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NECESSITY, CAUTION AND SCEPTICISM

Bob Hale and Crispin Wright

I—Bob Hale

Soon after accepting an invitation to prepare a paper for this Joint Session, I learned with great pleasure that Ian McFetridge had agreed, as I very much hoped he would, to reply to it, and eagerly anticipated a characteristically searching and illuminating response, particularly as the topic is one on which I knew him to have done much work, though little of it, unfortunately, is available to us. Our subject loses much by his death, as do its practitioners. The decision to proceed with the symposium was not an easy one; I am, I need hardly say, extremely grateful to Crispin Wright for making it possible to do so, by switching roles from chairman to respondent, and furnishing, at very short notice, so excellent a reply.

I

The problem of necessity. 'The philosophical problem of necessity is twofold: what is its source, and how do we recognise it?' Dummett's formulation[1] seems at first entirely compelling, but its presuppositions—that there is such a thing as logical necessity at all, and that it is a possible object of knowledge—are not beyond question. The first has, famously, been challenged by Quine and others; but it is with a challenge to the second that I shall be concerned here. The effect of several important contributions to the philosophy of necessity[2] has been to engineer a shift of focus—away from the question of how necessity is recognised and towards the question whether necessity is something recognised at all.

One who argues for a negative answer to that question—a non-cognitivist—is not bound to reject the notion of necessity altogether. But he will, surely, take a radically different view of what necessity is, and so offer a very different account of what we are about, when we make ascriptions of necessity, from that

[1] Michael Dummett 'Wittgenstein's Philosophy of Mathematics' in *Truth and Other Enigmas* (Duckworth 1978), p. 169.

[2] Crispin Wright *Wittgenstein on the Foundations of Mathematics* (Duckworth 1980), part 3, and 'Inventing Logical Necessity' in Jeremy Butterfield ed. *Language, Mind and Logic* (Cambridge University Press 1986); Edward Craig 'Arithmetic and Fact', in Ian Hacking ed. *Exercises in Analysis* (Cambridge University Press 1985); Simon Blackburn 'Morals and Modals', in Graham Macdonald and Crispin Wright eds. *Fact, Science and Morality* (Blackwell 1987). The shift is prefigured in various writings by Wittgenstein, especially *Remarks on the Foundation of Mathematics*.

which pervades a long and familiar philosophical tradition. Certainly those who have argued against the recognitional conception have not meant to reject the notion of logical necessity altogether; but neither have they meant to concede that there is a distinctive species of fact or truth—necessary truth—which we are, in virtue of cognitive limitations from which we suffer, incapable of apprehending. The non-cognitivist holds, rather, that it is a philosophical error to view ourselves, when we declare a given statement to be necessary, as affirming any sort of (further) truth (or falsehood) at all (i.e. over and above the truth or falsehood conveyed by the statement declared to be necessary). Simply, the recognitional conception is to be rejected because there is *nothing* to be recognised. Rather, accepting or declaring some statement as necessary is engaging in some sort of 'non-cognitive ratification'[3]—embracing or endorsing a *policy* of some sort (with the effect, roughly speaking, that the statement in question is removed from the arena of empirical falsification). There is, on at least one version of this view, always an element of *decision* in the acceptance of any statement as necessary (whether what leads us to it is a proof, or simply a brute incapacity to make anything of the suggestion that it might be other than true)—a decision not to allow any evidence we might come across as, finally, counting against it. Necessity is conferred, not cognised. Or, in somewhat different terms which have recently gained currency, necessity is not an object of *detection*, but the product of *projection*.

So much, for now, by way of sketch of the positive view of (statements of) necessity apt to find favour with the non-cognitivist. Doubtless a more detailed characterisation is desirable, and would probably be necessary, before anything approaching a well-founded conclusion about its correctness could be reached. It seems likely that further clarification would disclose several specifically different positions which the non-cognitivist might seek to occupy, depending, inter alia, upon how much or little emphasis is placed on the idea of decision or choice, and upon how, in detail, the idea that ascriptions of necessity involve the projection onto the world of facts about ourselves is elaborated. But I believe it is sufficiently clear, in

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[3] The phrase is Wright's.

broad outline at least, what kind of view is being opposed to the recognitional conception, and what its principal attractions are – an agreeably unmysterious answer to Dummett's first question (we are ourselves the 'source' of necessity), and no need to confront the second (which, with the demise of truth in virtue of meaning, and therewith of the notion that recognition of necessity is reflective discernment of internal relations among meanings or concepts, is apt to appear intractable), since there is nothing recognised and so no cognitive achievement to be explained. That is enough, I hope, to give point and shape to the specific issues to which I shall be giving detailed consideration.

II

The Cautious Man. My principal concern here is with an argumentative strategy which plays an important, and perhaps indispensable, part in the case for some form of non-cognitivism about necessity—a strategy which turns upon the intelligibility of the position occupied by a curious figure whom Wright calls the Cautious Man. The Cautious Attitude receives its fullest characterisation in connection with formal proofs. The statement whose necessity is directly in question, in this kind of case, is what Wright terms the 'corresponding descriptive conditional' —that is, the conditional which states that if, starting with such and such a formally specified basis (e.g. the assumption formulae for a proof in a system of natural deduction), a certain formally specified sequence of operations is performed (e.g. such and such applications of the formal inference rules), then such and such a formally specified result will be obtained. Wright contends, and I agree, that acceptance of a construction as a valid formal proof stands or falls with acceptance as necessary of its corresponding descriptive conditional. At first blush, it may well seem that if someone, presented with what by ordinary criteria constitutes a valid proof, nonetheless refuses to accept it as such (equivalently, refuses to accept the corresponding conditional as necessary), that can only be because he has somehow misunderstood or misapprehended the construction confronting him—misread some formula, or failed to see that some transition is a correct application of some formal inference rule, or some such. But not so, Wright claims:

Surely, now, there is a way in which someone can withhold
assent from such a proof without showing that he is
mistaken about, or has failed to apprehend, certain aspects
of its 'physiognomy', or has failed to follow or misunder-
stands it. In order intelligibly not to accept such a proof, a
person does not have to do anything which will indicate a
lack of understanding or misunderstanding, or a mistake.
A quite different possibility will be his adoption of what
seems superficially an excessively, perhaps neurotically,
cautious attitude to the thing. We get, for example, this
sort of response:

I can find no fault with the construction; it seems to me
that all the steps are sound in just the ways that your
descriptions of how they are achieved require, and that we
appear to have wound up with a proof of just what you set
out to prove. Repeated checks have served only to confirm
these impressions; and I accept that further repetitions
would almost certainly turn out the same way. However,
you are asking me to affirm that whenever exactly the
specified sequence of transformations is correctly followed
through on exactly the specified basis, we are bound to
achieve this (sort of) result—that no other outcome is
possible provided the blueprint is correctly implemented.
And that very strong claim, I feel, I am not entitled to
make.[4]

The example is, as remarked, of a rather special sort, but we are
left in no doubt that the Cautious attitude is intended to be
thought of as one that can intelligibly be adopted towards any
statement we may be inclined to regard as necessary. The CM
will concede the truth of the statement in question; and he will
grant that whatever it is that inclines us to accept the statement
as necessary 'weighs with him too'—he will allow, for example,
that he finds himself unable to imagine its falsehood—but that is
as far as he will go: he can see no reason to regard the statement
as anything more than well founded.

There are two main reasons why I am anxious to get clear
whether the Cautious attitude is possible, or fully intelligible.
They are linked to two uses to which the device of the CM has

[4] Wright (1980) pp. 452-3.

been put. When the CM made his first appearance on the philosophical scene [if it really was his first appearance: *vide infra*], his inventor's primary purpose was to defuse an objection to (a certain species of) conventionalism about necessity, stemming from a plausible proposal concerning the conditions under which a declarative sentence ought to be regarded as expressing a genuine assertion, apt to convey some content whose acceptability is a purely cognitive matter, and so involving no element of decision. The proposal was that

> a declarative sentence expresses a genuine assertion if it is associated with communally acknowledged conditions of acceptability in such a way that a sincere unwillingness to assent to it when such conditions are realised, and the agent is in a position to recognise as much, convicts him either of a misapprehension about the nature of the circumstances or of a misunderstanding of the statement.[5]

The envisaged objection to the view that our acceptance of statements as necessary always involves a (non-cognitive) decision is then pretty immediate. As applied to attributions of necessity, the proposal declares them (in effect) to express proper objects of knowledge, or at least of justified belief, if there are agreed conditions for their acceptability of the kind specified. But there are—or so it strongly appears—just such agreed acceptability-conditions associated with at least some attributions of necessity. For our natural—and, it may seem, the only possible—reaction to someone who, confronted with what we confidently, and, by ordinary criteria, justifiably accept as a valid proof, declines to accept that its conclusion must be true if its premises are so, is, as previously suggested, to suppose that he must have missed something—must, whether through misperception or misunderstanding of the intended character of some step(s), have somehow failed fully to appreciate what is before

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[5] Wright (1980) pp. 448–9. The quoted formulation does not expressly claim to supply a necessary as well as a sufficient condition of factuality. That Wright intends it so to be understood, and that he means to invoke the possibility of Caution against the recognitional conception is, however, quite clear from his summary statement at p. 459, where the proposal is repeated in biconditional form, and the second line of argument is emphasised. If the full biconditional version is acceptable, the ploy with the CM assumes the status of a crucial (thought) experiment.

him. And the envisaged response to this objection then runs, in effect: there are no such conditions—to suppose that there are is to ignore the crucial possibility that a man may adopt the Cautious attitude. If the CM's is a possible position, in other words, the conventionalist may block the objection by denying its minor premiss.

This defensive ploy should be distinguished from an offensive strategy which works with the converse of the conditional major premiss of the objection just sketched, and runs as follows. If ascriptions of necessity express proper objects of cognitive appreciation, then there should be agreed conditions for their acceptability of such a sort that, if a properly equipped subject who is in position to recognise those conditions to be fulfilled in respect of a particular putatively necessary statement nevertheless sincerely withholds assent from it, we have no option but to regard him as the victim either of some mistake about relevant aspects of the circumstances or of some misunderstanding of the statement. Contraposing, if a properly equipped subject, placed in what are agreed to be optimal conditions for apprehending the correctness of an attribution of necessity, *can* sincerely withhold assent whilst remaining fully intelligible to us, without our being obliged to fall back on the hypothesis of relevant mistake or misunderstanding, then the necessity of the statement is not a proper object of knowledge or justified belief. But the position of the CM is precisely as specified in the antecedent of this last conditional. Hence necessity is not a matter for recognition.

The possibility of the Cautious Attitude may thus be important to the non-cognitivist for two clearly distinct reasons. On the one hand, if satisfaction of Wright's proposed condition is seen as sufficient for statements of any given kind to be genuinely factual, there is a case for regarding ascriptions of necessity as enjoying that status—a case which the non-cognitivist may be unable to resist unless he can appeal to the possibility of Caution, or something very like it. And on the other, if the proposed condition is taken to be necessary for factuality, then, if Caution is a fully intelligible option, the non-cognitivist has what looks like a decisive argument at his disposal.

In his later paper, Wright offers an improved formulation of

the condition for a statement to be genuinely factual:

> Statements of a certain class are apt for the expression of
> genuine matters of fact only if there are contexts—in which
> vagueness, or permissible differences in evidence thresholds,
> are not to the point—in which it is *a priori* that differences of
> opinion concerning one of the relevant statements can be
> fully explained only by disclosing . . . some material
> ignorance, error, or prejudice on the part of some or all of
> the protagonists.[6]

It will be observed that the proposal here is put forward as a
necessary condition for statements to enjoy genuinely factual
status ('fact' does not, of course, mean here 'contingent fact', or,
for that matter 'physical fact': the proposal is designed to be
entirely neutral in these respects). Wright does not claim to have
provided a *sufficient*, as well as necessary, condition—indeed he
stresses, quite properly, that the argument he wishes to base
upon the proposal requires only that it be a true statement of a
necessary condition, not that it constitute a complete analysis.
The argument then presented is, in essential respects, a version
of the second argument above, only now the conclusion that
statements of the class in question do not enjoy genuinely factual
status is drawn from the premiss that there can be fully
intelligible disagreements involving them even when no expla-
nation in terms of material ignorance, error, etc., is available.[7]

Craig likewise regards the possibility of someone's taking up
the Cautious attitude as posing a serious obstacle to a cognitive
view of necessity. But there is no clear reason to think he means
to exploit that (alleged) possibility in either of the specific ways
described. He makes no explicit mention of conditions for

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[6] Wright (1986), pp. 199-200.

[7] So far as I have been able to see, nothing elsewhere in Wright's later paper commits
him to holding that the proposed condition is *sufficient* for factuality. So it would, so far,
be open to him to undercut the first, anti-conventionalist, argument by simply rejecting
its major premiss. My own view is that this would, however, be a somewhat
unsatisfactory move. The possibility is certainly not to be discounted—nor is it
discounted by Wright—that the proposal may require further refinement before it can
be viewed as giving a sufficient as well as necessary condition. But it seems, to me at least,
that any plausible amendments would be unlikely to disturb the substance of the anti-
conventionalist argument.

factuality, or genuine assertion, nor any explicit argument linking that alleged possibility to the untenability of a cognitivist stance. One possible line of thought, which may reflect Craig's view, is that there is, at any rate, some sort of disagreement between the Cautious Man and Normal Men but that, since the former agrees with the latter on all the facts of the matter (i.e. short of whether the statement in question is true by necessity), that disagreement cannot be viewed as cognitive in character, but has rather to be seen as a matter of the adoption, by the Normal Man, of a non-cognitive attitude or policy (towards statements whose falsehood he finds unimaginable) which his Cautious counterpart is not disposed to embrace. Or the thought may be, more simply still, that a cognitive view of necessity is tenable only if it can be shown that the Cautious Man is, contrary to appearances, guilty of some material ignorance or error. Either line of argument requires that the Cautious Attitude is a genuine option. There is no doubt that Craig is concerned to make out that that is so.

