

Bob Hale

Essence and existence

Resumen: *Por una teoría esencialista de la modalidad, entiendo una teoría que busca explicar la necesidad y posibilidad metafísicas como algo que se deriva de la esencia o naturaleza de las cosas. La teoría que defiendo en Necessary Beings afirma que es necesario que p si y solo si (y porque) es verdadero en virtud de la naturaleza de algunas cosas que p , y es posible que p si y solo si no hay cosa alguna cuya naturaleza excluya que sea verdadero que p . La teoría enfrenta problemas cuando es combinada, como lo es en Necessary Beings, con una versión fuerte de contingentismo, el cual sostiene que algunas cosas, y sus naturalezas existen solo contingentemente, y con la postura, la cual también defendí, de que la lógica modal de las modalidades metafísicas absolutas es S5. Aunque buena parte de la respuesta a estos problemas aún se sostiene, una parte importante de ella necesita una revisión significativa. Este artículo explica algunos de los principales problemas que la teoría enfrenta, presenta una defensa mejorada de mi solución a algunos de ellos, y provee una nueva y mejor solución a aquella parte del problema donde una revisión significativa es requerida.*

Palabras clave: *Esencia. Modalidad metafísica. Contingencia. Existencia.*

Abstract: *By an essentialist theory of modality, I mean a theory which seeks to explain metaphysical necessity and possibility as deriving from the essence or nature of things. The theory I defended in Necessary Beings asserts that it is necessary that p if and only if (and because) it is true in virtue of the nature of some things that p , and possible that p if and only if there are no things whose natures preclude it being true that p . The theory faces problems when it is combined,*

as it is in Necessary Beings, with a strong form of contingentism which holds that some things, and their natures, exist only contingently, and with the view, for which I also argued there, that the modal logic of absolute metaphysical modalities is S5. While much of the solution to these problems I proposed can be upheld, an important part of it needs significant revision. This paper explains some of the main problems confronting this theory, presents an improved defence of my solution to some of them, and provides a new and better solution for that part of the problem where significant revision is needed.

Key Words: *Essence. Metaphysical modality. Contingency. Existence.*

1. Essentialist theories of metaphysical necessity

1.1. The general form of an essentialist theory

The fundamental questions in the philosophy of necessity and possibility are two, one metaphysical, the other epistemological:¹

- (1) What is the source or ground of necessities and possibilities?
- (2) How may we know what is necessary and what is possible?

An essentialist theory answers the first, metaphysical, question: what is necessary is what is true in virtue of the *nature* or *essence* of things, and what is possible is what is not ruled out by the natures of things (i.e. what is not false in virtue of the nature of things). Using $\Box p$ to mean ‘it is

true in virtue of the nature of x that p , and \Box, \Diamond to express metaphysical necessity and possibility, we may provisionally state the general theory as:

$$\begin{aligned}\Box p &=_{\text{Df.}} \exists x_1 \dots x_n \Box x_1 \dots x_n p. \\ \Diamond p &=_{\text{Df.}} \neg \exists x_1 \dots x_n \Box x_1 \dots x_n \neg p.^2\end{aligned}$$

This statement is neutral on the answers to some further questions, different answers to which will give rise to significantly different essentialist theories. Perhaps the most important of these questions concerns the logical form of the most basic claims made by the theory –claims of the form ‘it is true in virtue of the nature of x that p ’, which we are abbreviating to $\Box_x p$. The sole assumption we have thus far made about the form of these claims is that they involve two variables, x and p . The latter varies over propositions, the former over things. We’ve so far said nothing about which things are the admissible values of this variable, i.e. which things are being taken to have natures, in some interpretation of that phrase. So that is one question: What, more exactly, does x vary over?

However, there is another, quite separate, question about the interpretation of ‘It is true in virtue of the nature of... that ___’, viz. Does it have further logical structure (i.e. significant syntactic structure)? In particular, should it be understood as formed by means of a binary operator ‘___ in virtue of...’ taking a proposition as its first argument and a term as its second, with the first argument in our case being itself formed by applying the truth-operator to a sentence and the second by applying the term-forming operator ‘the nature of...’? This would be to interpret our basic essentialist claims as having the structure:

(It is true that (p)) in virtue of (the nature of (x)).

It may seem very natural to interpret our basic claims as so structured. I shall call this the *structured interpretation*. However, there is clearly also an alternative, *austere interpretation*, on which our basic claims have no such complex internal structure, and on which we should regard ‘It-is-true-in-virtue-of-the-nature-of... that ___’ as an unbreakable binary operator, with one

argument-place to be filled by a singular term (or variable) for a thing and the other to be filled by a sentence.³

1.2. Some questions and problems

1.2.1. Contingently existing individuals

Some of the questions a proponent of an essentialist theory faces do not depend upon interpreting ‘It is true in virtue of the nature of... that ___’ as possessing significant internal structure, but arise equally if one takes it to be logically or semantically un-structured.

Most obviously, on either interpretation we must face the question: What does x in $\Box_x p$ vary over? This is tantamount to asking: What things have natures? Or at least, it is so, provided that we do not construe that question as presupposing that natures are entities over and above the things which have them –to avoid this unwanted implication, we might prefer to ask: What things x are such that $\Box_x p$ is significant?

English grammar requires that the x -place in $\Box_x p$ be filled by a noun or noun-phrase. Thus admissible replacements for x include *common nouns*, both singular and plural, as in:

It is true in virtue of the nature of *man* that man is an animal.

It is true in virtue of the nature of *whales* that whales are mammals.

It is true in virtue of the nature of *water* that water is a compound.

We may also have *proper nouns*, i.e. proper names, as in:

It is true in virtue of the nature of *Aristotle* that Aristotle is a man

More generally, the x -place can be filled by any singular term, at least as far as grammar goes.

The x -place cannot be filled by expressions of any other syntactic type –it cannot be filled, for example, by any predicate, or relational or functional expression; nor can it be filled by conjunctions such as ‘and’, ‘or’, ‘if’, etc. If, as some of us do, we think of expressions of these types as nevertheless standing for entities, we shall need to employ nouns or other nominalizations corresponding to these non-nominal expressions. We could then have things like:

It is true in virtue of the nature of *being wise* that anything wise is animate.

