sceptics about them (although, with Field, commitment to realism is another matter entirely). That would be to pretend that we have no use for them in the prosecution of science, and can simply do without them without inhibiting our practice. In avoiding that pretence—in acting in good faith—however, we take on the philosophical responsibility of theorizing rather than abstaining. It is, subsequently, incumbent upon us to give a philosophical story about the status (semantic, metaphysical, epistemological, . . .) of these commitments. Consequently, in the absence of the kind of compelling prima facie evidence of value that comes with ubiquity and entrenchment, we do well to scrutinize the

status of a concept as Field-dispensable. When we resort to philo-
sophical intuitions to garner a concept that will serve science, we
had better be prepared for the outcome to be unfavourable in some
cases. It has to be a reasonable epistemic possibility that we some-
times adopt (from philosophy) a way of speaking and thinking that
does not pass the test of Field-indispensability and which, accord-
ingly, we do better to avoid, by abstaining, rather than to take as a
cause of our reconfiguring or expanding our semantic, logical, epis-
temological and metaphysical commitments. So there is a dispens-
ability criterion—Field-dispensability—that is appropriate to intro-
duce the promotion of scepticism (as opposed to realism) about
metaphysical necessity and which is not unduly demanding.

I do not wish to promote a scepticism about metaphysical neces-
sity that is methodologically dependent on a generalized conception
of pragmatic scepticism as the new first philosophy. I certainly do
not wish to entertain the idea of it being a general constraint on phi-
losophy that its practitioners require a pragmatic licence to develop
their conceits and to practise. That stance would not only involve a
violation of academic freedom, it would also be anti-intellectual to
its core. For the history of science and mathematics teaches us that
there prove to be any number of advantages gained by the prosecu-
tion of theoretical projects that do not immediately or of themselves
contribute directly to an improvement in our cognitive endeavours.
But, with all these caveats entered, … there comes a time! There
comes a time when a concept, that has no discernible and significant
non-philosophical life, and which has had generous theoretical atten-
tion over a long period of time, becomes a fitting target of pragmatic
scepticism.[2] Or so a very modest anti-quietism advises.

I do not wish to promote a scepticism about the philosophical
conceit of metaphysical necessity that is supposed to be a reasonable
starting point from which to approach any concepts that live a full
and independent life outside of philosophy. Such lives are lived by
the concepts that figure, indisputably, in the content, conduct and
communication of science—those expressed in, for example, our
talk of the unobservable, the mathematical, the causal, dispositions,
laws, and the probable. Looking beyond science proper, pragmatic
scepticism is not a reasonable opening stance towards any concepts

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[2] In the case of metaphysical necessity, the culmination of half a century of theoretical atten-
tion is encapsulated and advanced to new levels by Williamson (2013).

that are recognizable as recurring across a wide range of times, pla-
ces, languages, and the cultures that support them. For the evolution,
ubiquity and entrenchment of these concepts should count as strong
prima facie evidence that they are playing a role that, in some sense,
needs to be played in the practical and intellectual lives of humans.[3]
It will be a matter for philosophy and science to construct and test
hypotheses about what the specific roles of these concepts are and to
predict how things will go badly for those who endeavour to dis-
pense with them. It is to be anticipated (with Hume 1739, Book I,
passim) that a discourse will often earn its keep simply by bringing
the advantages that speed and vagueness have over accuracy and
precision: it is often worth our while to make our messages shorter
and less complicated even if, by certain lights, the shift in meaning
allows 'anti-realism'—one way or another—to get a grip. To be
clear, I am advocating a presumption of optimism in all such cases.
My sceptical project is emphatically not to begin with a mythical ta-
bula rasa and then hold our concepts, one by one, to account in the
court of pragmatic utility while presuming then guilty until proven
innocent. The project is Neurathian. We begin where we are, on the
high seas of practical and intellectual life, and would be very well ad-
vised not to jettison planks of our ship just because it is not immedi-
ately obvious how exactly they contribute to the structure. In partic-
ular, then, I do not wish to promote a scepticism about the
philosophical conceit of metaphysical necessity that is supposed to
be an equally reasonable starting point from which to approach the
modal concepts at large or in the field. Modal concepts such as those
of possibility, ability, capacity, disposition, affordance, and so on
have very strong claims on being presumed innocent on the grounds
of organic evolution, ubiquity and entrenchment. It would be a natu-
ralistic miracle (and not in a good way) if this family of concepts did
not contribute, somehow, to our effective and efficient accumulation
of knowledge of how the world (actually) is.