Before I turn to the question whether either line of argument accomplishes its goal, there are two further preliminary points to be made. First, it should be observed that there is no intention that the agreed conditions of acceptability mentioned in the premisses of both arguments should be of such a kind that their satisfaction in respect of any genuinely factual statement and cognitive subject excludes the possibility of error. That is, it is to be an open possibility that a putative knower should perform his part perfectly, in optimal circumstances, and yet still wind up with a mistaken belief, without detriment to the status as genuinely factual of the statement he then accepts. Any requirement which excluded this possibility would, it seems, deny factual status to the vast majority of statements whose title to it ought, in the present context, to be deemed unimpeachable. For there are, surely, no such strong agreed conditions of acceptability associated with such statements as that there are tigers in India, or collieries in Lancashire. The point is, perhaps, obvious enough and, I hope, uncontroversial; but it is worth emphasis here, because it is not unknown for philosophers to assume that where necessities are in question matters are otherwise. As against this, it should be acknowledged that the cognitivist need not be committed to the (implausible) claim

that we are equipped with some infallible method of discovering necessary truth.[8]

My second preliminary point concerns a constraint upon the use of the argumentative strategies described. Both Wright and Craig agree that it is crucially important that Caution be suitably distanced from a much more familiar stance—plain philosophical scepticism. The point is simple enough. Scepticism is, plausibly, an *intelligible* position in regard to any class of putatively factual statements. Thus if the possibility of adopting that stance in relation to attributions of necessity were sufficient to establish the intelligibility of the Cautious Attitude, it would be quite unclear how the status as genuinely factual of perfectly ordinary contingent statements could fail to be compromised by an obvious analogue of the second argument. So successful deployment of that line of argument quite certainly requires that Caution be distinct from scepticism. How do things stand with the first, defensive strategy? Well, obviously enough, it would not be so immediately and directly disastrous for one wishing to avail himself of it, should he find himself unable to make out that Caution is anything other than scepticism by a new name. For he could accept that the (original) proposal gives a sufficient condition for factuality, argue that, because Caution (now, we are supposing, not distinguished from scepticism) is intelligible, ascriptions of necessity fail to qualify as factual by that route, and concede—with some steeling of the nerves—that for the same reason, ordinary contingent statements equally fail to qualify *by that route*. If he makes this move he had better hope, of course, that there is some alternative sufficient condition, satisfied by ordinary contingent statements but not by ascriptions of necessity—it is quite unclear to me how that would go. But this move would be, in any case, unsatisfactory, and quite transparently so. Its effect is that the proposed sufficient condition for factuality is deprived of all interest, since *no* statements will meet that condition, if the claim of any to do so can be defeated by citing the possibility of intelligible scepticism

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[8] For a recent defence of the contrary view—that knowledge *a priori* requires possession of an 'ultra-reliable warrant', see Philip Kitcher *The Nature of Mathematical Knowledge* (Oxford University Press 1983) chs. 1–4. Kitcher's arguments are criticised in my *Abstract Objects* (Blackwell 1987) ch. 6.

with regard to them. It would then be entirely proper for the original objector to propose a strengthened sufficient condition, expressly stipulating that unwillingness to assent to the statement should not be intelligible only as involving the adoption of a sceptical attitude; and maintain, with as much plausibility as before, that ascriptions of necessity count, by this criterion, as genuinely factual. In sum, Caution had better be distinguishable from scepticism, whether the weapon is to be offensive or defensive.

III

Caution and Scepticism. The question immediately confronting us, then, is whether the CM can be adequately distanced from the plain, and potentially ubiquitous, sceptic. Since both Wright and Craig would concede, I think, that at least some of what they tell us by way of elucidation of the CM's position feeds the suspicion that he is, after all, some sort of sceptic, I may, I hope, be permitted to forgo further supporting quotation and pass directly to the main question for discussion in this section. Given that the CM presents an uncomfortably close resemblance to the sceptic, what grounds may be offered for thinking the resemblance to be merely skin deep?

Both Wright and Craig stress that the CM finds the falsehood of propositions which others regard as necessary every bit as unimaginable as they do. Both depict the CM as unwilling to 'inflate' unimaginability into necessity. 'The limit of his imagination . . . is still just another fact about him, and he sees no reason to take it as a guide to what must of *necessity* be the case'. 'He sees no cause to project aspects of our imaginative powers onto reality, or to dignify them as apprehension of what *must*, or *cannot*, be the case.'[9] Craig, as I have remarked, is perfectly clear about the need cleanly to separate Caution from scepticism. When he returns to the problem, in the final section of his paper, his aim appears to be to make out that there are perfectly respectable reasons, quite free of sceptical taint, for resisting any temptation to 'infer any absolute impossibility from the limitations of our own imagination'. There are, he contends, two sources of the idea that some such inference is in order: it may be held that

[9] First quotation from Craig (1985) p. 93, second from Wright (1986) p. 205.

the meanings of our terms are transparent to the mind upon inspection, the inspection consists in imaginatively presenting ourselves with their conditions of application, and since we are not liable to error in this process we end up knowing that what *we* mean by *that* sentence could not but come out true . . . [or it may be held that] our mental powers are perfectly in tune with reality.[10]

We may not take much persuading that neither source is respectable. But there can be some question whether these options, so circumscribed, are the only ones available to the would-be cognitivist who seeks to draw conclusions about necessity from what he can and can't imagine. 'How', Craig asks, 'can we be so confident that we have not overlooked a possibility which, if presented, would strike us as verifying what we had taken till then for a necessary falsehood, and do so without noticeable conflict with the previous meanings of the terms?' The question clearly expects the answer that we can't. But once due acknowledgement is accorded to the point, previously stressed, that the cognitivist need not be saddled with the view that we enjoy some sort of *infallible* access to necessities, it should be clear that we have no business supposing that the idea that imaginative experimentation with truth-conditions must involve either any such crude transparency of meaning thesis or any claim to some incorrigible faculty of meaning-inspection. Quite simply, the idea that we may, by pertinent exercises of our imagination, come to reasonable conclusions about what is or is not possible, is, on the face of it, consistent with acknowledgement that we are liable to make mistakes about it. The claim that something is necessary, or impossible, is always a denial of possibility. In this, it resembles a contingent universal generalisation over an unsurveyable domain, which is equivalent to a denial of existence. Just because the totality is unsurveyable, there can be no question of establishing the generalisation by inspection of all relevant cases. There can, likewise, be no question of establishing a claim about necessity (or impossibility) by running through all (relevant *prima facie*) possibilities. In consequence, there has always to be an *epistemic*

[10] Craig (1985) p. 110.

possibility that we have failed to exercise our imaginations hard enough, or in the right direction. But what this admission of fallibility enjoins is caution, not Caution. Or, if it is maintained that the bare unexcluded possibility that we should be led to revise our belief in necessity *is* enough to warrant Caution, then it is anything but clear that an interpretation of that attitude which puts it at a respectable distance from plain scepticism has, after all, been provided.

It may be felt that Craig's first alternative is demonstrably bankrupt for reasons which in no way depend upon an unduly inflated presentation of that alternative in terms of our possessing *infallible* access to the meanings of our terms: for do not well-known Wittgensteinian considerations about rule following, etc., decisively obstruct the old conception of truth in virtue of meaning, and the attendant picture of ourselves as coming to recognise such truths simply by reflection upon our intended meanings? A very great deal more needs to be said about this than I can begin to say here—and not just for want of space—but I had better say this much. First, those considerations *are*, plausibly, destructive of the idea that there are antecedently determinate facts about meanings, disclosable by some species of inspection, fidelity to which enjoins recognition of certain statements as true of necessity. But second, proper assimilation of those considerations should not involve rejection of the idea that there are any facts about meaning at all—that we cannot properly conceive of ourselves, in making statements, as ruling out certain possibilities and leaving others open (to put it one way). Whether a satisfactory epistemology of necessity—if that can be provided—might make space for an appropriately sanitized version of the thesis that necessity is truth in virtue of meaning, I do not presume to say. But the epistemology of *meaning* is in no shape to help *explain* knowledge of necessity. So it was no part of the intended point of the foregoing remarks to suggest that an epistemologically more modest version of Craig's first alternative might be a good *starting point* for a positive account of the latter. My point was, rather, that if Caution is to be made out to be a respectable attitude by argument designed to show that the only sources of the belief that we can get to conclusions about necessity from facts about imaginability are defective, it needs to be clear (a) that these are indeed the *only*

possible sources of the idea, and (b) that the arguments purporting to discredit them do not trade on needlessly extravagant interpretations of them. I would not want to defend Craig's second source, as presented, any more than I want to defend the first; but it is just not clear that we must believe that our mental powers are *perfectly* in tune with reality—whatever that might mean—if we are to suppose that facts about what we can and can't imagine have some bearing upon what is or isn't possible.

Wright returns to the problem in the closing pages of his (1985). In line with the necessary condition of factuality proposed in that paper, the non-cognitivist (or anti-factualist) with respect to necessity has sought to make his case by first exhibiting what purports to be a fully intelligible dispute concerning the necessity of the descriptive conditional corresponding to what one of the parties, X, accepts as a perfectly good formal proof, and then contending that it is no condition of the dispute's being fully intelligible that either X or Y (who regards the 'proof' as he regards any well-conducted experiment and will not admit that there is any necessity in the offing) should be supposed guilty of some germane ignorance, error or prejudice. Confronting once more the crucial question—what sets Y apart from the sceptic?—Wright now makes what may well seem a more satisfactory proposal than those lately considered. The traditional sceptic about other minds, the past, or whatever, does not deny that we can get the truth-values of statements of the kind in question *right*; what he challenges is our capacity to do so *reliably*. It is, in other words,

> . . . granted that there is an objective subject matter at issue: the challenge . . . is that we make good our belief that our epistemic capacities are up to the task of securing reliable beliefs about it. It is clear enough that this is not what Y was depicted as saying. Y did not grant X that *some* descriptive conditional is necessary, and then seek to cast doubt on the effectiveness of our controls . . . on attempts to winkle out the right one. Rather, he sought to be persuaded that, in order to do justice to the construction, there was any cause to invoke a special notion of 'necessary'

truth. And it is, so far, quite unclear whether, or how, he ought to be persuaded of that.[11]

Υ then, in contrast with the traditional sceptic, refuses to grant that there is a range of facts about necessity—it is not just that he will not grant the necessity of the specific conditional in question; there is no statement whose *necessary* truth he will grant. If the proposal is not to be fairly obviously unsatisfactory, it is crucial that *Υ*'s unwillingness to grant the existence of such facts should be distinguishable from plain denial. If not, then his position is none other than that of the anti-factualist himself. And if the latter is allowed to be one of the parties to the dispute, the effect of deploying Wright's criterion is that no class of statements can survive as genuinely factual in regard to which anti-factualism is even so much as an intelligible option—i.e. if anti-factualism is intelligible, it is true. That would surely be too easy—it does not seem that a man must be confused, if he thought that he could understand what the anti-factualist is claiming, but thought also that he is wrong. If *Υ*'s position is to be distinct both from scepticism on the one side and outright anti-factualism on the other, he needs to be understood as simply remaining *neutral* on the disputed question whether this or any other statement is true by necessity.

Granting that the non-cognitivist case may be best seen as proceeding in terms of the possibility of adopting, in any dispute where a putative necessity is in question, some such neutral stance, there remain, it seems to me, several connected reasons for doubting its cogency.

It is instructive to consider how the anti-factualist case might naturally run—and how, if I am not mistaken, Wright means it to run—in other regions of discourse where philosophers have been more commonly disposed to embrace its conclusion. There is, in particular, an important disanalogy between the way in which we might expect the anti-factualist to conduct his case in regard to statements about what is funny, say, or to aesthetic or moral judgements, and the case just sketched for ascriptions of necessity. We may disagree over whether a remark, say, is, or was in the context in which it was made, funny. There need be nothing unintelligible about this, even if neither of us misheard

[11] Wright (1986) pp. 207-8.

or misunderstood it, neither is missing out on some crucial item of background information, and—if this is appropriate here— neither harbours any relevant prejudice (it wasn't, for example, a joke at my expense). People do just find different things amusing. Similarly, we may take opposed views on whether a certain piece of furniture—a William Morris chair, say—is elegant. And it is clearly conceivable that our difference of opinion should survive all attempts to resolve it by uncovering some relevant ignorance, error or prejudice, and yet remain perfectly intelligible. People do just differ in their tastes. And, if the case can be made out for moral statements, it will, it seems, run along essentially the same lines—citation of intelligible moral disagreement which is not to be explained in any of the ways in which it would have to be explicable, if moral statements are to be admitted as genuinely factual. If the case can be made along these lines, it will succeed because we have, in the end, to admit that people who are not (relevantly) confused, ignorant or prejudiced may, in good faith, simply differ in their moral beliefs, just as they may differ over what they find funny, or elegant, say. That is not to say that such differences must be inexplicable; for they may well be explicable in terms of upbringing, emotional disposition or similar terms—but the explanation, if available, need do nothing to call into question the *propriety* of the opposed views. Nor, of course, is it to say that we should be as happy to agree to differ in matters of morals as we are in matters of humour or taste.

When the anti-factualist case is made in this way, it exploits the possibility of straightforward first-order disagreement over statements of the class whose factual status is in question. Schematically, we have disagreement, concerning some particular statement(s) of that kind, between parties each of whom is prepared to assert statements of that kind (or if, for some reason, one of them is not so prepared, this is inessential to the anti-factualist case, which could be as well made, in any of these areas, in terms of a disagreement between subjects who are given to making claims about what is funny, or elegant, or morally wrong). Each subject understands well enough what is at issue between them. Neither regards statements of the kind in question as intrinsically problematic, in any sense that would involve the suggestion that it is never proper to make them.

They simply disagree about *which* such statements are to be made, or accepted, and it is this disagreement which the anti-factualist proceeds to exploit.

Development of the anti-factualist case with respect to necessity along the same lines would involve citation of intelligible first-order disagreement about some statement(s) ascribing necessity, between subjects neither of whom is, quite generally, predisposed against ever making or accepting such statements. If it could then be made out that there need be no explanation of the cited disagreement in terms acceptable to the factualist, that would clinch the opposed case. Prosecution of that case along such lines might be expected to focus on such disagreements as that between parties who are agreed that it is (logically) possible that *A*, but disagree over whether it is necessarily possible that *A*, or on disputes featuring the opposed views of classicists, intuitionists and relevantists about the soundness of certain patterns of inference.[12] The hope would then be to exhibit some such dispute as (fully) intelligible, though not to be explained in terms congenial to the factualist.

Whether or not these particular disputes have the requisite character to generate anti-factualist conclusions, they are markedly different from the X-Y disagreement in terms of which Wright conducts his case. It is true that we seem there to have a first-order disagreement, with X taking the structure on display to be a proof, and Y declining, in effect, to do so. And since we may take it that they are agreed that, for the structure to be a proof, the corresponding descriptive conditional must be true of necessity, it appears, at least initially, that the focus of their disagreement is a particular ascription of necessity. But—in marked contrast with the differences of opinion concerning what is funny, or elegant, or morally right, envisaged previously, and as Wright himself emphasises—we precisely may *not* take it that there are other such statements of the general type in question to which Y *would* assent, although in dispute with X over this particular one. What is really at issue between them is, not whether this particular statement is necessary, but whether there is (any compelling reason to recognise) a special category

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[12] It is noteworthy that Wright's choice of dispute—over the *technical* correctness of a formal proof—is expressly designed to avoid entanglement in these issues.

of necessary truth at all. That is, instead of feeding upon the (undisputed) fact of intelligible first-order disagreement, the case as presented exploits the possibility of a certain kind of higher-order dispute.