It is true in virtue of the nature of *addition* that $a+b=b+a$.

It is true in virtue of the nature of *disjunction* that if p is true, so is $p \cup q$.

If, as I have suggested, the x -place may be filled by a proper name of an individual, such as ‘Aristotle’, then, given the quite widely held view that the existence of such individuals is often a contingent matter, there is an obvious further question to be faced: Does the truth of such basic essentialist claims require the existence of the object whose name occupies the x -place? Does our statement about Aristotle’s nature entail Aristotle’s existence? Connected with this question there is a potential problem. For according to the essentialist theory as so far formulated, what is true in virtue of a thing’s nature is necessarily true, so that we may pass by the theory from our statement about Aristotle’s nature to

Necessarily Aristotle is a man.

But it seems that Aristotle cannot be a man if he does not exist, so that this in turn entails

Necessarily Aristotle exists

which runs counter to the widely held view that his existence is a contingent matter, i.e. that

Aristotle might never have existed.

Thus the essentialist theory apparently leads to the conclusion, unpalatable to believers in contingently existing individuals, that Aristotle is a necessary being. Before I discuss how this problem might be solved, I want to introduce another problem which should not be confused with our first problem.

1.2.2. *Contingently existing natures*

If we adopt the structured interpretation of basic essentialist claims, we are –on the face of it– taking the nature of a thing x to be a further entity, distinct from x itself. But then how is a thing’s nature related to the thing itself? In particular, does the existence of x ’s nature depend upon x ’s existence?

How one answers this question may depend upon what kind of entity one takes a thing’s nature to be. One might, for example, take x ’s nature to be the conjunction of x ’s essential properties, and so a complex property. Since the existence of properties is not usually thought to depend on that of their instances, and may, on a platonistic view, be independent of their being instantiated at all, one might hold that x ’s nature will not in general require x ’s existence. One might hold this view, even in case x is a particular individual, such as Aristotle. But there is a complication here. If the properties composing Aristotle’s nature or essence are purely general, there is no reason why they should require either his existence or that of any other particular individual. But in the case of individuals like Aristotle, we can distinguish a strong version of essentialism and a weaker one. On the weaker version, Aristotle’s nature is indeed to be specified by answering the question: *What is it to be Aristotle?* But the answer can be given by specifying the purely general properties essential to Aristotle, such as being a man. On the stronger version, the question: *What is it to be Aristotle?* is more demanding. An answer is required to say not just what kind of thing Aristotle is, but also what individuates him, or distinguishes him from every other individual of that kind. If we set aside, as more or less patently inadequate, any answer which appeals to haecceities or primitive ‘thisnesses’, we are left

with answers which individuate Aristotle by his relation to other particular individuals –such as his having originated from such and such parents, etc. But properties like *being the son of x and y or coming from ovum o and sperm s* are not purely general; they involve certain particular objects, and so presuppose the existence of those objects. If their existence is a contingent matter, then so will be the existence of Aristotle’s nature, even if it doesn’t require Aristotle’s existence.

That certain natures may exist only contingently poses a new problem for the essentialist theory. As we have seen, the theory says that it is necessary that p iff there are x_1, \dots, x_n such that it is true in virtue of the natures of x_1, \dots, x_n that p , and possible that p if there are no x_1, \dots, x_n such that it is true in virtue of the natures of x_1, \dots, x_n that $\Box p$. But if some of x_1, \dots, x_n might not have existed, then –on the assumptions we are currently entertaining– their natures might not have existed either, and in the absence of further natures requiring the truth of p , it might have been false that p , so that it would not have been necessary that p . But if there are possible circumstances in which p would be false, it is not *absolutely* necessary that p . And if we assume that there might have existed individuals other than (and perhaps in addition to) those which actually exist, so that there might have been some (additional) natures over and above those which actually exist, then there will be a matching problem about possibility. For while the truth of p may not be ruled out by the natures of any actually existing things, so that *as things are*, it is possible that p , there might have existed some things whose natures require p ’s falsehood, so that it is not *absolutely* possible that p .

2. Essence, necessity, and non-existence

In what follows, I shall try to explain how I think these problems are best solved⁴ In this section, I shall focus on the first problem –the problem of contingently existing individuals, as opposed to, and in so far as it is separable from, the problem posed by the fact that the contingent

existence of individuals threatens to bring with it the contingent existence of their natures or essences, and so to subvert any essentialist explanation of absolute necessity and possibility in terms of un-modalised quantification over the putative sources of necessity.

2.1. The troublesome argument

As we saw, the problem arises because an essentialist theory as described allows us to pass from

- (a) It is true in virtue of the nature of Aristotle that Aristotle is a man
To
(b) Necessarily Aristotle is a man
which, we may suppose, entails
(c) Necessarily Aristotle exists.

But this conflicts head on with the widely held view that many actually existing individuals, such as Aristotle, might not have existed.

The troublesome argument can be more fully and explicitly formulated like this:

1	(1) $\Box_{Aristotle}$ Aristotle is a man	assn
2	(2) $\Box px (\Box_x p \rightarrow \Box p)$	assn
1, 2	(3) \Box Aristotle is a man.	from 1, 2
4	(4) $\Box \forall \phi \forall x (\phi x \rightarrow x \text{ exists})$	assn
4	(5) $\Box (\text{Aristotle is a man} \rightarrow \text{Aristotle exists})$	from 4
1, 2, 4	(6) \Box Aristotle exists	from 3, 5.

(3) is inferred from (1) and (2) by two steps of \forall -elimination and *modus ponens*.⁵ from (4) by steps of \Box -elimination, \forall -elimination and \Box -introduction. The undischarged premises are (1), (2) and (4). Various doubts might be raised.