   Here, for the first time, a general strategy for freeing metaphysical
necessity from the clutches of scepticism presents itself. At its core is
the proposition that metaphysical necessity is a generalization or re-
finement (in some sense) of concepts that are entrenched in our
knowledge-gathering practices and can be liberated from the

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[3] I include here concepts—such as the moral concepts—whose primary value is not obvi-
ously cognitive. But since I do not anticipate that resistance to scepticism about metaphysi-
cal modality will go down that route, I leave this prospect aside.

clutches of scepticism by our articulation of that generalization or re-
finement. This is, indeed, to describe a general strategy that has
promise. I now consider particular versions of that strategy and the
prospects of their being executed successfully.

III

Anti-Sceptical Strategies. I turn to the question of how such a reason-
able scepticism about metaphysical necessity might be addressed.
My consideration of options does not aspire to be exhaustive.
Rather, I shall consider three particular strategies that might strike
those who would engage with the project as salient. These strategies
are indirect, in that they are attempts to establish appropriate con-
nections between metaphysical necessity and other concepts that
have, arguably, a more immediate and pressing claim on pragmatic
utility. Moreover, the strategies in question are, in the first instance,
calculated to resist scepticism about the weaker of two conceptions
of 'metaphysical' necessity which, I think, we must distinguish. The
weaker concept, A-necessity, is a generic necessity of which the
stronger concept, M-necessity, is potentially a species. The concept
of A-necessity is the concept of a necessity that is alethic, objective
and absolute, and which tolerates the inclusion of a posteriori cases.
The concept of M-necessity is the concept of a necessity that is
(already) an A-necessity, but which is enhanced by some further sub-
stantive 'metaphysical' component. I do not anticipate that anyone
who is interested in defending the pragmatic value of the concept of
metaphysical necessity is likely to dispute either the serviceability of
the key elements that I have adduced in characterizing A-necessity or
the place of these in characterizing a necessity that is properly meta-
physical. Nonetheless, some elucidation of the intended characteris-
tics is in order.

   The 'alethic' status of A-necessity is largely captured in logical
terms. When *it is A-necessary that P*, we may validly infer *P*; and
when *P*, we may validly infer *it is A-possible that P*. This is usually
thought to be enough to rule out that A-modality is deontic, and
that is the intent. The 'objectivity' of A-necessity is supposed to
mean (perhaps) no more than that it is non-epistemic. We are al-
ready familiar with various modal concepts that are intended to be

objective in this way—for example, the physically modal, the causally modal, and the nomologically modal. By calling a modality 'objective', in the intended sense, we are not making any deep claim. The characterization is part of the data that delineate the modal concept in question; it is not part of a theory about it. In particular, the characterization is (emphatically) not supposed to be a venture in realism. Any modal anti-realist must be allowed to go about her theory-building business with the distinction to hand between (for example) Goldbach's conjecture being epistemically contingent and its being non-epistemically non-contingent. The Humean, for example, is just as entitled to endorse the non-epistemic status of a concept of necessity as she is to endorse the non-epistemic status of the concept of causation. Or, at the bare methodological minimum, such anti-realists must be allowed the leeway to start from the presumption of entitlement to make that distinction in the data, even if an imagined denouement consists in demonstrating, ultimately, that there is a deep incoherence in (say) a Humean countenancing a non-epistemically modal concept. The 'absolute' or 'non-relative' status of A-necessity is a tricky matter (of which the most careful and informative treatment I know is due to Hale 1996). But, broadly speaking, this is a matter of the extent or strength of a modality: that being distinguishable from any view about the 'source' of the necessity or how we recognize it. If the concept of X-modality is that of an alethic and objective modality, then for every X: (i) for every P such that *it is X-possible that P*, *it is absolutely possible that P*, and (ii) for every Q such that *it is absolutely necessary that Q*, then *it is X-necessary that Q*. For the modalities that concern us, the totality of the possible worlds is the totality of the absolutely possible worlds, and (so) absolute necessity is what is the case in (unrestrictedly) every possible world. Finally, that A-necessity is tolerant of a posteriori cases is intended to capture the idea that we are not ruling out the classic Kripkean cases. In fact, for ease of exposition, I will go further and rule these cases in, so that we take as working hypotheses some subset of: *it is A-necessary that Hesperus = Phosphorus*; *it is A-necessary that Socrates is human*; and *it is A-necessary that water contains hydrogen*.