Υ wants to be persuaded that there is any cause to invoke a special notion of 'necessary' truth. I have two comments on this. First, Υ does at least go so far as to allow[13] that there is 'an interesting and important contrast' between the circumstances, such as when confronted with the kind of construction we call a proof, in which others are disposed to declare some statement to be necessary, and 'other experiments': in the latter, 'a detailed description of counterfactual outcomes, or even a cine film simulation of them, might be possible'; whereas in the former case, his best efforts to conceive of things turning out otherwise, or to imagine the putatively necessary statement's being false, simply get nowhere. But now, *why* exactly does he think the contrast interesting, and just *what* importance does he attach to it? How does he *explain* it? If he persists in regarding it as reflecting no more than a (presumably contingent) limitation upon his (our?) powers of imagination, what sort of theory should he propose to account for the fact that we suffer from this limitation? I am far from sure that Υ has convincing answers to these questions; I shall not, however, pursue the issue here.[14]

Second, while Υ's demand may not be sceptical (at least not in the traditional sense), it is, pretty clearly, an essentially *philosophical* one. And just for that reason, it is not to be expected that it could be met by appeal to the kind of considerations which lead those already disposed to acknowledge that there are

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[13] cf. Wright (1986) pp. 204-5.

[14] Some remarks in section 4 of the present paper have a fairly direct bearing upon it, however. The issue becomes a particularly delicate one for the non-cognitivist, if he follows Craig's plausible suggestion (1985, pp. 105-6) that we are apt to take it to be necessary that p just when no alternative explanation of our inability to imagine things being otherwise gets off the ground. If the availability of such an alternative explanation ought always to inhibit our tendency to lay claim to a necessity, then, unless the non-cognitivist holds that we suffer from *inexplicable* imaginative limitations, he is committed to an error theory of modal discourse, paralleling its better known counterpart in ethics. But that squares ill, it would seem, with the suggestion, also advanced by Craig, that we commit ourselves to the policy—'rule the unimaginable out of court'—in the interests of finding reality intelligible, as opposed to merely predictable; at least, it does so, unless the thought is that our commitment to the policy entails a lapse from rationality. I do not think Craig means to suggest that it does.

necessary truths to accept this or that particular statement as such; in that sense, X and Y are somewhat at cross purposes. But in much the same way, someone who elected to adopt a neutral position—if that is possible[15]—on the question whether there are other minds, or whether there is an external world, etc., could hardly be argued out of his neutrality by appeal to the kind of evidence that routinely settles specific questions about such matters. But if the disagreement between X and Y has the philosophical character (at least on Y's side) that I have claimed for it—if, in particular, it is *philosophical argument* of some sort which is needed to budge Y from his neutral position—then it becomes somewhat less clear that we may conclude, via the proposed criterion of factuality, that statements in the problematic class are not genuinely factual. If the claims just made about the character of that disagreement are correct, then it is in point to ask whether *any* distinctively philosophical claims can qualify as factual. There may, indeed, be the makings of some sort of dilemma here: either they don't—but then wouldn't it tell against the proposal, or this way of deploying it anyway, if it should turn out that, even in the quite broad sense of factuality it is aimed at clarifying, such claims have no better title to factual status than judgements about what is funny, or elegant, etc.—or they do, i.e. the notions of material ignorance, error, prejudice and vagueness are construed generously enough to cover the sorts of things that underlie philosophical, as well as more ordinary, disagreements—in which case, what special reason is there to think that the one which presently exercises us fails to qualify?

None of these remarks is intended to suggest that the neutral stance is in essential respects sceptical. But it should be clear that what really matters, in the dialectical situation as we have it, is not as such whether the CM, or Y, is properly classified as a

[15] It may, of course, be questioned whether it *is* possible to sustain a neutral stance on the existence of minds other than one's own, or of an external world, or of the past. It has, perhaps, to be conceded that it is easier to envisage ourselves getting along in the world without modalizing than to see how we could manage radical suspension of our usual beliefs about other people, the past, etc. But the issue, as I understand it, concerns not the practical feasibility of the neutral stance, nor even its ultimate coherence or defensibility, but its *prima facie* intelligibility. And if scepticism about, say, other minds is at least *prima facie* intelligible, it is hard to see how neutrality on the matter—however, precisely, it is distinguished from scepticism—can fail to be so as well.

(traditional) sceptic, but whether his attitude is one that can be intelligibly maintained across the board, or at least with respect to classes of statements whose presumed factual status we should not wish to have to deny. The play with scepticism comes in just because, if it should prove impossible to separate the CM, or Y, from the sceptic, that would mean—given the assumption (which is not in dispute here) that scepticism is everywhere an *intelligible* option—that the argument from the possibility of Caution is too strong. Obviously that will be so, even if Caution, or neutrality, is distinct from scepticism, if it is, like scepticism, an intelligible attitude towards (otherwise) uncontroversially factual statements. But as suggested above, it is far from clear that the kind of neutral stance Y is supposed to occupy could not be intelligibly adopted towards statements about other minds, or the past, or the external world generally.

IV

The non-cognitivist 'policy'. My aim, in the preceding section, has been both strictly limited and wholly negative; I have sought to show that argument centred on the (alleged) possibility of the Cautious attitude fails to deliver a decisive blow to the conception of necessity as a proper object of knowledge. Even if my efforts are judged to be successful, a formidable task still confronts anyone who would defend that conception. For there can, in my view, be little doubt that considerable—though, by its very nature, less decisive—pressure to embrace the opposed, non-cognitive, view derives from the manifest lack of a credible *positive* epistemology of necessity, and what may well seem to be miserable prospects of providing one. Sooner or later, the cognitivist must do something to fill that gap: it is plainly inadequate merely to repeat the traditional answer that we can just see certain truths to be necessary, and can apprehend the necessity of others by deduction—for that leaves unexplained precisely what wants explanation, viz. what 'seeing that such and such *must* be true' consists in, and how proof facilitates apprehension of necessity.[16] Needless to say, I would dearly like

[16] A pressing problem here—forcibly presented by Wright (1980, pp. 337-41)—concerns how, if at all, we may sustain the intuitive conception of proof as both functioning as a means of discovery and yet disclosing to us truths which hold of necessity. If, on the one hand, it is criterial for the correctness of a proof of a particular

to have been able to propose here at least the beginnings of positive answers to these questions. Having nothing to offer that is ready for serious discussion, I shall, instead, conclude with some remarks on what may prove to be a fatal weakness in the opposed, non-cognitive, position which have, or so I am inclined to believe, some bearing on the central issue.

According to the non-cognitivist, what sets the CM apart from the rest of us—i.e. those who *are* prepared to designate certain statements as necessary—is not that he is somehow 'blind' to a species of fact that we are able to (re)cognise, but that he holds back from a 'policy' which we, throwing Caution to the winds, have adopted. There can be some question about just what this policy is supposed to involve.[17] But the issue on which I want to focus here concerns, not the *content* of the policy, but its

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proposition, or calculation yielding a particular answer, that it issues in that very result, how can the construction facilitate any sort of *discovery*, since checking that it is indeed correct involves verifying that it has that particular outcome? If, on the other hand, the criteria for the correctness of proof or calculation are taken to be result-independent, it becomes hard to see how empirically verifying that they are satisfied in respect of a given construction can possibly apprise us of the *necessary* truth of any proposition. As Wright puts it, 'it seems that the most that such an investigation can tell us is that starting from such-and-such a basis, so-and-so resulted and no error is apparent in the intermediary steps. How then do we make the transition to recognition of necessity?' (p. 339). I can offer no more than a brief and highly programmatic thought here, which obviously requires elaboration and defence. I cannot see how our ordinary dealings with proofs or calculations could possibly 'force a necessity on us', as it were, unless we were already in the market for the discovery of one. But I do not see that that has to be fatal to a cognitive view of proof. There may, I think, be a way past Wright's dilemma, provided we can separate the general question of how we come to think in terms of logical necessity at all (how we come to be in the market) from the question, concerning a particular case, what warrants us in believing that such and such holds as a matter of necessity—here there can be room for mistake, of course, so that the fallible character of our dealings with particular constructions need not present a decisive obstacle to viewing them as means by which necessary truths are discovered.

[17] Craig (1985), pp. 104-5 esp., argues that the 'policy' can be just one of believing certain statements to be necessary. The essential non-cognitivist claim, as he sees it, is not that ascriptions of necessity are non-descriptive in character, serving rather to give expression to attitudes (contrast Blackburn's projectivist treatment of modality—Blackburn (1987), and *Spreading the Word* p. 217), but that there is no 'faculty by means of which we *recognise* necessity'—'belief in necessity [is rather] a psychologically determined consequence of our recognition of facts of another type'. I find Craig's position, so far as I understand it, problematic for several reasons which I lack space to present here. One obvious *prima facie* difficulty concerns what his non-cognitivist says about the truth-values of our beliefs in necessity. It looks as though he'd better hold them all *false*—since if he allows that any are true, it's difficult to see how his position differs from plain scepticism—but oughtn't he then to have something good to say in support of this strong negative claim?

range of application. If, as the non-cognitivist contends, we are to be seen as systematically treating certain statements in a certain way, there ought to be available some characterisation, in general terms, of the range of statements we so treat. And as Wright has properly stressed,[18] this should be an independent characterisation, not parasitic upon the tendency of others to conceive of themselves as having grasped a necessary truth. The policy has to be one to which we could *all* subscribe, equipped with no facts about the relevant contexts save those acknowledged by the CM (these being, on the non-cognitivist's view, all the facts of the matter); we must be able to recognise for ourselves—i.e. without relying upon the (allegedly misguided) propensity of others sincerely to believe themselves to have apprehended a necessary truth—the circumstances in which that policy is apt. And the question is whether such an independent general characterisation is forthcoming.

No attempt to circumscribe the relevant range of contexts via their involvement of some distinctive subject matter—e.g. logical or mathematical—looks to have much hope of success. Quite apart from doubts about the feasibility of this particular suggestion (centrally, just how are mathematical contexts to be demarcated?),[19] it seems clear that any such proposal would be misconceived: for there is, plausibly, no subject matter in relation to which putatively necessary truths cannot be formulated.

A better looking proposal is that the conventionalist policy will be apt in just those cases where one's best efforts to imagine the falsehood of some statement get nowhere. The CM is depicted as parting company with the rest of us at just this point: he will not take the step from (his) inability to imagine something to the necessity of the contrary. 'The limit of his imagination . . . is still just another fact about him, and he sees no reason to take it as a guide to what must of *necessity* be the case.'[20] But the CM does, or at least can, discern a contrast here, between what can and what can't be imagined. As Wright has it "He may grant. . . that he cannot imagine what it would be like

[18] Wright (1980) p. 465.
[19] For some discussion of the difficulties here, see Wright (1980) pp. 465–6.
[20] Craig (1985) p. 93.

[for some allegedly necessary statement to turn out false]. . . He may grant that this marks an interesting and important contrast . . . but he sees no cause to project aspects of our imaginative powers onto reality, or to dignify them as apprehension of what *must*, or *cannot*, be the case.'[21] And now, if there is a contrast here which is discernible by the CM, is it not entirely natural and proper to hold that it is precisely that contrast which marks off the cases in which the conventionalist's policy is to be applied? Craig at one point describes the policy in just these terms—'The non-cognitivist theory consists in the view that this further step [i.e. to ascribing necessity] is not a matter of the Normal Man's recognition of some different kind of fact to which the CM is blind; it is a policy which the NM adopts towards propositions *when he finds their falsehood unimaginable*.'[22]

Natural it may be. But there are at least two sources for doubt about its propriety. One is that the suggestion conspicuously fails to do justice to the role of *proof*. In very many cases, our disposition to accept a statement as necessary seems to have little or nothing to do with our apparent inability to imagine things being other than as the statement declares them to be, but to be grounded rather in our having a proof of it, perhaps from other statements already accepted as necessary. In such cases—the statement that there are infinitely many primes may serve as example—we may well feel either that we can form no conception of what the appropriate imaginative exercise could be, or that, insofar as we can find application for the notion of imaginability, it threatens to lead to the wrong result: in just what sense, if any, are we unable to conceive of there being a largest prime number? Of course, given a proof of the infinity of primes, we could declare it to be, for that very reason, unimaginable that there is a largest prime. But to adopt absence of conflict with the results of available proofs as a criterion of imaginability would be just to concede the point I am urging. Flawed as it is, the proposal to characterise the appropriate range of contexts as logical or mathematical has at least this merit, i.e. that it at least tries to do justice to the idea that a distinctive type of reasoning—formal or informal proof—plays a

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[21] Wright (1986) pp. 204–5.
[22] Craig (1985) p. 103, my italics.

large part in shaping our conception of what holds of necessity.

It thus appears that the present suggestion requires some modification. The proposal had better be, roughly, that the policy is to be applied to a statement either if its falsehood is simply unimaginable or our warrant for accepting it is afforded by a proof (perhaps from premisses to which the policy is already known to apply). However, quite apart from its standing in need of some refinement, that formulation is unduly generous to the non-cognitivist, since it simply glosses over a further, delicate question he must somehow satisfactorily tackle. In cases where imaginative gymnastics are not to the point, we are nevertheless disposed to treat a statement as necessary if we are led to accept it by reasoning *of a certain kind*—and the question is whether the non-cognitivist can supply an independent general specification of that kind of reasoning.

We may, without serious loss of generality, focus upon the case where the statement at issue is a conditional whose antecedent supplies the premiss for a piece of reasoning we are disposed to accept, of which the consequent of that conditional is the conclusion. The status of the premiss and conclusion thus plays no relevant part; the question is when—i.e. given what constraints upon the intervening reasoning—are we in the market for treating the corresponding conditional as necessary? It is, of course, straightforward to answer the question in terms congenial to the Normal Man, or to the cognitivist: it is appropriate to accord that status to the conditional when, but only when, there is a deductively valid, as opposed to merely inductively acceptable, argument from the antecedent to the consequent. But the non-cognitivist cannot, in this context, just help himself to that way of putting it, since the intuitive conception of valid deduction is precisely of reasoning which is *necessarily* truth-preserving. He needs, rather, to provide a characterisation of valid argument (i.e. of the range of arguments which we would, on best performance, classify as 'valid') which makes no essential use of the notion of necessary truth (or, obviously, any other notion which would suffice for its introduction) and at the same time is of sufficient generality to cover all relevant cases. The second constraint is not merely ornamental. So far as reasoning within a particular formal system goes, the non-cognitivist might seek to discharge his

obligation by supplying a purely syntactic characterisation of the consequence relation. One might, to be sure, question the adequacy of this suggestion, even considered as providing a partial solution—shouldn't there be some restriction to an acceptable formal system? and does the appropriate notion of acceptability admit of explanation in suitably independent terms? But quite apart from doubts on that score, there is, surely, no prospect of a *fully general* answer to our question along these lines.