2.1.1. Premise (4)

This is perhaps the most obviously questionable premise. It asserts that no predication concerning a particular object can be true unless the object which is the subject of the predication exists. It may be objected that many logically complex predications do not require the existence of referents for names occurring in them –for

example, it may be held that negations and disjunctions embedding an atomic predication Fa (e.g. $\neg Fa$, $Fa \vee \exists x\neg Fx$) do not require a's existence. Thus (4) surely needs to be restricted.

A restriction to atomic predications would be much more plausible (but is probably stronger than is required, since conjunctions such $Fa \wedge Ga$ surely require a's existence, if at least one of F, G is atomic). But even such a severe restriction would not block our argument, since 'Aristotle is a man' is plausibly taken to be atomic.

One might also object to (4), even for atomic predications, if one adopted a Meinongian or similar view on which some objects do not exist. Thus Meinong, or Priest, for example, may insist that 'Sherlock Holmes was a man' is true, even though the famous sleuth never existed. But we need not consider this further here, since even the most ardent Meinongians and fellow-travellers will not wish to claim that 'ordinary' concrete objects such as Aristotle need not exist for there to be atomic truths about them.

2.1.2. Premise (2)

On the face of it, rejecting this is not an option for the essentialist, since it amounts to scrapping his proposed explanation of metaphysical necessity in terms of essence. However, there is a complication. Some essentialists would deny that statements of a thing's essential properties are properly expressed by simple necessitations. (5) According to the essentialist, x 's nature or essence comprises what it is to be x , so that the propositions true (solely) in virtue of x 's nature must indeed be true, if x is to be at all. However, whilst we can re-express this point by saying that (1) entails:

(3a) Aristotle is necessarily a man

this last is by no means equivalent to (3) –the crucial difference being precisely that in asserting (3a), one is not committing oneself to Aristotle's necessary existence, as one plausibly is taken to do, if one asserts (3).

As far as it goes, this appears to me to be correct. But it leaves us with a problem, if we aspire

to preserve, not just a viable form of essentialism (in the more familiar sense of a position according to which a thing's properties may be divided into those which belong to it essentially, and those which are merely accidental), but an essentialist explanation of metaphysical necessities, which we are taking to expressible by means of an exterior \Box , functioning as a propositional operator. If that project is to survive, we need to locate a proposition of the form $\Box(\dots a \dots)$ concerning Aristotle for which the truth of (1) is sufficient. When we see how to do that, we shall be able to accommodate misgivings about the logical form of essentialist claims whilst preserving an essentialist explanation of *de re* metaphysical necessities.

2.1.3. Questionable \forall -eliminations

Our argument relies on two (implicit) steps of -elimination at which we should look askance –from $\forall x(\Box p \rightarrow p)$ to $\Box_{Aristotle} P \rightarrow \Box p$ between (2) and (3), and from $\forall x(\phi x \rightarrow x \text{ exists})$ to $\phi(Aristotle) \rightarrow Aristotle \text{ exists}$ between (4) and (5). These steps are, of course, classically valid. But is the assumption of classical quantification theory safe, in the present context? Well, no –it is anything but safe. For the context is one in which we are assuming that some objects exist only contingently. But in even the weakest normal quantified modal logic, if quantification is classical, we can prove:

Converse Barcan: $\Box \forall x \phi x \rightarrow \forall x \Box \phi x$

and in particular, we can prove that $\Box \forall x \exists y x=y \rightarrow \forall x \Box \exists y x=y$, so that since the antecedent is a theorem, so is the consequent. But that says, on an obvious reading, that every object necessarily exists.

Cutting what could be a somewhat longer story short, the best way for a contingentist to solve this problem is to insist that the underlying quantification logic should be free –more specifically, the sensible view is that we should adopt the minimum departure from classical logic, i.e. a *negative free logic*, in which the -elimination and the -introduction rules require a supplementary premise which ensures, in one way or another, that the instantial term has reference.

This might be accomplished by the use of a primitive existence predicate $E!$, or by requiring a supplementary atomic premise embedding the instantial term –the details aren't important here.

This doesn't yet settle the matter. As it stands, our argument is now invalid, but we need to ask whether there is a suitable supplementary premise to which we can appeal to justify the questionable steps of \forall -elimination. But now there is a problem. For any such *undischarged* additional premise will be non-modal –it will be, say, an atomic predication ' $\varphi(\text{Aristotle})$ '. But then, since the step of \Box -introduction that gets us to (5) will rely on it, that step will be invalidated. There remains only one further possibility for saving the argument, and that is to maintain that a suitable premise can be inferred from one of the existing undischarged premises, i.e. in effect, from (1). This, at last, takes us to the heart of the matter.

2.1.4. Premise (1)

Whether or not (1) entails the modal proposition (3), or some other proposition of the form $\Box(\dots a \dots)$ concerning Aristotle, it appears indisputable that it entails the non-modal proposition (3 minus) that Aristotle is a man. For surely whatever is true in virtue of something's nature must be at least *true* –true *simpliciter*. But then why can't (3 minus) serve as the required atomic existence entailing premise for the subsequent (suppressed) steps of \forall -elimination? Well, it should be obvious that this simply relocates our question exactly where it should be. The suppressed step of \Box -introduction between (4) and (5) already relies on (1) as a premise. So there was already a question to be faced, whether (1) is a suitable premise after all. In essence, the idea behind the rule of \Box -introduction is that we may necessitate the conclusion of an inference, provided that that inference depends only upon undischarged premises which hold true of necessity. In the case of the weakest modal logics, this means that the undischarged premises must themselves be necessitated –so that we may infer $\Box A$ from B_1, \dots, B_n provided that each B_i is of the form $\Box C$. In stronger modal logics, the undischarged premises B_1, \dots, B_n of the subsidiary

deduction may be of other forms, such as $\Diamond C$, $\neg\Box C$, etc., but only because in the context of the stronger logic, these are equivalent to their necessitations. But now the crucial question for our argument is whether propositions of the form $\Box_x p$ are admissible. Here there is a danger of being misled by our otherwise useful notation for 'it is true in virtue of the nature of x that p '. Our operator *looks* like a kind of necessity operator – but we should not assume it is one.