I must anticipate that the opponent of scepticism about metaphysical necessity will claim that she never meant to defend anything more than the pragmatic utility of A-necessity. If that is the intention, I shall not quibble. I do not intend to try to make anything—

here—of the claim that we can see off scepticism about A-necessity but not scepticism about metaphysical necessity. To achieve (only) the former would be a significant result. However, I also anticipate that some opponents of scepticism about metaphysical necessity have intended to defend M-necessity and not 'just' A-necessity. Moreover, I anticipate that some defences of the pragmatic value of metaphysical necessity might *depend* on its being understood as M-necessity. In effect, this would be an appeal to some consideration that goes beyond the (presumed) absoluteness of M-necessity and broaches such matters as the source of absolute necessity or our means of recognizing that. I shall have a little to say about this prospect at the end of the paper. But I proceed in the first instance to take the more modest concept of A-necessity as the subject of the sceptical dispute.

IV

The Explication of Apriority as a Source of Anti-Sceptical Hypotheses. Quine's most positive appraisal of the concept of analytic necessity boiled it down to the concept of apriority, as explicated in the manner of the logical positivists. So now let us consider the concept of apriority explicitly. The concept of apriority—however we elaborate or explicate it—is an epistemic concept and, by stipulation, the concept of A-necessity is not. But the pragmatic value of the concept of apriority is worthy of consideration, because it inspires hypotheses about the pragmatic value of the concept of A-necessity. The concept of apriority might be explicated, to Quinean satisfaction, if it can be distanced appropriately from a commitment to unrevisability. Such an explication may be conceived as involving a suggestion about the conditions under which we introduce an apriority operator (moving from P to *it is a priori that P*) and a conception of the consequences of our eliminating it (moving from *it is a priori that P* to P). It is to be emphasized—again—that the primary *explicandum* here is a statement involving an operator (*it is a priori that p*); it is not the statement (P) to which the operator applies. On the traditional explication, the introduction of the apriority operator or, we might say, the formation of the belief that *it is a priori that P* is appropriate when P is (identified as being) justifiable or knowable

independently of experience. On the traditional explication, the elimination of the operator involves detaching a *P* which we may proceed to treat as immune from revision in the face of any experience. For our, pragmatic, purposes, and echoing old-school-style pragmatic theories of meaning, it is the elimination or manifestation side of the conceptual equation that dominates matters.[4] This is what encodes what it is that we go on to do with statements that we take the trouble to dignify as having the relevant status, and this is the facility that we risk losing if we dispense with the concept in question. Consider now two explicatory hypotheses concerning the manifestation condition for the apriority operator, both of which are intended to rescue the concept from the unwanted trappings of unrevisability. To manifest commitment to apriority is:

(AP1)   to treat *P* as having a special status with respect to epistemic probability

or

(AP2)   to treat *P* as available for deployment (either as a premiss or 'imaginatively') when developing any supposition about what is actually the case.[5]

I am not presently concerned to consider the credentials, or the sources, of these candidates for the role of explicators of apriority. What matters for my purposes is that each of the above inspires a parallel hypothesis about the explication of A-necessity. Consider then two explicatory hypotheses concerning the manifestation condition for the A-necessity operator, both of which are intended to rescue the

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[4] From a Quinean perspective, acquisition or introduction conditions in general lose much of their epistemological authority, since, we are advised, we may add to our total web of belief anything we take to have a chance of helping with the overall management of experience and then claim our justification for having done so retrospectively, in consideration of the effects. But, abstracting away from Quinean idiosyncrasies, the focus on manifestation conditions remains appropriate for my purposes in any case.