To the objection that now threatens—i.e. that no suitably independent account of the difference between deductively valid and inductively acceptable inference is available to him—the non-cognitivist has, so far as I can see, one and (essentially) only one reply. The difference has, for him, to reside in the way—to put it very roughly—what are ordinarily deemed to be deductively valid arguments distinctively affect us. But he may contend that, whilst it is important to stress the role of deduction in addition to simple unimaginability in determining our judgements of necessity, it would be an error to suppose that the second disjunct in the revised proposal incorporates any fundamentally new idea—in addition, that is, to the notion of unimaginability that figures in the first disjunct. His thought, in other words, should be that the distinctive character of the relevant kind of argument can be captured in terms of that notion. The single inferential steps which we take to be valid are, he may claim, precisely those in which we find ourselves unable to imagine the joint truth of the premisses and falsehood of the conclusion. And extended arguments are taken to be deductively valid just when they are wholly composed of such steps. Thus although our more complicated formulation is required for a competent account of the range of contexts to which his policy applies, its second disjunct imports nothing that goes essentially beyond the basic notion of unimaginability, and so gives rise to no *special* difficulty.

This will not do. In particular, the final claim is unwarranted. The problem centres on transitivity. It is, familiarly, of the essence of our intuitive conception of proof that the relation of entailment is transitive; if it were not, we could accept the premisses, and accept also that each inferential transition, taken by itself, corresponds to a true entailment, and yet remain free to

reject the conclusion. But it is far from clear that the non-cognitivist's ersatz for the full-blooded consequence relation has this property—i.e. that whenever it is unimaginable that (A but not-B) and further, unimaginable that (B but not-C), it will also be unimaginable that (A but not-C). The requisite transitivity principle might hold, if we allowed ourselves a rather rich conception of what it is for the truth of a proposition to be imaginable—a conception according to which it is imaginable that p only if we can imagine its being the case that q, wherever p entails q. (Actually, there is some question whether even this is strong enough, but I don't need to pursue that here.) There is, of course, nothing intrinsically objectionable in construing imaginability in this way—beefing it up, as it were, with the help of logical consequence: but it should be clear that the non-cognitivist has precisely no right to any such beefed-up conception. Without it, the required transitivity principle has, or so it appears to me, little chance of holding. But if it fails, we have as yet no fully adequate explanation of our tendency to treat as necessary the conditional corresponding to what we should normally describe as a valid proof.

To summarise: *without* the revision allowing for cases in which proof guides our disposition to ascribe necessity, the proposal under consideration is incompetent to capture the full range of contexts in which the non-cognitivist's policy ought, it seems, to apply (i.e. all those contexts in which we are disposed to ascribe necessity); but *with* that revision, the proposal remains unacceptable because, on what appears to be the only interpretation of the additional clause available to the non-cognitivist, it becomes a mystery why the availability of what we would normally count as a proof should dispose us to regard the corresponding conditional as necessary.

The thought that prompted that objection was that unimaginability is not happily viewed as a quite generally *necessary* condition of our being disposed to ascribe necessity. Neither—and this brings me to my second reason for dissatisfaction with the proposal—is it straightforwardly *sufficient*. Somewhat ironically—since his business is to defend the non-cognitivist line—Craig supplies some contrasted examples which nicely illustrate the point. We can't, he contends, imagine a new colour, but we don't conclude that there are necessarily no

shades other than those with which we're acquainted. We don't, that is, invariably 'take the step' from unimaginability to impossibility. But sometimes we do. We pass easily enough, to use another of Craig's examples, from our inability to imagine the operation of a (genuinely, not just verbally) deviant arithmetic—in which, say, $8 + 5 = 12$—to the belief that it's impossible. The question that exercises Craig is: why this difference? And the answer he proposes strikes me as the right one:

> If we don't pass from unimaginability to holding it logically necessary that there are no more colours than those known to us, surely that is because an alternative explanation of our inability strikes us as too plausible. We find it too easy to think of the case of the person who sees fewer shades than we do, and too easy to accept that they cannot imagine more shades than they can see—whereupon the application to ourselves becomes hard to resist. . . . But what would it be to *subtract* a little from our arithmetical experience in order to get some intellectual grasp of the possibility of *adding* to it—that doesn't seem to give a coherent thought at all. An explanation of our inability to imagine the arithmetically deviant along the lines that served for colour . . . doesn't get started; so nothing checks our tendency to project our incapacity and suppose that reality just *couldn't be like that*.[23]

The question that concerns us—not quite Craig's question, but closely related to it—is: given that unimaginability alone is insufficient to render the non-cognitivist policy apt, what further condition needs to be met? Craig's answer to his question suggests an answer to ours: we should apply the policy (treat the proposition that p as necessary) just when (i) we find ourselves unable to imagine its being false that p and (ii) there is no alternative explanation of our inability. But to this there is, it seems to me, a simple objection. If we take the talk of *alternative* explanation at face value, it is being conceded (implicitly, at least) that the necessity of p would be one explanation of our inability to imagine its falsehood, and, more importantly here,

[23] Craig (1985) p. 106.

clause (ii) would amount to the condition that there be no explanation of our inability other than in terms of p's necessity. But then the criterion *uses* the notion of necessity and so lacks the requisite independence. In view of that, the non-cognitivist might prefer to drop the reference to 'alternative explanation' altogether and have clause (ii) read: there is no explanation of our inability. But I'm not sure that that is any sort of improvement: on this account, the policy the non-cognitivist sees us as applying involves us in accepting that we suffer from an *inexplicable* imaginative limitation whenever we ascribe necessity—is that any *more* respectable than crediting ourselves with an inexplicable faculty for detecting necessities?

I have tried in this paper to make plausible two, essentially negative, claims: first, that one important line of argument—from the possibility of Caution—fails of its purpose, and second, that there are grounds for suspicion that an independent specification of the range of contexts in which the non-cognitivist policy applies—essential if that is to constitute a viable alternative—will not be forthcoming. I should like to conclude with a necessarily brief and tentative thought about the direction a positive epistemology of necessity might take. I agree with Craig that it's important to get straight about the proper place of imaginability in the theory of knowledge in general, and in the philosophy of necessity in particular— though perhaps not about what that place is. And I think we must agree with him, too, that if our inability to imagine such and such is just a fact about us—that we suffer from a certain imaginative limitation—then there is no epistemically defensible step from there to any conclusion about what must of necessity be the case. But it is not clear that our inability to imagine something is always *just a fact about us* in that sense—that there is always available, in principle at least, a correct explanation of it in terms of the limited character of our (respectable) perceptual and cognitive capacities. Indeed, Craig himself seems inclined to allow that arithmetical deviance might be an exception, and it is not too difficult to think of others where no such explanation seems at all likely. The thought—very crudely—is that the cognitivist will want to insist upon some such distinction, between imaginative incapacities which merely reflect our own limitations and those which are due rather to some impossibility

inherent in what we are trying to imagine; and that he may see us, in judging such and such to be so as a matter of necessity, as opting for the latter account. In developing this suggestion—in effect, that we may use our imagination to explore the realm of possibilities—it would be important to stress the open-ended character of the enterprise: we are always prepared to have our beliefs about what can be imagined reshaped by the efforts of others. Three closing remarks: first, the suggestion would be singularly unattractive, if it saw us as going into an imaginative sweat, as it were, whenever we ascribe necessity to a proposition —but I do not think it need involve that implausibility. Second, we are a long way from the idea that our apprehension of necessity results from the operation of some quasi-perceptual necessity-detecting faculty. That is, I take it, on the whole, an advantage; but it does mean that an alternative explanation needs to be found for the immediacy attaching to some judgements of necessity. Finally, it should be clear that no account along these lines can find room for absolutely certain, non-defeasible knowledge of necessity. That may be seen as a crippling defect; but I can see no way to hang onto the traditional idea that we enjoy a special *kind* of knowledge of necessity, as distinct from, in some cases at least, a high *degree* of certainty about it.[24]

NECESSITY, CAUTION AND SCEPTICISM

Bob Hale & Crispin Wright

II—Crispin Wright

Bob Hale's sharply focussed and probing paper deserves a much more thoroughly considered reply than has proved practicable in the very sad circumstances which find me in the respondent's role, rather than that of Chairman. I had keenly anticipated his exchange on this difficult and fundamental topic with the late Ian McFetridge, and had hoped, indeed, that the occasion might serve as a catalyst for a more extensive flow into public view of Ian's long worked-on ideas about necessity and cognate matters. His tragic death has deprived British philosophy of one of its most refined and talented thinkers.

In the first three sections of what follows I try to respond to the two principal broad doubts which Hale raises. The first of these concerns Caution and the dialectical role which I have elsewhere tried to give it in the debate about the status of necessity.[1] Hale questions whether, if indeed always a possible response to a purported proof or purportedly necessary statement, Caution is not in fact a quite generally available response—so that an analogous stance could be assumed, for instance, with respect to ordinary claims about others' mental states, or about the past, or the material world, however conclusively supported in the light of our usual practical standards. This question, and its obverse—whether Caution could indeed coherently be assumed with respect to all our judgements of necessity simultaneously—will be the issues for sections I and III respectively. Hale's second doubt concerns whether any non-cognitivist conception of our ratification of proofs, and our acceptance of statements as necessary, can successfully explain the phenomenon of our non-collusive agreement in these judgements. That will be addressed in section II.

The non-cognitivist platform which I tried to develop in chapter XXIII of *Wittgenstein on the Foundations of Mathematics*

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[1] Attention is here restricted, needless to say, to *a priori* necessary truths.

and in 'Inventing Logical Necessity', and which Hale is concerned to undermine, does not emerge unaltered at the end of section III. In the final section I shall pretend to turn traitor, as it were, and join Hale in probing for further weaknesses. Drawing on a thought from, ironically enough, the *Remarks on the Foundations of Mathematics*, I shall canvass reason to think that Caution—or, more specifically, its descendant, *Eccentricity*, with which we shall by then be concerned—is not an available option for at least a large class of proofs and modal judgements. But the reasons for its unavailability should not be uncongenial to anyone who starts out in broad sympathy with a non-cognitivist, or 'conventionalist' conception of necessity.

Let me quickly advertise a second shift of perspective. Hale pays me the compliment of working within terms dictated by a condition on a discourse's being 'factual' or 'genuinely assertoric' which I developed in the writings cited above. But I have come to feel that the *factuality* of ascriptions of necessity, at least in whatever minimal sense is cognate to truth-value bearing, is better not viewed as the point at issue. Modal discourse *is* truth-value bearing; there is no hope, I believe, of an 'expressive' or other kind of non-assertoric reconstrual of it.[2] We need to recognise in general that truth-aptitude is not the matter to make pivotal in realist/anti-realist debates. The question is not whether ascriptions of necessity can be true or false—they can—but what characteristics are possessed by the truth-predicate which qualifies them. The condition which, were Caution to play the specific role in this debate that I originally envisaged, ascriptions of necessity might turn out to fail to satisfy is a condition not on 'factuality' but on the propriety of thinking of modal discourse as, so to speak, seriously representational and of our relations with modality in correspondingly seriously cognitive terms.[3] So the antagonists in what follows will be the 'cognitivist' and 'non-cognitivist' respectively.

[2] What, for instance, is a non-assertoric construal to make of iterated modalities, or entailments between modal and non-modal sentences? Cf. Hale, 'The Compleat Projectivist', *Philosophical Quarterly* 36, 1986, pp. 65–84.

[3] These matters are further discussed in my 'Realism, Anti-Realism, Irrealism, Quasi-Realism' in *Midwest Studies in Philosophy*, vol. XII, edited by Wettstein, Vehling and French, University of Minnesota Press 1988, pp. 25–49, and 'Anti-Realism: the Contemporary Debate—Whither Now? in John Haldane and Crispin Wright, eds., *Reality: Representation and Projection*, Oxford University Press, forthcoming.

I

The traditional epistemology of necessity which the device of the Cautious Man is intended to confront distinguishes two classes of necessary truths: those which we recognise as the culmination of some sort of process consisting of discrete inferential or transformational steps—i.e., in a wide sense of the term, a *proof*—and those whose recognition is not to be represented as a formal or inferential process but is better likened to a kind of direct awareness, in the light of understanding, or 'intuition', that they cannot but be true. A broadly foundationalist conception of our knowledge of necessity is the inevitable concomitant of the traditional view: a base class of necessities— let us call them *axioms*—are admitted by the faculty of intuitive awareness, and these we then proceed to exploit and augment by proof.

In the discussions to which Hale is responding it was Caution about proofs which took centre stage. But if the traditional view is essentially foundationalist, it can be undermined—if Caution can indeed undermine anything—by Caution about axioms. We cannot recognise necessities as the culmination of proof if there are no necessities which we recognise without proof. This is not because proofs cannot proceed except *from* axioms in our sense—the assumptions of a proof may be contingencies, or the proof may be a *reductio* or otherwise discharge all its assumptions. The point is rather that axiomatic judgements are needed to sanction the ingredient steps. We only have a proof if, for some appropriate description of its alleged pedigree, each step is the *only possible* continuation under that description.[4] And, on the traditional view, the judgement that, for a particular step, that is the case—the judgement that *necessarily* no other step has the relevant pedigree—can only be axiomatic or the product of inference from axioms.

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[4] I am not, of course, forgetting that rules of inference—Disjunction Introduction, for instance—may prescribe no unique continuation at a particular point in a proof. But there will nevertheless be a judgement—the 'Correseponding Descriptive Conditional' (see note 28 below)—on whose necessity the validity of an application of such a rule will turn. If the step is, for instance, from '*A*' to '*A* or *B*', then the conditional will run along the lines:

If '*A*' is the premise for a Disjunction Introduction step, and '*B*' is determined as the right-hand disjunct in the conclusion, then the conclusion is '*A* or *B*'.

Now, the proposed condition, originally on factuality but now on suitability for cognitivist blessing, was that a class of statements qualifies (if and) only if it is *a priori* that differences of opinion concerning them, if not attributable to vagueness,[5] can be rendered intelligible only in terms of the occurrence of something worth describing as a *cognitive shortcoming* on the part of one or both of the differing parties.[6] Cognitive shortcoming can only consist, presumably, in not holding an opinion which ought to be held or in holding an opinion which ought not to be held. But we can be a little more specific: not holding an opinion which, epistemically, ought to be held has to be attributable to ignorance of germane data or to failure—because of inferential error, or prejudicial underweighting of the data, or simply overlooking the possibility of an acceptable inference—to move to an opinion which the data warrant; and holding an opinion which, epistemically, ought not to be held has, similarly, to be attributable to possession of spurious data, or to failure—because of inferential error, or prejudicial overweighting of sound data— to restrict one's inferences to those which are genuinely warranted. One way or another, then, anything worth viewing as cognitive shortcoming is going to involve ignorance, error, or prejudice.

A crucial question, then, is whether some interesting form of Caution is possible about axioms: necessitated statements which, on the traditional view, we recognise to be true, but for which this recognition is not to be viewed as the culmination of proof, in the broad sense germane to our concerns. Must a difference of opinion about an axiom, one side accepting it and the other Cautiously refraining from doing so, involve ignorance, error or prejudice on one side or the other?

That is a crucial question, however, only provided the relevant form of Caution is indeed 'interesting'. For, as Hale

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[5] Either in their content or in the notion of a *sufficient* case for (dis)believing them. See pp. 199-200 of 'Inventing Logical Necessity', *Language, Mind and Reality*, edited by Butterfield, Cambridge University Press 1986, for motivation of the details of this proviso.