Since our underlying modal logic of absolute necessity is –at least in my view– the strongest normal modal logic S5,⁶ it would suffice, to ensure the availability of (1) as a premise in the subsidiary deduction for the required \Box -introduction step, that (1) be true only if its own necessitation (i.e. $\Box\Box_{\text{Aristotle}}$ Aristotle is a man) is so. But that is at least very plausible –for surely if something has a certain nature, it could not have had a *different* nature. If, for example, Aristotle is, but need not have been, by nature a man, then it is possible that he should not have been a man at all –being a man cannot have been one of his *essential* properties!

Does this settle our issue? Well, surely not. It merely serves to direct attention to what should have been the target of our doubts all along. For if (1) really entails (3 minus), and the latter entails Aristotle's existence, then by the transitivity of entailment, (1) entails that Aristotle exists –so that it will be true in virtue of Aristotle's nature that he exists; his essence will *entail* his *existence*! But that is surely wrong! The fact that it is (part) of Aristotle's essence to be a man should no more entail that Aristotle exists than the fact that it is (part) of the essence of men to be animals should entail that there are men.

2.2. Essence, non-existence, and transcendence

If that is right, x 's existence is never –or at least, is not in general– part of x 's essence. We might put this by saying that correct statements of essence are not existence-entailing. I shall develop a solution based this idea in the sequel. First, I want to say a little about a quite different way of implementing it.

2.2.1 Fine's puzzle and his unworldly solution

Something very close to this claim is made by Kit Fine in his very interesting paper "Necessity and Non-Existence" (Fine, 2005). In that paper, Fine discusses a puzzling argument rather closely to the one we have been examining:

- 1 (1) It is necessary that Socrates is a man
- 2 (2) It is possible that Socrates does not exist.
- 1, 2 (3) It is possible that Socrates is a man and does not exist.

The argument is an instance of the valid form $\Box p, \Diamond q \vdash \Diamond(p \wedge q)$. Yet it appears that the premises are both true but the conclusion false. Dismissing various alternative solutions to the puzzle, Fine argues that –by analogy with the distinction that may be drawn between *sempiternal* and *eternal* truths (the former being tensed sentences which are always true, the latter tenseless sentences which a true simpliciter)– we should distinguish between *wordly* and *unwordly* truths. He introduces this distinction as follows:

Just as one may distinguish between tensed and tenseless sentences according to whether they can properly be said to be true or false at a time, so one can draw a distinction between *wordly* and *unwordly* sentences according to whether they can properly be said to be true or false in a world. And just as one may draw a distinction between eternal and sempiternal truths according as to whether they are true regardless of the time or whatever the time, so one can draw a distinction between *transcendental* and *necessary* truths according as to whether they are true regardless of the circumstances or whatever the circumstances. (*Op. cit.*, 324)

As examples of wordly and unwordly sentences respectively, Fine gives 'Donkeys bray' and 'Socrates is self-identical'. The first of these, he thinks, is true, but might not have been so –it is true in our world, but there are worlds in which it is false. The second, however –or so Fine claims– cannot properly be said to be true in a world at all. Thus it is not necessary, if by that we mean 'true in all worlds' –rather,

it is a transcendental truth– true 'regardless of the circumstances'. This is to be contrasted, he thinks, with a sentence such as 'Either Socrates exists or Socrates doesn't exist', which is (merely) a necessary truth, because true in all worlds, not a transcendental truth, true regardless of the circumstances.

The application of these ideas in Fine's solution to the puzzle involves a correlated distinction he draws between wordly and unwordly predicates. Thus in his view 'brays' is a wordly predicate, and so –crucially for his solution– are 'exists' and 'does not exist', whereas 'is self-identical' is unwordly, and so –again crucially for his solution– is 'is a man'. Thus 'Socrates is a man' is an unwordly sentence, but 'Socrates does not exist' is wordly. The crucial question for the puzzle concerns what kind of truths the more complex sentences composing the premises and conclusion of the puzzling argument should be taken to express.

Fine claims that the wordly/unwordly distinction gives rise to three different grades of necessity and possibility, which he calls *unextended*, *extended*, and *superextended*. *Unextended* necessity and possibility apply only to *wordly* sentences. Thus:

It is possible that Socrates does not exist

It is necessary that Socrates exists or does not exist express an unextended possibility and an unextended necessity. But when we apply the notions to unwordly sentences, they are extended, so that:

It is possible that Socrates is self-identical

It is necessary that Socrates is a man express an extended possibility and an extended necessity. Finally, the notions are used in a superextended way when applied to compounds having both wordly and unwordly components, so that:

It is possible that Socrates is a man and that he does not exist expresses a superextended possibility.

Fine has an interesting –if somewhat speculative and possibly idiosyncratic– discussion

of our inclinations and disinclinations to employ the unextended, extended, and superextended notions, especially as these bear on the ways in which we are likely to interpret the sentences composing the puzzling argument. His view is that we treat 'man' as an *unworldly* predicate in (1), and so –correctly, in his view– take (1) to express an *extended* necessity. As for (2), we take 'does not exist' to be worldly, and so –again correctly, in his view– take (2) to express an *unextended* possibility. But when it comes to the conclusion, things are complicated. Since one component is unworldly and the other worldly, we ought to interpret it as expressing a *superextended* possibility. But, Fine claims, we are extremely averse to using the superextended notions. So what we do is treat 'man' as short for the worldly predicate 'existent man' and interpret (3) as trying to express an unextended possibility. But if we take (3) this way, it seems clearly false, since when 'is a man' is interpreted as the worldly predicate 'is an existent man', it cannot be true of anything which does not exist. So the upshot is that we take (1) and (2) to be both true, and (3) false. Since the argument appears valid, we have a problem.

But, says Fine, while we are not mistaken in our judgements about the truth-values of premises and conclusion so interpreted, we are wrong to think the argument valid. For the combination of an extended necessity and an unextended possibility in the premises cannot yield an unextended possibility as a conclusion. And further, there is clearly an equivocation over 'is a man', which is interpreted as an *unworldly* predicate in its premise but as a *worldly* one in the conclusion.