[5] Preparedness to deploy *P* when developing any supposition about what is actually the case is distinguished from designation as unrevisable by an intended distinction of temporal scope. To treat a statement *P* as *currently* available to deploy as an element of our reasoning from any supposition about what is actually the case is not, of course, to commit now to treating *P* as available *at all future times* to be deployed as an element of our reasoning from any supposition about what is actually the case. The theorems of what we currently take to be our (optimal) logic are currently available to be deployed as elements of our reasoning from any supposition about what is actually the case. But that leaves open the prospect that the optimal revision of theory in the face of recalcitrant experience should be a revision of what we take to be our (optimal) logic. Or so the intention goes.

concept from the unwanted trappings of the commitment to a neo-Aristotelian version of the canonical content of Best Science. To manifest commitment to A-necessity is:

(AN1)   to treat *P* as having a special status with respect to objective probability

or

(AN2)   to treat *P* as available for deployment (as a premiss or 'imaginatively') when developing any supposition about what is counterfactually the case.

I will suggest that these explicatory hypotheses face complementary difficulties. In objective probability, hypothesis (AN1) seeks to relate A-necessity to a concept that is pragmatically impeccable. The difficulty faced by (AN1) lies with the *relation*. It is not evident that we can identify and forge a connection between objective probability and A-necessity that is of the right kind to transfer to the latter the (indisputable) pragmatic value of the former. The difficulty faced by (AN2) lies with the *relatum*. There are in the offing a variety of connections between counterfactual supposition and A-necessity, many of which promise to transfer pragmatic value of the latter to the former. But it is not (yet) evident what the nature or extent of the pragmatic value of the former is.

V

A-Necessity and Objective Probability. In this section, my brief remarks are intended only to introduce some challenges to what may now be an embryonic research programme, one suggested by remarks due to, among others, Edgington (2004, pp. 4ff.) and Williamson (2016, pp. 469ff.).

The following three observations combine to present a basic challenge to anyone who would entertain the thought, however qualified, that A-necessity is to be 'correlated' with having an objective probability of 1. Firstly, there are—of course—various philosophical 'interpretations' of objective probability, such as frequentism, best system, propensity, and so on (for an authoritative introduction to which see Hájek 2012). Sometimes these interpretations are

presented as exercises in conceptual analysis, sometimes as exercises in metaphysics, and sometimes just as 'interpretations'. An attempt to elaborate the pragmatic significance of necessity in relation to objective probability must clarify exactly what, among the foregoing, is being brought to the table in the name of objective probability. Secondly, on at least some views, objective probability values vary in such a way that those of prospective contingencies (the shooting of Kennedy) vary over time until 'settled' (by occurring or not) and then collapse to 1 or 0 for all subsequent times. (The integral values for settled retrospective contingencies reflect fatalism about the past.) In that case, it seems evident that a significant part of what is normally considered A-contingent will be associated with a probability of 1 at all times. Thus consider facts about the initial conditions of the universe (or about what is logically settled thereby). Thirdly, it is well known that when we have a probability measure on an uncountable set, a probability of 0 does not correlate with *will not happen*. The probability of hitting any given point on a real line with unit length is zero, yet when the trial is conducted some point will be hit. The probability of the outcome O was 0, yet at a certain time it is the case that O (transpireth). But whatever transpires is not impossible and, so, probability 0 does not correlate (straightforwardly) with what *cannot happen*. But however these three observations are (jointly) dealt with, there is a further—and deeper—problem that must be addressed by those who would attempt to derive a pragmatic significance for necessity from the pragmatic significance of objective probability.