[6] The re-orientation might seem to have rendered the condition almost platitudinous. It would be congenial if that were so, but I doubt if it is. It still needs arguing that our dealings within a discourse are 'seriously cognitive' and the discourse itself 'seriously representational' only if cognitive shortcoming has to be at the root of every dispute of the relevant kind. But I do not suppose that Hale would dispute the re-orientated condition when he was content with it as a condition on factuality. In any case, I have no space to discuss the condition further here.

reminds us, it is important that the Cautious Man not turn out to be, for instance, some traditional kind of epistemological Sceptic. Scepticism is, plausibly, an available stance almost everywhere. Perhaps, as we should certainly like to think, it involves cognitive shortcoming—prejudicial underweighting of accepted data, for instance—and perhaps it does not. But if it does, and Caution is aptly viewed as Sceptical, then there is at least a *prima facie* case for regarding the Cautious Man as guilty of cognitive shortcoming. And if it does not, the proposed condition will lose plausibility unless augmented with a special proviso about Scepticism; but once the condition is so augmented, the possibility of Caution about necessity, since a Sceptical stance, will have no immediate bearing on the prospects for cognitivism.

It is accordingly vital, if a non-cognitivist challenge is to be mounted on the back of Caution, both that the attitude involve no readily demonstrable element of ignorance, error or prejudice, and that it not reduce to any familiar form of epistemological Scepticism. But, as Hale emphasises, the challenge may abort even if those conditions are satisfied. Scepticism is merely an illustrative case: any interesting form of Caution, whatever its detail, must not allow of generalisation to other kinds of statements for which the appropriateness of a cognitivist view is not contested. Otherwise the proposed condition will once again lose plausibility unless augmented with a special proviso about whatever sort of general attitude Caution illustrates.

Traditional forms of Sceptic do not contest that the discourses with which they are concerned are apt to correspond or miscorrespond to something real—that there either is or is not a real physical universe, for instance, which, if it exists, is or is not as the particular opinions we have about it dictate. What they contest is that we can, in truth, acquire even the weakest reason to hold any particular statement of the contested discourse to be true. Hale recognises that the Cautious Man of 'Inventing Logical Necessity'—the character there called 'Y'—is distinguished from the Sceptic in this respect. Y is not, in the typical sceptical mould, a realist about the contested discourse who professes dissatisfaction with our ordinary epistemological controls on it. But nor is his position to be simply that of the non-

cognitivist about necessity. For otherwise, as Hale suggests, the argument which seeks to exploit the possibility of Caution would seem to move from the intelligibility of the non-cognitivist position to its truth.[7] Rather Y has to be a kind of *agnostic*: he understands the notion of necessity, and is not disposed to deny outright that any statements are necessarily true. He is content to grant that there is often reason to believe the contents embedded within necessitated statements, and that such reason can be obtained in just the ways in which the traditional view sees us as arriving at recognition of necessities—proof and reflection. But he sees no cause to invoke the notion of necessity in the description of the teachings of reflection and the imagination, or to use it to dignify the products of reasoning and proof.

It is here that Hale demurs. He reminds us of the sort of dispute—for instance, a disagreement about comedy, or good taste—where the proposed condition seems most at home. In such a case the antagonists will typically both be willing to make other judgements of the contested sort—each of them will be prepared to accept that certain things are amusing, or in good taste, and they will very often be in substantial agreement about a large class of such judgements. In addition, the disagreement need not be in any way 'second order', as Hale puts it. It need not be that either party is driven by any *philosophical* opinion about the character of comedy or good taste, or about the extent of the unproblematically cognitive. The dispute can purely concern what is comic, or fine, without the intrusion of philosophical opinion or—and here is where the proposed condition does some work—cognitive shortcoming in relation to any non-comic or non-aesthetic matter.

This consideration does not, of course, determine victory for the comic, or aesthetic non-cognitivist. What it does is to oblige the cognitivist to explain how some *other* kind of cognitive

[7] Actually Hale seems to me to overstate the reason why the Cautious Man should be distinguishable from his philosophical patron. Y *could* simply adopt a non-cognitivist view and be no less challenging a customer on that account. For if cognitivism *is* the proper philosophy of necessity, the non-cognitivist is presumably guilty of cognitive shortcoming and it ought to be possible to show as much. The point is not that allowing Y to become, in effect, the non-cognitivist makes things too easy for non-cognitivism. It is rather that Y thereby surrenders any claim to independent credibility—independent, that is, of one's prior convictions about the debate.

shortcoming has to be involved in such divergences of opinion—a kind of ignorance, error or prejudice which is specific to the appraisal of the comic, or aesthetic. And that will demand an account of the ideal epistemology of such judgements and the production of a consequent explanation of how divergences of opinion require departure from the ideal. The possible avenues to explore then seem to be three: the invocation of a conception of the comic, or aesthetic, as *sui generis* states of affairs whose appreciation demands the proper exercise of a corresponding *sui generis* cognitive sensibility; the elucidation of a set of *bridge principles*—whose own epistemology is *a priori* or in some other way unproblematical for these purposes—which mediate competent appraisal of the comic, or aesthetic, on the basis of inferences based on information of other kinds; or the disclosure of how judgements concerning the comic, or aesthetic, somehow provide the *best explanation* of matters about which our original antagonists may be presumed to be agreed.

It is interesting to speculate how, if those exhaust the options, the cognitivist about the comic might possibly proceed to make a satisfactory case, or whether the aesthetic cognitivist might somehow enjoy better prospects. But we cannot pursue such matters here. Our question is rather: is Hale right to suggest that the sort of disagreement that will arise between Cautious and Normal Men about judgements of necessity is significantly disanalogous to the kind of comic or aesthetic disagreements just envisaged?

Well, disanalogous it certainly is—at least as matters are portrayed in 'Inventing Logical Necessity'. There, the Cautious Man, Y, does, in some respects, take an explicitly philosophical stance—for instance, he sees '. . . no cause to project aspects of our imaginative powers onto reality, or to dignify them as apprehension of what *must* or *cannot* be the case',[8] hardly the language of a first-order dispute! But why does the philosophical character of the stance matter? If the proposed condition is accepted, and cognitivism about necessity is correct by its lights, then Caution, whatever its motivation, involves a cognitive shortcoming, and an answer is owed about where specifically it is going wrong—about why, precisely, Normal Men are justified

[8] 'Inventing Logical Necessity', p. 205.

in moving to the necessitated beliefs which Caution eschews.

Hale, I am sure, would not deny this. His point is rather that the *prima facie* coherence of Caution was supposed to provide a *reason* for concern whether necessitated judgements could satisfy the proposed condition. No doubt there is a perfectly legitimate such concern—is cognitivism about necessity ultimately defensible? But Caution, when it amounts to a philosophical stance, is hardly distinguishable from agnosticism about the prospects for cognitivism. And surely the *prima facie* coherence of the agnostic point of view cannot be a reason for holding it?

Well, why not? The key issue here is whether, as Hale suggests, Caution may indeed be generalisable. Is there such a thing as *prima facie* coherent Caution about other minds, the past, or even the material world? Hale does not attempt much more, in his published paper, than—rather warily—to float the possibility and canvass its dialectical significance. In a note he remarks that

> It has, perhaps to be conceded that it is easier to envisage ourselves getting along in the world without modalising than to see how we could manage radical suspension of our usual beliefs about other people, the past, etc.

But he continues

> But the issue . . . concerns not the practical feasibility of the neutral stance,

—Caution in relation to other kinds of statements—

> nor even its ultimate coherence or defensibility, but its *prima facie* intelligibility. And if scepticism about, say, other minds is at least *prima facie* intelligible, it is hard to see how neutrality . . . can fail to be so as well.[9]

However, I think it will emerge, if we focus a little closer on what Caution involves, that there are quite impressive reasons to doubt that it will generalise as widely as Hale suggests.

Reflect that Caution does not have to be *quite* as explicitly philosophical in character as, in Y's advocacy, it becomes. There does not seem to be great difficulty in envisaging a

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[9] Note 15, p. 192.

language in all respects like ours save that it is free of explicit modal idioms. It would hardly be an inconvenience to speak such a language: science, mathematics, (non-modal) logic, psychology, literature and the arts—almost every area of human expression and inquiry could be prosecuted and discussed exactly as it is now. Only philosophy and modal logic would be exceptions. Imagine, accordingly, someone—Hero— trained in such a language as their only language who is expert in the logic, philosophy and mathematics which its expressive resources allow. We—or those of us who are similarly expert— would have no difficulty in interacting with such an individual. But now suppose that it becomes clear to Hero that we are using a concept, to which he is not party, to classify certain judgements—typically, though not without exception, in the areas of logic and mathematics—and that the general gist of the classification is that these are judgements which, if we have made no mistake, *have* to be true in all thinkable circumstances. Suppose it had not occurred to Hero to think of these judgements as in any way set apart. No doubt he had conceived of certain of the truths of logic and mathematics as pretty *obvious*—even as, for practical purposes, completely certain; and no doubt he had recognised that the methods of logic and mathematics are distinctive. But it had never crossed his mind to think of this obviousness as a reflection of a reliable—though fallible—capacity of recognition of what *must* be the case; or to regard the methods of logic and mathematics as distinguished not just by their formal and reflective character but in the *necessity* of their products. And now, when it does cross his mind, because we bring it to his attention that we so view these matters, Hero finds himself without any sense of why we want to make such claims. Perhaps he has an inchoate philosophical worry about how anything which finite, rooted-in-the-actual human beings could accomplish, could amount to knowledge of such cosmologically impressive scope. But all he needs to feel—for our purposes—is 'out of it': a spectator on a practice with concepts whose basis remains obdurately mysterious to him.

I take it that Hero's predicament is at least *prima facie* intelligible. Think of it on the model of someone totally lacking in a sense of humour who has been raised in an English-speaking

but similarly mirthless culture and then, on being re-integrated into normal English society, encounters for the first time jokes and laughter, and the whole panoply of comic vocabulary and judgement. But can anything analogous be constructed for judgements concerning other minds, or the past, or the material world? Well, if so, it must be possible to characterise languages which Hero could practise during his innocence of the concepts of other minds, matter or the past. But what are they? Is there a purely phenomenal fragment of English in which someone could be competent who had never encountered and had no understanding of judgements concerning the material world? And if it seems easier to imagine English minus its past tenses and other devices for talking of what is past, could such a language be understood by someone who had no *beliefs* about the past? Finally, could there be a language-using subject who had concepts only of his own mental states, or no concept of the mental at all? These questions need detailed discussion, of course. But it is far from plausible, even *prima facie*, that they should receive affirmative answers. By contrast, Hero's Caution, whatever its fate on thorough analysis, does not seem immediately problematical in the same sort of way.

What are the essential features of Caution? Not, contrary perhaps to what the choice of that term might lead one to expect, a preoccupation with the *fallibility* of our reflective and imaginative capacities, or our logico-mathematical powers. The opponent of cognitivism about necessity who wishes to use the Cautious Man as a tool ought to recognise, as Hale emphasises, that no cognitivist need regard our knowledge of necessitated statements in general as especially certain.[10] The possibility of a close analogue of Caution about a range of statements requires, rather, two things: first, that it be possible to speak a language—operate a conceptual scheme, if you prefer—without having any beliefs whose formulation would require the conceptual resources distinctively utilised in the statements in question; second, that it be possible to grasp—at least in part—the content of those statements while unable to participate both competently and self-reliantly in the practice of making

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[10] Though an explanation is owing, presumably, of the high degree of certainty which we repose in sufficiently simple *axioms*.

them. The Cautious Man about necessity does not have a problem with the intended meaning of the *phrase*, 'true under all thinkable circumstances'. What he is at a loss to do is to understand the motivation for applying it to the beliefs he acquires as the result of logico-mathematical enquiry, or certain kinds of imaginative thought-experiment. Likewise the Mirthless Man need have no problem acquiring at least the right kind of understanding of 'funny'; its social significance will be salient enough, and we might clue him in to something of the relevant phenomenology by strapping him down and tickling his feet, while explaining that the comic response, though in some ways similar, is usually less intense and always *enjoyable*.[11] Both characters may be able successfully, without collusion with others, to classify new instances as 'necessary', or as 'funny', as the case may be. Their lack of self-reliance comes out in the fact that they will be able to make a judgement about what is funny, or necessary, only *via* making a judgement about how other people will react to the case. Neither has a use for such judgements as an expression of their own affective, or intellectual, responses.

The *prima facie* generalisability of Caution, then, to e.g. statements about other minds requires, first, the *prima facie* availability of a language, employable by a rational human subject, in which no claims about the psychological states of others can be formulated and whose competent use requires no beliefs about such states; and, second, the possibility that a subject who employed such a language might—after the fashion of the Mirthless and Cautious men—simply not be receptive to the extension of his language to include other-minds vocabulary. If the issues concerning the first requirement are, as I have suggested, moot, the satisfiability of the second seems to me extremely doubtful. What is called for is an indication of how our subject might move to a grasp of psychological vocabulary which was in no relevant way inferior to the understanding of modal and comic vocabulary possessed by the Cautious and Mirthless Men—and then might struggle over the self-reliant ascription of psychological states to others. Well, let him have become competent enough in the non-inferential self-ascription

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[11] I am assuming that he doesn't enjoy having his feet tickled under physical restraint.

of such states, and understand them in whatever degree that implies; then the point is that there is not, apparently, in the competent ascription of psychological states to others, the same kind of distinction as in the comic and modal cases between judging that third parties would, *ceteris paribus*, accept a certain judgement and being moved to that judgement by aspects of one's own affective or intellectual response.

This is not to make either of two presumably incoherent claims: it is not to claim that the judgement that Jones is in pain is not to be distinguished from the judgement that others would *ceteris paribus*, so judge; nor is it to claim that the judgement that Jones is in pain has no proper basis save on the judgement that others would, *ceteris paribus*, so judge. The point is rather that to be in position reliably to judge how third parties will *ceteris paribus* judge others' mental states *is* to have mastered standard grounds for the ascription of mental states to others. It remains to be seen under what, if any, circumstances Hero might be a reliable predictor of our ascriptions of necessity; a crucial question is whether, as would be congenial to non-cognitivism, the competent, non-collusive use of modal vocabulary can be accounted for as a product of *policy*, based only on knowledge of non-necessities—an issue for the next section. But it is clear, I take it, that there is no reason in principle why our comic responses should not be completely predictable by the Mirthless Man.[12] And if that were so, it would still remain that his judgements about comedy were not, in the relevant sense, *self-reliant*; there would still be a slot to be filled by—what he lacks—a capacity for the crucial kind of motivation for such judgements. But there seems to be no such slot to fill in the case of the ascription of mental states to others; roughly, you cannot be in position to predict third parties' appraisals of others' mental states—on the basis of any kind of ground currently available to us[13]—without being in all respects competent in the appraisal of such states on your own account.

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[12] I mean that it is not in the *nature of* the comic response to be unpredictable by people who have no such responses—and have to make their predictions on the basis of ordinary psychological and contextual information. I do not mean to deny that *our* comic responses may not actually be so predictable.