2.2.2. *Misgivings in Fine's solution*

If Fine's solution to his own puzzle is accepted, there could be a similar solution to our puzzle. We could observe that since 'is a man' is an unworldly predicate, the sentence 'Necessarily Aristotle is a man' can only be true if it is taken as expressing an extended necessity. But since 'exists' is a worldly predicate, the sentence 'Necessarily Aristotle exists' must express an unextended necessity. But clearly no unworldly

truth (such as 'Aristotle is a man') can entail a worldly one (such as 'Aristotle exists'), for then the unworldly truth could be at best true *in all circumstances*, as distinct from being true *regardless of the circumstances*. A Finean solution would accordingly reject premise (4) in our version of the argument.

Obviously to accept the Fine solutions, we must accept his fundamental distinction between the worldly and the unworldly, and the contrast which depends upon it, between unextended and extended kinds of necessity and possibility. I do not myself find this sufficiently clear to command acceptance. Fine characterizes the contrast in several different ways –between truths which depend 'on the circumstances', and those which don't; between those which depend upon how things 'turn out' and those which don't; and, at the level of necessary truths, between those which hold *whatever the circumstances* and those true *regardless of the circumstances*. I find these characterizations suggestive, but elusive. I think the nearest Fine gets to a clear explanation is in the following remarks:

We are accustomed to operating with an inclusive conception of what is necessary and what is true in a possible world... we think of any possible world as... settling the truth-value of every single proposition... [so that] the distinction between necessary and transcendental truths [disappears]... All the same, it seems to me we naturally operate with a more restrictive conception of what is necessary and what is true in a possible world. A possible world... is constituted, not by the totality of facts, or of how things might be, but by the totality of circumstances, or of how things might *turn out*. We might think of the possible circumstances as being what is subject to variation as we go from one possible world to another; and we might think of the transcendental facts as constituting the invariable framework within which the variation takes place. (Fine, 2005, 325-326)

What seems to me clearly right here is the idea that there is –as Fine puts it– an 'invariable framework within which variation

takes place'. Put another way, although things might have been different from the way they actually are in an enormous variety of ways, the scope for variation is *not unconstrained*. Fine's 'transcendental facts'—that is, the facts expressed by what he calls extended necessities, such as Socrates's being a man, or any individual object's being self-identical—are precisely not subject to (modal) variation. There are no possible worlds, or possible circumstances, in which Socrates exists but isn't a man, or in which this building exists but is self-distinct. So far, so good. The trouble is that it is then quite unclear why logical necessities such as the necessary falsehood of any proposition of the form $A \wedge \neg A$ and, perhaps, the necessary truth of any proposition of the form $A \vee \neg A$ are not likewise 'framework truths'—for we no more think that there are possible circumstances in which contradictions are true, or (perhaps more problematically) instances of the Law of Excluded Middle are false, than we think there are circumstances in which Socrates isn't a man, or in which some bachelors are married, etc.⁷ In short, while there is a reasonably clear contrast to be drawn here, it does not divide things up in the way Fine needs—we don't get his contrast between transcendental/unwordly necessities/truths such as 'Socrates is a man' and mundane/worldly necessities like 'Socrates exists or doesn't exist', and we don't get his 'grades' of necessity and possibility, crucial to his proposed solution.

2.3. Essence and non-existence without transcendence

I think there is a much simpler and much less problematic way to block the troublesome argument of 2.1 and solve Fine's puzzle. In a nutshell, but somewhat roughly, we should simply deny that statements of essence—including statements of individual essence—are ever existence-entailing with respect to the entities whose essences they purport to state; they are, rather, negatively existential statements of an entirely familiar kind.⁸

The key idea can be clearly and most straightforwardly illustrated by considering general statements of essence, as exemplified by propositions like:

Whales are mammals
 Snails are molluscs
 Men are vertebrates
 Water is a compound of hydrogen and oxygen.

The key point here is that these propositions state *what*, or part of what, *it is to be* a whale/snail/man/water. They do not state, or imply, that there *are* any whales/snails/... etc. They are purely general statements which we can represent as universally quantified conditionals, such as $\forall x(x \text{ is a whale} \rightarrow x \text{ is a mammal})$, and thus are equivalent to corresponding *negatively existential* propositions, such as $\neg \exists x(x \text{ is a whale} \wedge \neg x \text{ is a mammal})$.

I suggest that we should carry this point across to statements of individual essence. Thus a proposition such as:

Aristotle is a man

taken as a perhaps partial statement of what it is to be Aristotle, is to be sharply contrasted with such propositions as:

Aristotle was a philosopher
 Aristotle taught Alexander.

These latter propositions are indeed existentially committing—neither of them can be true unless it is also true that Aristotle exists. But our statement of essence—in so far as it is understood as just that—does not say or imply that there is such a thing as Aristotle, but says only something about what it is for something (anything) to be Aristotle—what is required for something to be Aristotle. Its surface form is therefore potentially seriously misleading, for it encourages us to think of the statement as having the logical form of a simple atomic predication *Fa*. But really, what it does is to state a necessary condition for something (anything) to be Aristotle; it tells us that nothing is Aristotle which is not a man. Thus its real form can, just as in the case of general statements of essence, be given by a universally quantified conditional, or equally a negatively existential proposition:

$\forall x(x=\text{Aristotle} \rightarrow x \text{ is a man})$
 $\neg \exists x(x=\text{Aristotle} \wedge \neg x \text{ is a man}).$

More generally, statements of individual essence do not have the logical form, Fa , of atomic predications suggested by their surface form in natural language. Any statement of this form is logically equivalent to $\exists x(x=a \wedge Fx)$, which is in turn logically equivalent to its expansion $\exists xFx \wedge \forall x(x=a \rightarrow Fx)$. In this, only the left conjunct requires the existence of an object to which F applies; the right conjunct does not require the existence of any such object, and in particular, it does not require a 's existence –on the contrary, if a does not exist (i.e. there exists no object identical with a), then the right conjunct is vacuously true. Properly understood, the full import of a statement of individual essence is captured by the right conjunct alone.