The concept of objective probability is at least Field-indispensable to the conduct of science (cf. Lewis 1980, p. 83); it might even be Quine-indispensable, by earning representation in Best Theory, canonically stated. The ensuing question is simply what is it that might be supposed to require us—even to motivate us at all—to add A-modality to the probabilistic discourse? It might be suggested that we *may* think of, and implement, probability measures as measures of 'degrees of A-possibility' (again see Edgington 2004, pp. 4ff. and Williamson 2016, pp. 469ff.). But why should we exercise that permission? It is not clear what it is about A-possibility that calls on us to measure it in the ways that the application of probability theory allows. But there is a deeper problem. In the context of addressing scepticism about the pragmatic value of possibility, to proceed in this direction is to proceed in the wrong direction. The challenge

was, emphatically, not to boost the pragmatic value of probability
by showing that it might be applied to something (else); it was to es-
tablish the pragmatic value of possibility by showing that our think-
ing about objective probability invokes A-modality or, somehow, is
improved by making a connection of the right kind to A-modality.
Perhaps probability measures can be applied to A-modality, but if
that is all we have, one might as well say that the pragmatic value of
A-modality lies in humour, because we can have a laugh at things
we may characterize as A-possibilities, or in morality, because we
can find despicable things we may characterize as A-possibilities.[6]
Moreover, we have at least one philosophical model which suggests
that we *need not* think about the relationship between objective
probability and objective possibility in such a way that our concern
about the former motivates a concern with the latter. On the view of
Lewis (1980, 1983a) matters of objective probability are orthogonal
to matters of modality. On that view, matters of objective probabil-
ity are matters of how things are within a world, while matters of
modality are matters of how the totality of worlds is. Thus, on the
Lewisian view, matters of objective probability relate to matters of
modality in much the same way that matters of lawhood relate to
matters of modality. An analysis tells us what to look for within
each world when we look for the laws, but what the laws are is a
matter of how things are in that world. It is barely worth the ink to
make it explicit that Lewis's neo-Humeanism is philosophically
controversial. But the availability and cogency of the neo-Humean
philosophical model of objective probability cannot but enhance sus-
picion that there is nothing that about the deployment of objective
probability talk in the practice of the science that demands or merits
that A-modal talk should be grafted onto it. To be clear: it may be
that if we are already committed to exercising the concept of A-mo-
dality, and given that commitment to a concept of objective proba-
bility is strongly indispensable, we improve our cognitive outlook by
integrating the two. But that consideration will not move the sceptic
who remains to be convinced that we ought to exercise the concept
of A-modality in the first place.

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[6] Most of our thinking, no doubt, requires that we have a space of outcomes to consider.
But that does not take us immediately to the postulation of objective possibilities, since the
(crucial) question is why such consideration requires or merits characterization of the space
as a space of A-possibilities.

VI

A-Necessity and Counterfactual Invariance. In this section, my brief remarks are reflections on a more familiar research programme. I see the forging of a connection with counterfactuality—propositional or suppositional—as offering the best hope of establishing the pragmatic significance of A-necessity. Firstly, relating our thinking about A-modality to the office of supposition has always struck me as a far more promising project than any incidental play with imagining or conceiving. The move towards supposition is an attempt to relate modal thought to an activity that any (finite!) intelligent creature is obliged to undertake in its cognitive efforts, and which enjoys certain degrees of freedom from various limitations imposed on us by phylogenetic accidents. Secondly, counterfactual discourse passes the tests that I have suggested for establishing a presumptive anti-scepticism. Since the tests of organic evolution, ubiquity and entrenchment are passed by counterfactual discourse, it would be surprising if no good comes of this way of approaching the world and dispensing with it were to be a matter of no consequence. Thirdly, the present attempt to transmit pragmatic utility from conterfactuality to A-necessity can (potentially) draw upon a variety of independently motivated theses about how these two concepts are related. The core idea, of course, is that the A-necessities are what would have obtained no matter what had been the case. This core idea has, then, been articulated in the postulation of various cognitive correlations between absolute necessity and various versions of counterfactual invariance. The postulated correlations are, variously, logical (Lewis 1973, Williamson 2010), analytic (Lewis 1973), epistemological (Williamson 2007, ch. 5), and metaphysical and conceptual (Peacocke 2004, ch. 4). It is a non-trivial question *which* such connections, if forged, would do the trick of transferring pragmatic value in the required direction (from counterfactual invariance to A-necessity). But, to avoid such niceties, I am happy to concede that some such connection can be forged, and—to enable my argument—I shall assume that the following thesis does the trick:

(AN2*)   The manifestation condition for belief in the A-necessity of *P* is the manifestation of preparedness to deploy *P* (as a premiss

or 'imaginatively') when developing any supposition about
what is counterfactually the case.[7]

Moreover, we can add to the attraction of (AN2*) by elaborating
how the unrestricted generality of the *explicans* is a powerful factor
in establishing the pragmatic utility of what might otherwise seem a
remote and impractical sphere of possibility. If there are (identifi-
able) *P* that have the status of A-necessity, then we may develop any
counterfactual supposition that *Q* by 'adding' *P*, *without further
ado*; that is, without any further reflection on the content or status
of *Q*. We might wonder whether, having counterfactually supposed
some outlandish *Q* (that there had been transparent iron, or that
there had been spatiotemporally disjoint spacetimes …), we are still
entitled to develop our supposition by invoking the propositions
that are technologically necessary, or physically necessary, …, and
then we may bring our reasoning to a halt as we hesitate, or vow to
err on the side of caution. But if we have in stock propositions, *P**,
that we can confidently add to our deliberations within *any* counter-
factual supposition *Q* whatsoever, we need not detain ourselves by
reflecting at length and deeply on the specific commitments that are
brought about by so supposing that *Q* before deciding whether we
may add some such *P* to the mix. This is why we (might) have a
pragmatic interest in an A-modality that seems in the case of possi-
bility to take us far, far beyond any practical or scientific interest
that we have. It is (or might be) because that A-modality in the
case of (discerned) necessity facilitates the expansion of our homely
counterfactual suppositions (and all others) without further ado—
without the need to consider the limits of *co-tenability* (Goodman
1954) imposed by the content or context of the supposition.

I have attempted to outline the plausibility and power of the expli-
catory hypothesis that A-necessity relates to counterfactual supposi-
tion in some way that is apt to transmit pragmatic value to the
former concept from the latter. I have also conceded that the dis-
course of counterfactuality merits a presumption of having some
pragmatic value. So it may seem that we are on the verge of seeing
off scepticism about A-necessity. Yet I believe that significant work
remains to be done if that victory for A-necessity is to be secured,
and here is why.

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[7] That connection is explored and refined in some detail in Divers and Elstein (2012) and
Divers and González-Varela (2013).

The entrenchment and ubiquity of counterfactual concepts, I have allowed, shifts their status in matters of sceptical dialectic. But a philosophically satisfying treatment of these matters must say more about exactly what the role of counterfactual thought is in our dealings with the actual world. And, returning to my Quinean perspective on the matter, there are broadly two parts of science in which we might look to locate that role.

The first place we might look is the canonical notation in which Best Theory is articulated. Swiftly, I will state that I cannot foresee a defence of a counterfactual conditional as having that status. As I have emphasized throughout, what might be defended is the thesis that certain statements that do figure in that role, and which themselves contain no counterfactual vocabulary, have yet a special counterfactual status. But that merely shifts us back onto the question of why we should be concerned with what counterfactual status they have, and points us towards the second place in which we might seek an answer to such a question. The second part of science to which we might look is the expansive place in which a great deal of our cognitively progressive discourse supports and facilitates broadly scientific communication and broadly scientific practice. This, I am sure, is the right pace to look, but we are, I believe, far from having pinned down what it is, exactly, that counterfactual discourse does for us in that expansive place. Moreover, I would add, the present enquiry puts a crucial constraint on what exactly it is that we must find. What we would need to establish is that there is a certain kind of conditional (say) that is both (a) Field-indispensable—somehow, to some extent, even weakly so—to the conduct of science broadly construed, and (b) essentially of modal significance, so that invariance with respect to all conditionals or suppositions of *that* kind is a genuine mark of A-necessity. Some otherwise promising thoughts about the function of counterfactual thinking come under pressure on one or other of these fronts, and here are some examples of how so.