[13] We are prescinding throughout, of course, from the possibility of predictions based on neurophysiological information.

There is much more to say about this, of course. I have meant only to air certain reasons to be doubtful whether Caution is a generalisable attitude. There are problems about extending it to each of the broad areas of judgement which Hale mentions which do not, at least *prima facie*, arise in the case of necessitated judgements. That is not, naturally, to provide grounds for thinking that Caution about necessity is, in the end, fully intelligible. But the case for saying that it is not is still to be made; so Hero can continue to play—at least for a little while longer—the role of a putative exemplification of how to disagree with the *cognoscenti* about necessitated judgements without ignorance, error, or prejudice.

II

The concluding chapter of *Wittgenstein on the Foundations of Mathematics* tried to make use of Caution in two ways. The first was as a heuristic to focus on whether differences of opinion concerning necessity have to involve cognitive shortcoming. The second involved the suggestion that a base of opinions available to the Cautious Man might provide everything required for a Normal pattern of modal judgements if built upon in accordance with an appropriate *policy*; and that, accordingly, nothing but empirical judgement need be involved in the ratification of necessities. This is, in fact, a pivotal issue: if somebody could pass as Normal—in a manner involving only the making of *self-reliant* judgements—who actually cognised only contingent empirical matters but proceeded on that basis to dignify certain judgements as necessary in accordance with a well-defined policy, all motive for a cognitivist conception of necessity would be undercut. Conversely, if no such policy could succeed—if there simply is none which encompasses all the situations in which we are willing to regard judgements as holding true of necessity,—what explanation could be offered of our agreement in self-reliant such judgements *save* that necessity is something we cognise?[14]

In section IV of his paper, Hale argues, on the basis of two

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[14] Such a policy might concern features of the context in which an (unmodalised) judgement comes up for consideration, or the kind of basis there might be for believing it, or effects exerted on considering subjects. (Our basic policy with judgements about comedy, for instance, is to deem them acceptable when we are suitably amused.)

objections, that the latter is indeed the situation. The non-cognitivist must, presumably, recognise that our ordinary practice involves a distinction between necessities—*axioms*—which are acknowledged purely in the light of reflection, without inference, and necessities which are acknowledged in response to an articulated proof. So the needed policy must provide guidance with respect to both kinds of case: it must describe when it is appropriate to accept an axiom, and when it is appropriate to regard oneself as possessing a proof. And these descriptions must (i) be applicable on the basis of nothing but ordinary empirical knowledge, and (ii) issue in a capacity for self-reliant judgements of necessity—judgements in no way based upon information or expectations concerning others' responses.

Hale's discussion assumes that, as far as the acknowledgement of axioms is concerned, the non-cognitivist's policy is going to have to start from the thought that, very roughly, we acknowledge axioms when their falsehood is unimaginable. It is, no doubt, a somewhat lame start—the relevant notion of unimaginability needs careful circumscription, and Hale returns to the point in his second objection. His first objection, however, concerns not this starting point but the prospects for an adequate characterisation of the contexts in which we are in the market for proof. Crucial to any such characterisation will be some sort of account of the distinction between reasoning which, as we ordinarily think, establishes the necessity of the corresponding conditional and reasoning which merely establishes its probability—between deductively valid and inductively acceptable inference. To the challenge to provide such an account, the non-cognitivist has, Hale writes,

> . . . one and (essentially) only one reply. The difference has, for him, to reside in the way . . . deductively valid arguments distinctively affect us. But he may contend that . . . it would be an error to suppose that [this demands]—any fundamentally new idea—in addition . . . to the notion of unimaginability [which figures in the account of our acceptance of axioms]. . . . The single inferential steps which we take to be valid are, he may claim, precisely those in which we find ourselves unable to imagine the joint

truth of the premisses and the falsehood of the conclusion. And extended arguments are taken to be deductively valid just when they are wholly composed of such steps.[15]

The problem which Hale finds with this concerns transitivity. It is of the essence of our ordinary conception of proof that entailment is transitive. Transitivity is all that prevents us from accepting the premisses and each ingredient step of a proof while remaining at liberty to reject its conclusion; and such a permission would, it appears, subvert the whole institution of rational argument. But it is far from evident, Hale continues,

> that the [non-cognitivist's] ersatz for the full-blooded consequence relation has this property—i.e. that whenever it is unimaginable that (A but not-B) and, further, unimaginable that (B but not-C), it will also be unimaginable that (A but not-C).[16]

Let Hale be right that any notion of unimaginability which is at the service of the non-cognitivist here—so is not, for instance, understood as constrained by some independently grasped notion of entailment—fails to generate a transitive relation when

It is unimaginable that . . . but not———

is interpreted in terms of it. Why exactly is this a difficulty for the non-cognitivist? It would be a decisive difficulty, of course, if the project were to give a *constitutive* account of the entailment relation; a non-transitive relation cannot constitute a transitive one. But that is not what the non-cognitivist was challenged to do. The challenge was to characterise *when* the conditional corresponding to a piece of reasoning is, as a matter of policy, acceptable as necessary; why may that challenge not be met by characterising a relation which is to hold at each ingredient step—even if the relation is non-transitive?

Suppose for a moment that the other half of the challenge—to characterise when it is appropriate to accept an axiom—has somehow satisfactorily been met in terms of some notion of unimaginability, in accordance with the constraints (i) and (ii)

[15] This volume, p. 198.
[16] This volume, p. 199.

above. Accordingly, that the truth, or falsehood, of a proposition is, in the relevant way, unimaginable is something which it is possible to know by ordinary empirical means and without reliance on others' (predicted) responses. In that case, how could Hale's point about non-transitivity pose any objection to the claim that the same notion of unimaginability might, in the way he envisages, serve to meet the challenge about deductively valid inference?

The answer is that there would be no objection provided the *only* constraints on meeting the challenge are (i) and (ii). A policy formulated in terms of the relevant notion of unimaginability would be clear, and implementable by Hero. What Hale's objection presupposes, it seems to me, is the imposition of a third constraint:

> (iii) The policy to be described must fasten on conditions which not merely allow Hero to recognise the right range of contexts as ones in which a necessitated judgement is acceptable, but explain why it is *necessity* which we are willing to predicate in such contexts

Suppose this constraint has been met in the case of axioms. That will involve that e.g. finding the falsehood of a proposition unimaginable in the relevant way will have been made out to provide an intelligible motive for a necessitated judgement. And now Hale's point is simply that, given non-transitivity of the germane kind, there will not be *that* motive in general for regarding the conditional corresponding to a proof as necessary, even if the motive operates on each of the ingredient steps. And what other kind of motive would the sort of account envisaged have the resources to describe?

I believe that there are good reasons for allowing constraint (iii). A satisfying non-cognitivist account of necessity must surely engage both the question of how ordinary empirical faculties might suffice for competence with necessitated judgements and the question of why we are moved to make such judgements at all. But I do not see that the sort of account envisaged cannot speak to the constraint in the case of proofs, provided it succeeds in doing so in the case of axioms. Suppose we have a chain of reasoning from $A(1)$ to $A(k)$, such that for each $A(i)$, the truth of '$A(i)$ and not-$A(i+1)$' is unimaginable in the relevant way,

although that of '$A(1)$ and not-$A(k)$' is *prima facie* imaginable enough. Then we have, by hypothesis, motives for regarding each of 'If $A(i)$, then $A(i+1)$' as necessary. Suppose we act on them. Then each such conditional will be regarded as holding of all imaginable circumstances—so to regard them is part of accepting their necessity. So the imaginability of the truth of '$A(1)$ and not-$A(k)$' is now a matter of its *joint* imaginability with the truth of each of those conditionals. And accomplishing this feat of imagination will involve explaining to ourselves how each of a series of conditionals could be true simultaneously with the antecedent of the first and the negation of the consequent of the last. I take it the feat will be beyond us. Hale's first objection overlooks the consideration that even when necessity is seen as projected out of the imagination, imaginability will still be constrained by necessity; an impression that something is imaginable may not survive the attempt to imagine it in the company of other judgements to which we are moved by our inability to imagine their falsehood. Hale's second objection is the obverse of the first. It is that, on the face of it, the sort of policy outlined will be too generous. There are many things which we find unimaginable—for instance, a radically new shade of colour, or the possession of vision a thousand times more sharp than any human actually has—but do not propose to dismiss as impossible. So Hero needs to be advised of a restriction: when should he respond to the failures of his imagination with a judgement of necessity, and when not? Drawing on Edward Craig's discussion,[17] Hale offers the non-cognitivist the proposal that it is appropriate to move from the unimaginability of the falsehood of P to the judgement that P is necessary provided we can envisage no alternative explanation of our inability to imagine P's being false. And to this, he claims, there is

> . . . a simple objection. If we take the talk of *alternative* explanation at face value, it is being conceded . . . that the necessity of P would be one explanation of our inability to imagine its falsehood, and, more importantly here, [the proviso] would amount to the condition that there be no

[17] Craig, 'Arithmetic and Fact', in *Exercises in Analysis*, edited by Hacking, Cambridge University Press 1985, pp. 89-112; see especially pp. 105-7.

explanation of our inability other than in terms of P's necessity. But then the criterion *uses* the notion of necessity and so lacks the requisite independence.[18]

There are several points here. First, why must the formulation of the policy avoid all mention of necessity? The situation is not, remember, that Hero may not be presumed to have any inkling of the notion; it is, on the contrary, of the essence of Caution that its objects are understood. What must not be presupposed is that Hero knows self-reliantly when to accept necessitated judgements. But the judgement that no explanation of our inability to imagine P's falsehood is going to be forthcoming unless in terms of P's necessity, is not itself an *application* of the notion of necessity. So why would the proposal break the rules?

Second, the proposal is, in any case, something of a poisoned chalice, as Hale in effect observes. The non-cognitivist ought, surely, to want nothing of the idea that necessity might *best explain* unimaginability; how could a 'projective' predicate feature in a statement of the best explanation of the response out of which it was projected?

But a third point is the most important. There is in any case surely no difficulty about explaining why, in the sort of examples noted, we do not move from an inability to imagine something to a judgement of necessity. The explanation is that they do not constitute examples of unimaginability in any relevant sense. The impression to the contrary derives from confusing imaginability with visualisability-from-the-perspective-of-the-first-person. Perhaps the latter is the sort of thing 'imaginability' ought—allowing for the substitution of senses besides vision—to mean. But then we need another word—maybe 'intelligibility' or 'conceivability'—to serve our present purpose. In any case, the fact is that there is no relevant difficulty in imagining—understanding—what it would be, after microsurgery on the optic nerve, say, to perceive a radically new colour in the infra-red range, or to enjoy dramatically enchanced visual acuity; no problem about how we should know that such a state of affairs had come about, or how we should test for it in others. What we cannot do is visualise *now* what, first-personally, it would be like. The unimaginabilities that will be relevant for the non-

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[18] This volume, p. 200-201.

cognitivist's sought-for statement of policy will not be constituted by problems we encounter in attempting to anticipate the phenomenology of the experiences we would have if it were not the case that *P*. They will involve a blank inability to form any *understanding* of what it would be for *P* to be false, and—this is important—the absence of any corresponding difficulty with the idea of *P*'s truth. They will consist in a failure of intellection first and foremost, and of the sensuous imagination only inasmuch as understanding may, in examples involving, e.g., colour, carry an ability of imaginative representation in its train. I do not see that it is clear that the relevant sort of unimaginability cannot be sufficiently elucidated, or obvious that anything we can elucidate will outrun our dispositions to make necessitated judgements and so, like imaginability as construed by Craig and Hale, call for further problematic qualifications.

None of this, of course, goes very far at all towards explaining how a satisfying statement of the sought-for policy might be formulated. I have tried merely to give reasons to doubt that Hale has shown that the search is futile.

III

The apparently *philosophical* nature of Caution, and the consequent suspicion that, like Scepticism, it might be a widely available stance, with several uncontroversially factual discourses falling within its potential sphere of operations, was only one aspect of apparent disanalogy with e.g. the comic which concerned Hale. The other was its *global* character: Hero, even after he comes to understand the significance of necessitated judgements, is not disposed to make *any* off his own bat. He may, of course, choose to pretend that he is. But a crucial kind of motive for such judgements, essential to the capacity to make them self-reliantly, is—so the story goes—simply not within his repertoire. By contrast, the kind of disagreements about the comic, or about matters of taste, which fuel non-cognitivist suspicions about those matters, typically involve antagonists with what we seem to be constrained to regard as irreducibly *different* senses of humour or aesthetic sensibilities. Each finds *some* things funny or, e.g., elegant. They diverge over which.

A natural first reaction to this point is that it is inconsequential.

There might, perhaps, be difficulties in telling the story of the *An-aesthete*: a subject bereft of all aesthetic response. (Could someone who was insusceptible to aesthetic effects and motivations be motivated at all?) But the fiction of the Mirthless Man; at any rate, seems perfectly coherent. And is not that fiction as much at the dialectical service of the non-cognitivist about comedy as the sorts of irreducible disagreement about the comic which actually occasionally occur?

There is a line of thought available to Hale here, however, which makes it questionable whether this 'So what?' response will do. The concluding part of Quine's 'Two Dogmas of Empiricism' canvasses, famously, a kind of holistic empiricism according to which the acceptability of any belief is to be judged by its capacity to contribute to a total system of beliefs which, in addition to other familiar scientific virtues like predictiveness and simplicity, falls foul of 'recalcitrant' experience minimally often.[19] In 'Inventing Logical Necessity' I gave a simple argument—I would like to say 'showed'—that this proposal is incoherent: a fixed bound is imposed on the scope of any methodological pragmatism by judgements about when the system is 'working' and when it is not. Such judgements essentially involve appraisals of consistency and logical consequence—of what follows within the system, *modulo* the deductive apparatus which it embodies. And it is simply a confusion to suppose that the acceptability of these appraisals is likewise to be determined by reference to *their* capacity to participate in a total system of belief which falls foul of experience minimally often and is otherwise virtuous. The penalty for that supposition is that the pragmatic methodology is drained of all directive content.[20] Rather, a coherent epistemology of judgements about what a particular empirical theory-cum-logic entails, or is consistent with, has to find a way of acknowledging that they are *a priori*.

Suppose that this is so. Then the question seems to arise, what is the *explanation* of the possibility of acquiring reason to believe such judgements *a priori*? Can any kind of sense be made of this

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[19] Quine, 'Two dogmas of Empiricism in his *From a Logical Point of View*, Harper and Row 1961, pp. 20-46, section 6.

[20] 'Inventing Logical Necessity', pp. 192-4; cf also my, *Wittgenstein on the Foundations of Mathematics*, Duckworth 1980, chapter XVII, 'Proof and Experiment', section 3.

possibility *unless* they enjoy a special status of some kind? And now the notion of necessary truth can seem tailor-made to provide an explanation of this status. What better basis on which to found a satisfactory account of the possibility of arriving at certain truths by pure thought than on the notion that they hold true in all thinkable circumstances?