Obviously, if our statement (a) concerning what is true in virtue of Aristotle's nature is expressed in this way, the first step of our troublesome argument will run:

- 1 (1) $\Box_{\text{Aristotle}} \forall x(x=\text{Aristotle} \rightarrow x \text{ is a man})$ assn
- 2 (2) $\forall p \forall x(\Box_x p \rightarrow p)$ assn.
- 1, 2 (3) $\Box \forall x(x=\text{Aristotle} \rightarrow x \text{ is a man})$ (from 1, 2)
- 4 (4) $\Box \forall \phi \forall x(\phi x \rightarrow x \text{ exists})$ assn.
- 4 (5) $\Box(\text{Aristotle is a man} \rightarrow \text{Aristotle exists})$ from 4.

But now we are stuck. To proceed as before to deduce $\Box(\text{Aristotle exists})$, we would need the necessitation of the antecedent of the necessitated conditional on line (5); but that we do not have –we have only the necessitation of the strictly weaker statement that if anything is Aristotle, it is a man. Thus the troublesome argument breaks down.

Equally clearly, Fine's puzzle is resolved. We can and should simply reject premise (1) (It is necessary that Socrates is a man) –what we can and should accept is the weaker statement

(1*) It is necessary that nothing is Socrates which is not a man which we formalise:

(1') $\Box \forall x(x=\text{Socrates} \rightarrow x \text{ is a man}).$

But of course, this together with the second premise of the puzzling argument yields only the conclusion:

(3') $\Diamond(\forall x(x=\text{Socrates} \rightarrow x \text{ is a man}) \wedge \neg \exists x x=\text{Socrates})$

which is entirely unproblematic. Indeed, since the right conjunct entails the left, (3') may be simplified to the bare statement that Socrates might not have existed, i.e.

$\Diamond \neg \exists x x=\text{Socrates}$. But this is, simply a repetition of premise (2). The argument literally makes no advance from its premises!⁹

2.4. Propositions about contingently existing individuals

By a singular proposition I mean a proposition which essentially involves singular reference to at least one object.¹⁰ Singular reference to an object is *essential* to a proposition iff there is no equivalent proposition which does not involve singular reference to that object. Since there can be no singular reference to non-existent objects, a singular proposition depends for its existence on that of the object(s) to which it refers.¹¹ Thus if an object to which a proposition makes singular reference exists only contingently, the existence of the proposition is likewise contingent. Suppose a proposition p involves such reference to a contingently existing object o . Then in circumstances in which o would not exist, p would likewise not exist.

It is important –and will be important in our subsequent discussion– that a proposition p 's non-existence in certain circumstances C does not mean that p would not be true, were circumstances C to obtain. We can, following Adams (Adams, 1981), draw a distinction between a proposition's being true in certain circumstances and its being true of those circumstances. P is *true in C* iff, were C to obtain, p would exist and would be true, whereas for p to be *true of C*, it is required only that p would be true, were C to obtain. To illustrate, consider the proposition that Aristotle does not exist. This proposition exists because Aristotle exists, and of course, precisely

because he does exist, it is false; but it would be true if Aristotle were not to exist, even though it would not exist in those circumstances. The proposition *Aristotle does not exist* cannot be *true* in any circumstances, but it can be *true of* some circumstances –precisely those in which it would not exist.

Clear examples of singular propositions in this sense are provided by simple atomic predications –propositions of the forms *Fa*, *Rab*, *Sabc*, etc., in which *F*, *R*, *S* represent simple one-, two-, or three-place predicates such as ‘... breathes’, ‘... loves ___’, ‘... is between ___’ and ‘_ _’. But not only such atomic predications are singular propositions in my sense –in particular, a complex proposition such as $\forall x (x=\text{Aristotle} \rightarrow x \text{ is a man})$ counts as singular, since it is not equivalent to any proposition which does not involve reference to Aristotle. In those possible circumstances in which Aristotle does not exist, this proposition does not exist either, and so it cannot be true in such circumstances; but that does *not* mean it cannot be *true of* them. On the contrary, the proposition *does exist* (i.e. as things are –since Aristotle exists), and were Aristotle not to exist, it would be true (i.e. *true of* those circumstances in which neither Aristotle nor it would exist).

3. Contingently existing essences

I turn now to the problem outlined in §1.2.2. I attempted to resolve this problem in my book *Necessary Beings* (Hale, 2013, 9.4), but have subsequently come to think that while much of what I said there is right, or at least defensible, it stands in need of some significant revision.¹²

3.1. Background and preliminary observations

If, as I think we should, we take a thing’s nature or essence to be simply the conjunction of its essential properties, then essences are (typically complex) *properties* of a certain kind. For example, one might hold that the essence of the natural or finite cardinal *numbers* –what it is

to be a natural number– is simply to be 0 or one of its successors, and that the essence of mammals –what it is to be a mammal– is being a warm-blooded animal having a backbone and mammary glands which lays its fertilized eggs on land or retains them inside the mother.

In general, a property does not depend for its existence on that of any particular instance, and on a platonistic conception, does not depend for its existence on its having any instances at all. On the conception of properties I favour –what is often called the *abundant conception*– all that is required for the existence of a purely general property (i.e. a property specifiable by a predicate which makes no essential use of singular terms) is that there could be a predicate associated with a suitable application or satisfaction condition. Thus it is sufficient for the existence of the geometrical property of being a square that there is a predicate (e.g. ‘... is a square’) applicable to a plane figure iff that figure is composed of four straight lines of the same length meeting at right-angles. If one takes the modal logic of the kind of possibility involved in this condition for property existence to be the strongest normal modal logic, S5, then one can prove that all purely general properties *necessarily* exist.¹³

It follows that if a thing *X*’s nature is a purely general property, it –i.e. *X*’s nature– does not depend for its existence on that of any individual objects whose existence may be a contingent matter.

However, not all properties are purely general. In particular, there are what we might call *impure* or *object-dependent* properties – properties like *being a brother of Aristotle* or *being a successor of 0*– which cannot be specified save by means of predicates which essentially involve singular terms. In the case of some such properties –such as *being a successor of 0*– one may argue that the relevant objects involved are ones which exist necessarily.¹⁴ But in other cases, the existence of the relevant objects is widely held to be contingent, so that so also is that of the property. Thus there exists no such property as *being a brother of Aristotle* unless Aristotle himself exists.