Firstly, one quickly finds that many observations about the psychological or cognitive role of 'counterfactual' thinking are not in fact about what we, modally concerned, philosophers have come to classify as counterfactual thinking. To advert to the most familiar exemplars in this region, what I count as counterfactual are the thoughts that if Oswald hadn't killed Kennedy then someone else would have and that if the patient had taken arsenic then she would

look exactly like this: not the counter-actual thoughts that if Oswald didn't kill Kennedy then someone else did and that if the patient has actually taken arsenic then she actually looks exactly like this. In the psychology literature, for example, when a role or profile has been discerned, one must be very careful about whether it really is counterfactual thinking that is playing that role or displaying that profile. This is amply demonstrated by considering the variety of cases discussed under the heading of the 'counterfactual' in, for example, Byrne (2016). And it is no merely verbal matter. One can, of course, choose to use the term 'counterfactual' as one likes, even so widely that, as sometimes appears to be the case, it refers to any kind of thinking 'offline' or thought that has content *P* while it is also the case that one does not believe that *P* and/or *P is false* and/or we take as hypothesis *not-P*. But the crucial point for present purposes is that this range of thinking—whatever we choose to call it—does not have the right modal profile: it does not stand in the right relation to belief in A-necessity. If we include all of what I have called 'counteractual' supposition, then it is not the case that belief in necessity is manifest in commitment to treat all relevant propositions as available for reasoning under all such suppositions. I believe that it is necessary that Socrates is human, but I am not prepared to rely on the premiss that Socrates is human when invited to join in the hypothesis that the infant Socrates (actually) arrived on earth in a spacecraft. There is much more to say about that distinction, and I have attempted to do so elsewhere (Divers and Elstein 2012; Divers and González-Varela 2013). But the moral does not require more detailed support here: it is simply that when approaching the question of the role or function of counterfactual thinking, we must beware of broad talk that subsumes A-modally irrelevant cases.

Secondly, we must beware of the fallacy that transports us from the (alleged) inadequacy of the material conditional to the need for the counterfactual. One major problem that we have in this area is that there is very poor consensus on the logic of counterfactual conditionals (for a timely reminder and development of this point, see Rieger 2017). So it is (already) very difficult to produce examples of consensus-commanding logical features that (genuinely) counterfactual conditionals must have and which would thereby make them sufficient (or adequate) to support various inferences from hypotheses on which we informally rely. The other major problem is that there are various features that counterfactual conditionals might be

supposed to have but which other non-materially interpreted conditionals have also. One example of this is the apparent failure in counterfactual reasoning of antecedent strengthening and the happy conformity of this feature with non-monotonic reasoning. We supposed that *P* and were disposed to conclude that *Q*, but now we add to our supposition, *R*, and when supposing that *P and R* we are disposed to conclude *not-Q*. But it is it is not evident that this feature cannot be captured by semantic or proof-theoretic treatments of the conditional that are at once non-material and non-modal. (Thus see, for examples, the connexive logics surveyed in Wansing 2016.) It is not, of course, to be ruled out that a case can be made here along the following lines. There are various logical properties that we need to have represented across our repertoire of conditionals; the material conditional does not have any of these, and one alternative conditional—a genuinely A-modally significant counterfactual conditional—allows us to capture them all (or at least allows us to capture many in one fell swoop). But a successful research programme is needed to establish this.