This suggests a strategy for a head-on cognitivist response to the challenge posed by Caution. Roughly: seek to show that Hero's cognitive shortcoming consists either in his failure to acknowledge the ineliminable distinction in his everyday practices between *a priori* and empirical methods of appraisal, or in his failure to appreciate that this distinction issues from the necessity of some of his judgements and the contingency of others. The strategy is broadly consonant with that adumbrated by Hale in his concluding remarks, which likewise envisages seeking the salvation of necessity in its explanatory potential; specifically, in its possible role in the explanation of (what we find to be) unimaginabilities which are not best explained in terms of the limitations of our perceptual and other cognitive capacities.

I do not know whether either strategy has any real prospect of success. But there is, plainly, in any case a major question about the status of the *a priori* in Hero's thinking—and, for that matter, in the thinking of his non-cognitivist master. If we can, indeed, make nothing of the idea of a system of belief in whose practice *a priori* judgement plays no part, surely *something* needs to be said about contents which are apt for *a priori* appraisal—*some* kind of response is demanded to the question of how they are distinguished from others which cannot be so appraised.

The non-cognitivist case will be the stronger, I think, if the appeal of this demand is acknowledged and directly addressed. The beginning of a line of response would be that, prescinding from certain possible exceptions[21], the *a priori* ratification of a judgement is indeed the ratification of its necessity. But it is not that the necessity of the judgement *explains* the possibility of its *a priori* ratification; to think otherwise is to make a mistake comparable to that of thinking that the comic qualities of a

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[21] The putative *a priori* contingencies whose discussion originates in Saul Kripke's *Naming and Necessity*, Blackwell 1980, pp. 80-91 and *passim*.

situation are explanatorily prior to our being disposed to find it funny. The susceptibility of a judgement to *a priori* appraisal is not a *product* of its necessary truth (or falsity); rather 'necessarily true' and 'necessarily false' are mere linguistic co-ordinates of '*a priori* appraisable'—predicates which incorporate no substantial theory of *a priori* knowledge but may permissibly be applied to the objects of cognitive enquiry just in case the process of enquiry assumes a certain stripe.

This, as far as it goes, is apt to seem mere evasion. We are assuming that it has to be agreed by all hands that the *a priori* cannot be totally dispensed with. And the non-cognitivist is challenged to explain, in effect, how the *a priori* appraisability of what we consider to be the major classes of *a priori* judgements is to be explained without appeal to their necessary truth or necessary falsehood. But all that has been offered is the mere assertion that such an appeal would not be explanatory, supplemented by the familiar analogy with the comic by way of an indication of why not. Nothing positive has been offered in response to the original demand at all.

But the real point of the analogy with the comic, of course, is that—in the sense demanded—there *is* nothing positive to be said. What was demanded was an account of what *fits* judgements which are appraisable *a priori* to be so. That is like asking what *fits* a situation to provoke our finding it comical. There are many things which might, in any particular case be said in response to a question so formulated. But they would be said by way of rationalisation or causal explanation of our reaction to the case. And when taken in a spirit analogous to that of the original demand concerning the *a priori*, the question would invite us to give a different kind of answer: one which would involve thinking of the locus of the comic as residing not in our actions, which might then be rationalised or causally explained in various ways, but in something constituted independently of them. Now, what has to be essayed by the non-cognitivist about necessity who grants the (partially) co-ordinate roles of '*a priori*' and 'necessary' is, exactly, a view of the distinction between *a priori* appraisable judgements and the others which *rejects* the original demand when taken in that spirit. The distinction between those two broad classes of judgement is not drawn *for* us, by virtue of characteristics of their content in

explaining which recourse to the notion of necessity might be demanded. We do not *track* the distinction between *a priori* and *a posteriori* judgement, any more than we track the distinction between the funny and the unfunny. Rather, both distinctions are constituted in aspects of our practices and reactions.

Well, if this is how the debate develops, then Hale is clearly justified in his misgivings about the global character of Caution. Once the inevitability, so to speak, of the *a priori* is accepted, there is going to be no possibility of a globally Cautious line on the susceptibility of judgements to *a priori* appraisal. And then the sort of deflationary stance on the relations between necessity and the *a priori* canvassed above is going to pre-empt the possibility of global Caution about necessity also.

I do not know that the debate might not develop differently. But it is clear, if it goes this way, that the analogy which the non-cognitivist needs is not with the Mirthless Man but with an ordinary human subject possessed of an active but eccentric sense of humour. What is needed is that ordinary 'first-order' disputes be possible between subjects with, as it were, different senses of *a priority*.

But here the very foundationalism to which traditional cognitivism is wedded may seem to promise to provide what non-cognitivism needs. According to the tradition, all recognition of necessity is based on recognition of *axioms* in the extended sense introduced above. And the inarticulate primitiveness of the associated epistemology—'But don't you see?'—invites the thought that, if intelligible disputes about axioms can be depicted at all, they may well display the sort of blankly unnegotiable character which is possible in the case of disagreements about comedy. That would not establish non-cognitivism about necessity (*a priority*). But it would re-establish a dialectical situation very much to its advantage.

Consider a couple of test cases. First, an old stager

(A): Nothing can simultaneously be red and green all over.

Let Hero have passed whatever tests we care to impose on a proper understanding of the ingredients in (A) and its syntactic composition. In particular, let his classifications of items as red and as green be perfectly normal. Let it be the case also that he seems to have a grasp of modal concepts, applying them, as we

take it, correctly and self-reliantly in a large class of standard
kinds of case and only erring, where he does, in ways which seem
intelligible. Let him have been appropriately responsive when
his errors have been pointed out; and let his basic (axiomatic)
judgements of necessity have been wholly orthodox—so far. But
now, thinking about (A) for the first time, he goes Cautious. He
is prepared to accept that (A) is almost certainly true—at any
rate, he can neither recall nor, he admits, devise a counter-
example. He admits, indeed, that he cannot at present visually
imagine a counterexample, or—in contrast with the case of the
surgically extended colour spectrum—make anything of the
thought that anyone else might do so. But his inclination is not to
regard (A) as appraisable *a priori*, merely by reflection and
imaginative 'experiment'. So he is not moved by his imagination
in this instance; he declines to accept that (A) is necessary.

No doubt if this happened, we should strongly suspect some
misunderstanding, sure to issue, sooner or later, in error in non-
modal contexts. Perhaps that is how such a case would, as a
matter of fact, always turn out. But that is not the way it goes
with Hero. He seems to be quite clear about the conditions a
relevant counterexample has to meet. And he goes on passing
all tests for a normal understanding of the expressions in (A) and
the significance of their mode of combination therein—except,
of course, the test of a proper modal sensitivity to (A). Simply: he
is not inclined to accept that (A) is subject to *a priori* appraisal.
What grounds can we give him for our belief that, on the
contrary, it is?

Or consider a less hackneyed example:

> (B): No pair of lines can be drawn on a plane surface in such
> a way as to give the appearances simultaneously (i) of
> being distinct, (ii) of being straight, and (iii) of intersecting
> at two apparently distinct points.

The *a priori* convincingness of (B) was presumably at the root of
the Kantian conviction that actual space necessarily has a
Euclidean geometry. But (B) describes *appearances*, not the
reality of actual space.[22] However (B) is, plausibly, totally *a priori*

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[22] But we cannot avoid the Kantian conclusion, it might be thought, if we have in
addition the Kantian conception of space as the form of outer sense; for then it *cannot* be
other than as it appears. This, however, is an error. The appearances to whose

convincing. I should say that the complex appearance excluded by (B) is necessarily impossible, and I should strongly suspect confusion or misunderstanding on the part of anyone who was not similarly inclined. But must that be so? Hero, anyway, isn't inclined to accept the necessity/*a priority* of (B). He grants, as usual, that he himself has never encountered a counter-exemplifying appearance, and cannot contrive to construct one; he grants that he cannot, at present anyway, visually imagine such an appearance, and cannot understand how anyone else might do so. He suspects that, very probably, (B) is true. But he is not inclined to believe that its truth can be appraised *a priori*. Perhaps he is impressed by the improbable phenomenology of some of M. C. Escher's drawings; perhaps he just fails to see why a claim about how we cannot be 'appeared to' should be assessable by (abortive) forays into the visual imagination. What do we *know* that he does not, such that, if he knew it, he would realise that *a priori* appraisal of (B) *is* appropriate? And *must* he, in his present state of (putative) ignorance, be led to error over any other matter than the *a priority* of (B)?[23]

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incompatibility (B) adverts are not the appearances of Euclidean characteristics: the appearance 'of being straight', for instance, is not, for the purposes of (B), the appearance of *being a Euclidean straight line*, but an appearance which Euclidean straight lines would share with e.g. Riemannian ones. See James Hopkins, 'Visual geometry', *Philosophical Review*, 3, 1973, pp. 3-34.

[23] There is a reply which may tempt the cognitivist at this point, but by which it would be better not to be tempted. The reply would reflect that both (A)—implicitly—and (B)—explicitly—are concerned with the impossibility of certain appearances; that the verdicts of the sensuous imagination, when it is exercised in a disciplined way, just are reliable indicators of the ways in which things can or cannot be made to appear to us; and hence that Hero, if he is not ignorant of that, ought to be willing to let his opinion of (A) and (B) be guided by his imagination—which is to be willing to appraise both claims *a priori*. But, now, if the verdicts of sensuous imagination, properly disciplined, *just are* reliable indicators of possible appearance—that is, if such is merely mankind's collective *experience* over the ages,—then it seems to emerge as a *contingency* that (A) and (B) are apt for appraisal (in the imagination and hence) *a priori*. But *any* type of statements which we can appraise at all *might* in this way have been appraisable *a priori*; however they are actually properly appraised, it *might* have been that the verdicts of orthodox appraisals were reliably anticipatable by the imagination. To defend the *a priority* of (A) and (B) in *this* way is, accordingly, to entitle the non-cognitivist to renegue on his earlier acceptance of the correlativity of the *a priori* and the necessary; non-cognitivism about necessity will no longer require non-cognitivism about the *a priori*. What the cognitivist needs, rather, is a defence of the *a priority* of the needed connections between disciplined imagination and possible appearance; and, superfluous to add, the defence has to ensure that it is cognition rather than, loosely, convention that underlies our acceptance of those conditions. How does such a defence run?

Let me try to tidy up a little. We suppose (i) that *a priori* judgement will play a part in the operation of any coherent system of belief, and (ii) that non-cognitivism about necessity had probably better grant a role for judgements of necessity as co-ordinate to (some) *a priori* judgements.[24] If supposition (i) is wrong, then global Caution about necessitated judgements is, after all, at the service of the non-cognitivist about necessity as Mirthlessness is at the service of non-cognitivism about the comic. At least, that is so provided Caution and Mirthlessness are suitably analogous to each other and suitably disanalogous, *pace* Hale, to anything available with respect to uncontroversially factual regions of discourse. If supposition (i) is right, on the other hand, and desideratum (ii) is in force, then the Cautious Man must give way to the *Eccentric Modaliser*—the role assumed by Hero in relation to examples (A) and (B). The non-cognitivist claim is now that the placing of a judgement on one side or the other of the *a priori/a posteriori* divide is never a purely cognitive accomplishment; however natural we find a particular placing, the Eccentric Modaliser may dissent without cognitive shortcoming. And the consequence of this claim, of course, if correct, is that the same goes for necessity.

IV

Plainly, this new claim by the non-cognitivist has no chance of being upheld unless the pressures that force an acknowledgement that the *a priori* cannot intelligibly be wholly dispensed with fail to specify *which* statements are to be appraised *a priori*. It may well be that the anti-Quinean argument of 'Inventing Logical Necessity' is non-specific in this needed way. On the face of it, it bids us recognise only that not *every* judgement to the effect that such-and-such a situation, described thus-and-so, is inconsistent with a particular theory-cum-logic, can be subject only to global-pragmatic appraisal—a different kind of appraisal, independent of any commitment to the system of theory-cum-logic in question, has to be possible if the idea of the pragmatic

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[24] Though, as remarked in note 23, that desideratum lapses if the aptitude of certain judgements for appraisal *a priori* is secured via supplementary *a posteriori* premisses.

success of that system is to have any operational content.[25] But no particular judgements of the relevant kind are, apparently, singled out by the argument as demanding this different kind of appraisal; any particular judgement of 'recalcitrance' may be cast into the holistic seas, as it were, so long as not all are. Such eclectic treatment may strike us as, in some important sense, *unprincipled*. But it is for the cognitivist to make something of that thought. His opponent's claim is precisely that such judgements are at bottom no more principled, so no less subject to eccentricity, than judgements about the comic.

Nevertheless non-cognitivism is, surely, over-reaching itself when it claims that a *prima facie* intelligible[26] Eccentricity is possible in the case of absolutely *any* judgement which we standardly regard as appraisable *a priori*. Suppose, for instance, that Hero has never previously considered an explicit formulation of the Law of Non-Contradiction. Is it possible for him intelligibly to respond as to the examples (A) and (B) above?

> Hm. I am not sure that this is something that I can form a competent opinion about just by reflection. I cannot, I grant, recall any actual example of a statement which was true simultaneously with its negation. And I must confess to some difficulty when I try to be clear how such a thing might occur. I suspect that it never does occur. Nevertheless, I do not see that this can be a matter for adjudication by *a priori* methods alone.

Why does this seem so bizarre—much more so, surely, than anything involved in the earlier examples? It can be no part of the explanation that an acceptance of the Law of Non-Contradiction is constitutive of rationality. What is so constitutive is a disposition to *play by* the Law, so to speak; and Hero has that, by hypothesis. An explicit acceptance is not required; there is no great absurdity in the idea of an otherwise rational subject who, for whatever reason, cannot be brought explicitly to acknowledge

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[25] It is, strictly, a further step to the conclusion that such a species of appraisal can only be *a priori*. The matter needs a much fuller treatment, but here my concern is only with the worst case, as it were, for non-cognitivism. If the argument of 'Inventing Logical Necessity' fails to establish the indispensability of *a priori* judgement, the non-cognitivist can simply revert to the dialectical situation in place at the end of section I.

[26] I shall omit the qualification in what follows.

a principle of logic which his practice actually observes. Besides, Hero *is* inclined to accept that what the Law says is true. What he reserves judgement about is, to stress, its *a priori* appraisability.

Still, I take it that Hero's stance is not, in this instance, intelligible. And the reason is surely this: for Hero to reserve judgement on the *a priori* appraisability of the Law while allowing that, in his own experience, counterexamples have not occurred, seems to demand his belief in some sort of *epistemic distance* between the truth of a proposition and the falsity of its negation—as if one might establish the truth-value of P and then need a further process in order to establish the truth-value of its negation, rather as one might establish the arithmetical value of $10987 + 3733$ and then need a further process to establish its identity or distinctness with 174×80. But that is absurd: negation is *given* as a function on truth-value; the acceptability of the Law of Non-Contradiction does not flow from some yet more abstract characterisation of the notion of negation—the negation of P is *defined* as true when P is false and false when P is true. To suppose that the truth-value of not-P may present an *a priori* open question when that of P has been settled is merely to display a failure to grasp that negation is, constitutively, a *truth-function.*

This opens a crack in the non-cognitivist strategy which seeks to build on the possibility of Eccentric Modalising. It is not always possible to reserve judgement about *a priori* appraisability in a way that is both *prima facie* free of cognitive shortcoming and consistent with a proper grasp of all relevant concepts. Non-Contradiction is an exception; a hesitation about its *a priori* appraisability betrays, *modulo* a proper understanding of the other concepts involved, an innocence of what negation *is*.