3.2. Individual essences

3.2.1. *Weak and strong individual essences again*

As we saw, individuals may be held to have essences in either a weak or a strong sense. In the weak sense, the essence of an individual such as Aristotle might just consist in his essential possession of a certain purely general property, such as being a man. An essence in this weak sense is a property which is necessary for anything to be that individual, but not sufficient. Clearly, if individuals are held to have essences only in this weak sense—or more precisely, are held only to have purely general essential properties—the contingent existence of individuals poses no threat to the essentialist theory of necessity and possibility, precisely because purely general properties are not dependent for their existence on the individuals which instantiate them.

It is thus only if individuals are held to have essences in the strong sense, or to have essential properties which are not purely general but object-dependent, that the contingent existence of individuals may pose a threat to the essentialist theory. The threat it then poses is that the essence of certain individuals will consist in, or involve, their possession of some impure relational property relating them to other objects.¹⁵ Then if the further object(s) in question exist only contingently, so too will the essence.

3.2.2. *Are there strong individual essences?*

In *Necessary Beings* I took it as obvious, pretty well without argument, that individuals have essences in the strong sense. I have since come to think that this is far from obvious.¹⁶ The issue now strikes me as much more complex. To begin with, it is obviously crucially important to separate the metaphysical question here from an epistemological one. It may be held—at least plausibly, though not, of course, uncontroversially—that if we are to speak and think of a particular object, we must be able to identify it, in the sense that we have some way of distinguishing it from every other object.

But this might be a matter of our being able to single it out ostensively (or more plausibly, by a combination of a demonstration coupled with a general sortal term, e.g. ‘This tortoise’), or by supplying an identifying description which relates it uniquely to some other items which we may independently identify (e.g. ‘The man from whom I bought this copy of the *Times*’). How we single out a particular object, in this sense, is an epistemological matter. And it seems clear that the facts which we exploit for such identificatory purposes can be perfectly contingent facts about that object. The metaphysical question concerns not how we distinguish one object from all others, but *what*, if anything, *distinguishes* the object from all other objects—what *grounds* the object’s distinctness from every other object. To be sure, one may be reluctant to admit an individual’s distinctness from every other object as simply a brute, inexplicable fact. But even if there has to be something more to be said about what distinguishes each object from every other, it is far from clear that this must be something which could be taken to be a strong essential property of the object. For example, it might be granted that if $a \square b$, there will be some non-trivial property—not necessarily a purely general property, but perhaps a relational property involving some further object(s)—which one of a, b possesses and the other lacks. It may even be granted that there *must* be some such property. It does not follow that this has to be even a *necessary* property of one of a, b , let alone an *essential* property. Even more obviously, it fails to follow that there has to be an essential property of a which distinguishes it not just from b but from every other object.

Even if there can be—as I am inclined to suspect—no general argument from less controversial principles to the conclusion that there *have to be* strong individual essences, it may still be true that there are strong individual essences; and if some version of the much-discussed principle of the essentiality of origin can be upheld, there will be. Although I know of no compelling argument for that principle,¹⁷ I think the principle has at least some intuitive plausibility, and do not think we can discount the possibility that it is true. So in what follows,

I shall, for the sake of argument, assume that there are strong individual essences. And I shall further assume that at least some such essences are impure, object-dependent properties, where in at least some cases the relevant objects exist only contingently. My aim will be to show that even under these assumptions, one can uphold a version of the essentialist theory.

3.2.3. More ('new') objects and essences

Since I remain convinced of the essential correctness of the position on this which I took in *Necessary Beings* (Hale, 2013, 224-225), I shall here simply summarize the main points.

First, given the abundant conception of properties (*vide supra*), together with the assumption¹⁸ that the logic of the modality involved in that conception's condition for the existence of properties is S5, it follows not only that the purely general properties there are exist necessarily, but also that they are *all* the purely general properties –that is, any such properties which could exist do exist. And from that it follows that any 'new' objects there might be –i.e. objects distinct from any actually existing objects– must be objects of general kinds which (already, as it were) exist.

Thus, second, the possibility that there should exist objects other than any of those which exist (or once existed, or will exist) is a possibility which would be realized, for example, by there being horses which are distinct from any of the horses which do, have, or will ever exist. It –that is, the possibility of 'new' objects– is a purely general possibility. It is the possibility that there should exist objects of some kinds other than any objects of those kinds which actually exist. It is not to be confused with the view, which I reject, that there are certain objects –'merely possible objects'– which don't actually exist, but might have existed. [The contrast here is between the claim that $\Diamond \exists x \exists \varphi (\varphi x \wedge \forall \psi \forall y (@\psi y \rightarrow x \neq y))$ –'there could be a φ -er distinct from every actual object of any kind', which I accept, and $\exists x \exists \varphi (\forall \psi \forall y (@\psi y \rightarrow x \neq y) \wedge \Diamond \varphi x)$ – 'there is something, distinct from every actual object of any kind, which could be a φ -er', which I reject.

Third, if there were to be a φ -er –a horse, say– distinct from every actually existing object, it would (on the assumption about strong individual essences we are making) have an individual essence –it would, say, be essential to it to be a horse having a certain origin. So there would be a further, 'new', individual essence.

The question is whether such a new individual essence would impose an additional constraint, a constraint which would rule out the truth of some propositions whose truth is not already ruled out by the essences or natures there actually are.

Our new individual essence would be a complex property, composed of certain general properties –those essential to being a horse, say– and those which would distinguish our new horse from all others. But now:

Fourth: anything ruled out by our new horse's being a horse is already ruled out by what it is for anything to be a horse –i.e. by the general essence of horses, which already exists.