Thirdly, there is on the market a view—a heterodox view, but one that has support—according to which the conditionals that philosophers are inclined to call counterfactual are (essentially) modulations or modifications in the dimension of tense. This view is characterized as such by Edgington (1995, p. 315), who attributes it to Dudman (see, for example, Dudman 1988, 2000), and it is discussed by a former advocate, Bennett (2003, ch. 1). A much weaker and more focused claim is found in the Relocation Thesis (as Bennett calls it) of Edgington (1995, pp. 315–16), and this thesis might be appropriated for the purpose of explicating the use of at least some counterfactual conditionals in terms of temporal shift and objective probability. Assume that one is disposed to deny the conditional, 'If Oswald had not killed Kennedy then someone else would have'. Then, the thought goes, one ought to be prepared to do so only if equally disposed to assert (something along the lines of) 'At the crucial time, it was objectively very improbable that someone other than Oswald was going to kill Kennedy'. What the broad view and Edgington's observation suggest (to me) is that a significant part (at least) of counterfactual thought may be only very weakly indispensable. It may be that there is no general recipe for cashing out all counterfactual constructions by shifting temporal perspective and invoking probability. But it may also be that for many or most

counterfactuals there is some such way of draining them of their modal content without loss of assertability (when they are deemed assertable). If this thought can be sustained over a significant range of counterfactuals, it calls into question exactly how, and how well, support for an A-necessity operator can be derived from them.

VII

Metaphysical Necessity and Explanation. I conclude by offering some speculative remarks about the pragmatic value of metaphysical necessity and our pursuit of explanations. I am unsure whether our pursuit of explanations is likely to be invoked by the anti-sceptic about an A-necessity that is not yet the deliberately metaphysical M-necessity. Perhaps A-necessity is not yet robust enough, so that appeal to it is enough to sustain explanations of a style that are thought to be desirable. But let us finesse that point and return to speaking in the more coarse-grained terms of metaphysical necessity.

One sweeping proto-hypothesis is that in remarking the metaphysical necessity of P we thereby come to explain something about P that we would otherwise miss—there is more truth about P, than just P, to be had. The sweeping thought merits only an equally sweeping reply, but—I believe—it is still worth engaging in this level of generality in order to put a challenge in front of any attempt to extol the explanatory advantages of metaphysical modalizing. In the case of our making causal judgements, I do not doubt that the feeling that we have thereby explained something (that would otherwise be unexplained) does us some cognitive good in gathering knowledge about what is actually the case. I am not sure exactly how this is so, but I think that it is not by revealing to us that the vocabulary of causation merits a place in anything like what Quine conceived as Best Theory canonically stated. I am prepared to believe that something similar might be true concerning our judgements of metaphysical necessity. Certainly, that is a thought worth investigating. But let it be clear in advance what the limits of that project are. Unless the case is about to be made that our explanatory tastes are enough to insinuate the *logic* of metaphysical modality into the formulation of Best Theory, canonically stated, then what is in the offing is certainly not as robust a realism about metaphysical necessity as many have

imbibed, on the strength of their 'intuitions' or otherwise. My own view is that our discerning of what is explanatory is invariably a context-sensitive, interest-relative and quasi-aesthetic matter. As with secondary quality discriminations, it may be impossible for any creatures to pursue science without utilizing some distinction between the explanatory and the non-explanatory. To that extent, a thorough scepticism would be forlorn. But as with secondary quality discriminations, I see no need to impute to every intelligent creature the same discriminations that we make, nor to extend to them, on that basis, our pity for their having thereby missed something in the world. Apart from anything else, we should thereby pity ourselves for having missed out on all but a few of those infinitely many aspects of the world that correspond to the discriminations available within every sensory modality that there could be. So if our metaphysical modalizing is inspired by our predilections to find some true generalizations explanatory and comparable others not, I do not expect such metaphysical modalizing to be a universal element of all cognition. And that should tell us something about how metaphysical modalizing figures in our cognitive lives: perhaps somewhere in the realm of Field-indispensability, but—unsurprisingly—far less prominently so than our mathematics, and far more tenuously so.[8]

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