Now, how wide is the crack? Consider the case of formal proof. When Hero assumes the role of Eccentric Modaliser, he is liable to respond to any particular proof as the Cautious Man responds to every such proof.[27] So the story will be that he will agree with us about all empirical features of the construction and will give every sign of a normal understanding of the terms

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[27] Will he also be liable to err—as we should view it—on the side of generosity? The analogy with comedy would suggest so. But I do not think that the dialectical utility of Eccentricity would be impaired if it always took the form of a local Caution, as it were. In any case, I shall not pursue the matter here.

of art—'induction step', 'modus ponens inference', etc.,—by means of which we describe it. He will agree that it satisfies standard criteria for being a proof, and why. He will also share whatever we regard as the essential phenomenology of ratifying the particular proof: to feel the same imaginative pushes and pulls as we do, for instance, when he tries to envisage how the criteria to which its steps conform might turn out to be misbegotten, or how the particular result to which the proof has led us might not be obtainable on another occasion. Nor is his Eccentricity to be motivated by the possibility that there may yet be, by standards we already accept, some unnoticed error—it is not that he wants the proof to be further checked over, or that he has become obsessed with the essential fallibility of the faculties which such a check will exercise. The essential feature of both Eccentricity and Caution about a putative proof is that—save for an acknowledgement of whatever is imaginatively distinctive about it—Hero is disposed, in either guise, to make all and only judgements about the construction that we are disposed to make about what we consider to be properly conducted, rigorously controlled *experiments*.

Such judgements will include that we started here, carried out—correctly, so far as we can tell—certain operations as specified, and the upshot was this; that, probably, the particular upshot is always obtainable when the specified operations are correctly carried out on the original starting point; that there is, however, no justified route to that belief which is purely reflective and *a priori*; and that if there is a sense in which the upshot *must* be obtainable so long as the process is executed properly, it is at most a *causal* necessity which is involved. In brief, the Eccentric about a particular proof *is* not disposed to regard the Corresponding Descriptive Conditional[28] as *a priori* appraisable. The claim that there is always the option of an Eccentric response to any particular purported proof is the claim that it is always possible, without betraying any misunderstanding or cognitive shortcoming, to respond to any particular proof, (though not all), as if it were an experiment.

[28] The 'Corresponding Descriptive Conditional' for a particular proof should not be confused with its corresponding conditional, ordinarily so-called. See *Wittgenstein on the Foundations of Mathematics* pp. 452 and following; compare 'Inventing Logical Necessity' pp. 203-4; and Hale, this volume, p. 177.

But is this true? Wittgenstein repeatedly turns to the question of the relations and contrasts between proof and experiment in his later writings about mathematics,[29] and we can learn from his discussion at this point. Consider the case of a moderately complex arithmetical calculation—multiplying 14563 by 7621, for instance. And suppose that, for whatever reason[30], I have an interest in the empirical proposition:

> If I multiply 14563 by 7621 and, on the basis of a number of checks, am completely satisfied with all the steps in my calculation, the result I will have obtained will be 110984623.

Clearly, it is possible for me to confirm or disconfirm this proposition by an appropriately careful performance of the calculation; and the calculation, in this context, does assume the role of an experiment. Competently running the experiment requires me to make a large number of perceptual judgements and, interacting with them, a large number of applications of the rules of multiplication and addition. The question is therefore: what *other* kind of judgement—apart from the judgement that it is a proof that $7621(14563) = 110984623$—will be made by someone who runs the calculation not as an experiment but in a normal arithmetical context? Well, plainly there is a further kind of judgement which my competently running the experiment need not involve—though I shall very likely find myself making such judgements anyway—but which ratifying the construction as a proof has to involve: specifically, judgements to the effect that the relations between the various consecutive steps in the calculation are *internal*,—that *that* number is what *has* to result when *that* operation is performed on *those* numbers. The crucial question is therefore: what is the epistemology of these judgements?

Wittgenstein's suggestion, if I read him right, proceeds in two stages. First, he wishes to urge a certain view about what happens when a proof is ratified. Ratifying a process as a proof is not a matter of recognising, in the light of successive special

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[29] For detailed references, see *Wittgenstein on the Foundations of Mathematics* p. 318. Those to the *Remarks on the Foundations of Mathematics* are to the 2nd edition.

[30] Perhaps I am recovering after neurosurgery and, knowing that that is indeed the proper result (my calculator gives it), I want to test my ability to calculate.

operations of the mind and independently of any general conviction, that each step is bound by internal relation to the next. It is a matter of making ordinary empirical judgements about what happens in it, on to which is then *superimposed* the conviction that processes of the relevant kind move only via steps which are sustained by internal relations, so that each step constitutes a result which *has* to issue if the relevant operation is properly performed on the relevant basis. Second, the super-imposed conviction is not, properly speaking, something we *know*:

> ... I want to say that we have no right to say: though we may be in doubt about the correct reverse of e.g. a long word, still we *know* that the word has only *one* reverse. Yes, but if it is supposed to be a reverse in this sense, there can be only one. Does in this sense here mean by these rules or with this physiognomy? In the first case the proposition would be tautological; in the second, it need not be true.[31]

What is the point of the play with 'tautological'?[32] That the superimposed conviction is not the product of any kind of *cognitive* accomplishment; it is merely the articulation of the truism that we are here working with rules for which variation in output, without variation in input, *is not permitted*. We cannot, conclusively and beyond any shadow of a doubt, exclude the possibility that something other than what we are currently satisfied is the proper reverse of 'anthropomorphism' may come to seem to be the reverse of that word, and that we shall marvel at our inability to see our error before. But we *can* be completely confident in excluding the possibility that the word may in fact have *two* reverses. And no *recognitional* feat is needed to support such confidence—otherwise, the capacities it called for would no doubt be fallible too. Our confidence is based only on the fact that we have so fixed the notion of reversal that it constitutes a *function*—it is a rule of our practice not to accept distinct sequences of letters as reverses of the same word.

[31] *Remarks on the Foundations of Mathematics* 2nd ed. III 50.
[32] *tautologisch.*

On this view, then, Eccentricity is precluded as a response to proofs in general for the very same reason that it is precluded as a response to the Law of Non-Contradiction: it involves failure to treat as functions operations which are explicitly fixed as such. There is no hiatus between an understanding of arithmetical addition, for instance, and the recognition that it is a function—rather, it is part of the explanation of the concept of addition that no pair of numbers has more than one sum. Not to know that is not to know what adding is—there is no residual competence which might amount, near enough, to an understanding of addition, from which one might advance to a grasp of its status as a function by a cognitive move.

Eccentricity, then, is not an option with respect to any proof each ingredient step of which is the application of an operation which is (i) a function and (ii) such that there is no gap between knowing which operation it is and knowing that it is a function. So it is not an option with respect to arithmetical calculation, for instance, or to natural deductions in sentential logic in which every step is an application of a rule—like *&-Intro.*, or *modus ponens*—in which the conclusion is determined as a function of the premisses. There is space for a sceptical doubt whether a particular application of e.g. *&-Intro.* is correct—a doubt based on our intellectual and cognitive fallibility. But there is no space for doubt whether correct applications of the rule to the same premisses can vary in output—no space for the idea that it is an *a posteriori* matter whether or not they do. We have left no such space.

What about inferences rules, like *V-Intro* and *reductio ad absurdum*, in which there are or may be a variety of admissible conclusions from a given set of premisses? Even here, where the typographic identity of any admissible conclusion is not determined as a function of that of the premisses, there is still something which is: namely, a *condition* which any admissible conclusion has to meet. And there is, again, no distance between knowing what rule of inference is involved and knowing what condition this is—so no space for the idea that it might somehow be an *a posteriori* matter what the condition was in a particular inferential context, or whether it might somehow vary between contexts in which the relevant premisses were the same. Hence the Eccentric notion, that there was something experimental

about a particular application of such a rule, would have to crystallise around the judgement whether a particular conclusion met the condition in question. But under what circumstances could that be an *a posteriori* matter? Only if even after the identity of the proposed conclusion was settled, the judgement that the condition was met could properly turn on further, *a posteriori* information. And that is not a possibility here. For the condition concerns, constitutively, the typography of the conclusion; and whether the conclusion has the sort of typography demanded turns only on, precisely, its *identity*. Not to know that is not to know with what kind of objects formal rules of inference are essentially concerned.

Presumably it will be similar with formal proof of whatever kind. To think of a step in such a proof as if it were a step in an experiment will involve thinking that it is only courtesy of favourable background circumstances that proper execution of the step produces the result it does; that the repeatability of the result, when the starting point is the same and the step is executed properly, is, if guaranteed at all, guaranteed only causally. And this thought is simply not a competent option—not consistent with a grasp of the germane concepts—in either of the two kinds of case considered. In neither can the repeatability of the result be an *a posteriori* matter. For in the first, the move from starting point to result is the single application of an operation which is explicitly introduced as a function; and in the second, the question is whether the typography of the result—something which is an essential characteristic of it and will be viewed as such by anyone who understands what kinds of item formal proofs move among—satisfies a typographical condition, itself determined as the value of a function on the starting point. To suppose that the connection between starting point and result can only be determined *a posteriori* must therefore betray, it seems, a misunderstanding either of the nature of the step—a failure to grasp that it is the application of an explicit function—or of the character of the objects which make up its range.

It is another question, of course, whether these reflections, even if correct in the case of formal proof, can be extended to proofs in general. The immediate issue concerns how much damage they do to the non-cognitivist enterprise. *Prima facie*, the

damage is considerable. We seem to have shown that in an important class of judgements—those our acceptance of which constitutes the ratification of formal proofs—*a priori* appraisability cannot be disputed without evincing either misunderstanding of relevant concepts or cognitive shortcoming in relation to empirical matters. So do not these judgements satisfy the originally proposed condition? And if they do, has not the cognitivist made his point? For our assumption has been that the non-cognitivist ought to have no quarrel with the application of 'necessary' to (the great majority of) *a priori* ratifiable judgements; so cognitivism about *a priori* appraisability is going to carry cognitivism about necessity in its train.

On the other hand, this result is delivered by an epistemology of formal proof whose ingredients are nothing but ordinary scrutiny of an actual—or imagined—construction and knowledge of certain originally constitutive features of concepts. It is a necessary truth that the reverse of 'anthropomorphism' is 'msihpromoporhtna'; but it is a truth to be recognised by straightforward operations on paper or in the head, onto which we superimpose a constraint, that reversal of a word is a function, ignorance of which is not compatible with knowing what reversal is. We recognise the necessary truth in a quite unmysterious way by executing a series of routine manipulations to the best of our ability and seeing what we get. If we can find no error, then—since it is integral to our concept of reversal that only one outcome is possible—we will probably identify that result with the only one which it is possible to get. That only one result is possible, however, is not something we come to recognise in the light of some prior idea of the systematic reversal of a linear array of symbols, but something which a satisfactory explanation of the idea would have to make explicit. It is, so to speak, an epistemically primitive feature of the concept. So the epistemology of necessary truths for which this account is appropriate is a deflationary, almost unintellectual one: in essentials, we so explicitly fix our concepts that carrying through certain procedures and seeing what happens give us (defeasible) reason for necessitated judgements. Epistemically primitive features of concepts put us in the market for internal relations; and experience—if I may extend the term to include our awareness of the outcome of routines executed in the imagination

—then prompts a decision about the specific form those relations take.

It seems to me, therefore, that if an account along these lines turned out to be widely applicable, the non-cognitivist could acknowledge a technical defeat with something like equanimity. For the driving force behind non-cognitivism as a philosophy of modality has always been the belief that the cost of cognitivism must be epistemological extravagance or epistemological head-burying. It is utterly obscure, for instance, what could satisfyingly be said by way of elaboration of the idea of an *intuitional* contact with modal states of affairs. More generally, it is simply *prima facie* baffling how knowledge of necessities can have any place in a broadly empiricist world-view. Experience, we trust, can tell us what is the case; but how can it tell us what *must* be the case? The familiar, traditional response has been to cast about for a type of state of affairs—conventions, for instance—which might somehow constitute empirically reachable necessities. But there is no need for such a response in cases where the present proposal is apt, and no need for play with intuition or the epistemologically *sui generis*. Experience—and thought-experiment—*can* teach us e.g. what necessarily happens when a certain process is properly executed, either in reality or in thought, provided we have fixed it that *something* necessarily happens and provided we can tell empirically what actually happens when the process is run in a particular case.[33]

These ideas need much more detail and illustration than I can attempt here. But my purpose is not primarily to recommend the positive philosophy of necessity which they hold in prospect. Rather, I have wanted to point out one kind of apparent problem case for the non-cognitivist strategy based on Eccentricity, and then to suggest how it is not really a problem case—if one remembers why non-cognitivism seemed attractive in the first place.

So how, in conclusion, does the debate now stand? Matters

[33] This proposal actually marries nicely with thoughts Hale bruits in his note 16, where—responding to a dilemma developed in *Wittgenstein on the Foundations of Mathematics* pp. 337–41—he emphasises the need for any plausible epistemology of proof and calculation sharply to separate the question of how we come to be 'in the market' for recognition of a necessity from the question how a particular proof enables us to accomplish it.

are best summarised in the form of a dilemma for cognitivism: (a) If—what hardly seems likely, when one reviews cases like the colour-incompatibility and phenomenal-geometry examples presented above—the epistemology of *all* necessitated judgements can be accounted for within the bounds laid down by the ideas just sketched, then cognitivism wins a Pyrrhic victory. Necessity will be cognitive, by the lights of the proposed condition, but its epistemology will be, in effect, empirico-conventional. The spirit, if not the detail, of the correct account will be one with that which informs the empirical-knowledge-cum-policy proposal to which Caution/Eccentricity is harnessed. The difference will be only that, roughly, knowledge of the elements of convention which spawn necessity will be an explicit part of understanding the concepts in terms of which proofs e.g. are empirically assessed, rather than a matter of participating in a policy of which someone who is competent in the empirical appraisal of proofs could be entirely innocent. (b) If a significant class of necessitated judgements elude any explanation along the lines just sketched, then—for anything we have so far seen—the non-cognitivist challenge based on Eccentricity will remain intact for such cases. In particular, the idea of a positive account of our acceptance of such necessities in terms of pursuit of a policy has, if the reflections of section II were sound, survived Hale's attempt to expose it as unworkable.[34]

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[34] I am grateful to Bob Hale for very helpful discussion of this material in draft.