Fifth: it is (already) part of what it is to be a horse that any horse necessarily has a certain kind of origin –for simplicity, we may take this to be a matter of being engendered by a particular mare and stallion. Thus the possibility of there being a new horse is either the possibility of there being a new horse engendered by some actually existing mare and stallion, or it is the possibility of there being a new horse engendered by some mare and stallion at least one which is also new. In the first, simplest, case, what is ruled out is once again a possibility which is, in all relevant respects, purely general: it is not possible that there should have been a new horse, originating from a certain pair of actually existing horses, which might have originated otherwise. And this candidate possibility is already ruled out by what it is to be a horse, and so by constraints which are already, independently, in place by the actually existing nature of horses. The second case, where the new horse is envisaged as originating from one or more other new horses, is more complicated, but not essentially different.

3.2.4. *Interlude: contingently existing propositions*

As we saw, singular propositions depend for their existence on the existence of the objects they are about. Thus when we envisage the possibility that certain actually existing objects might not have existed, we are envisaging a situation in which certain propositions which actually exist would not exist. Equally, when –as we have just been doing– we envisage the possibility of new objects, distinct from any actually existing objects, we are envisaging a situation in which there would exist singular propositions which do not actually exist. Of course, we cannot, in the nature of the case, give examples of such propositions –we can only speak of them in general terms. If, for example, there were to exist a new horse, there would also exist various singular propositions about it, including propositions asserting that it might have been a frog, or might have had a different origin. If there were to exist a new horse, its essence would ensure that no such propositions as these could be true. While we cannot, of course, refer to any particular such propositions, and so cannot say of any of them individually that its truth is already ruled out –for there are no such propositions of which we can say this– what we can correctly say is that while there are no singular propositions concerning new horses, and so no singular propositions asserting of new horses that they might have been frogs, or might have had different origins, it is *already* ruled out by the nature of horses that there could be any such true singular propositions. And that, I claim, is enough to dispose of the worry that the possibility of new objects would close off possibilities which would otherwise be left open by the essentialist account.

3.2.5. *Fewer ('old') objects and essences*

It is here that I have come to think that my defence of the essentialist theory in *Necessary Beings* (Vd. Hale, 2013, 225-226) stands in need of some revision. The key claim I there made, which now seems to me problematic, was that if, say, Aristotle's essence had not existed –say because

it is part of his essence that he originated from Nicomachus and Phaestis, and one or both of them had not existed– then Aristotle himself would not have existed, so that there would then have been no possibilities concerning him. In consequence, I claimed, it would be a mistake to think that the non-existence of Aristotle's essence would leave open possibilities concerning him which are, given that his essence actually exists, ruled out – such as that he might have been a frog, or born of different parents; it would be a mistake, because in the envisaged circumstances, there would be no possibilities concerning him at all.

One very serious difficulty to which this gives rise concerns my claim that the logic of absolute metaphysical modality is S5. Consider the proposition that Aristotle might have been a cobbler, which we may assume to be true. Given that the logic of metaphysical modality is S5, it follows that it is *necessary* that Aristotle might have been a cobbler. However, my claim that had Aristotle not existed, there would have been no possibilities concerning him implies, or seems to imply, that had Aristotle not existed, it would not have been possible that he should have been a cobbler –contradicting the claim that it is necessarily possible that Aristotle might have been a cobbler. Underlying my key claim is the assumption that if Aristotle had not existed, there would have been no singular propositions concerning him, and so no singular propositions of the form 'Aristotle might have...' (i.e. of the form $\diamond\phi a$). A *fortiori*, there would have been no true singular proposition to the effect that Aristotle might have been a cobbler. Hence it is not the case that, no matter what else were the case, it would have been possible that Aristotle should have been a cobbler. Hence it is not necessary that Aristotle might have been a cobbler. It thus appears that there is a direct clash between the quite strict form of contingentism which I adopt in *Necessary Beings* and my claim that the logic of absolute metaphysical modality is S5.

The difficulty is brought out with admirable clarity by Christopher Menzel in his searching review of *Necessary Beings* (Menzel, 2015). Let us write $[p]$ to denote the proposition that p , and $E!x$ for ' x exists'. Then, as Menzel observes,

I appear to be committed, by my strict form of contingentism, to the following principle:

P For any proposition p , $\Diamond p \rightarrow E![p]$

Consequently, the essentialist theory's principle governing possibility cannot be simply: $\Diamond p \leftrightarrow \neg \exists X_1 \dots X_n \Box_{X_1 \dots X_n} \neg p$, but should be amended to: $\Diamond p \leftrightarrow E![p] \wedge \neg \exists X_1 \dots X_n \Box_{X_1 \dots X_n} \neg p$. Further, since the definition is to be understood as applying to claims about what is possible in modal contexts, it needs to be not simply a material but a *necessitated* (i.e. strict) biconditional:

ETP* $\Box(\Diamond p \leftrightarrow E![p] \wedge \neg \exists X_1 \dots X_n \Box_{X_1 \dots X_n} \neg p)$.

Now, write p for the proposition that Aristotle is a cobbler, and let q be any proposition which entails that Aristotle's essence does not exist (and so that Aristotle doesn't exist)—say the proposition that Phaestis never existed. Recall that, according to my theory, the usual necessity operator is to be explained in terms of the generalized counterfactual, so that $\Box p$ abbreviates $\forall q(q \rightarrow p)$. Then we may reason as follows:

- (1) $\Diamond p$ assn
- (2) $q \Box \rightarrow \neg E![p]$ assn
- (3) $q \Box \rightarrow \neg \Diamond p$ from 2 by ETP*
- (4) $\neg(q \Box \rightarrow \Diamond p)$ from 3 by counterfactual logic
- (5) $\exists q \neg(q \Box \rightarrow \Diamond p)$ from 4 by existential generalization
- (6) $\neg \Box q \neg(q \Box \rightarrow \Diamond p)$ from 5 by quantification logic
- (7) $\neg \Box \Diamond p$ from 6 by Def. \Box
- (8) $\neg(\Diamond p \rightarrow \Box \Diamond p)$ from 1, 7.

Thus the characteristic S5 principle fails.

Part of what has gone wrong here can, I think, be put in terms of the distinction to which I adverted in §2.4 between a proposition's being true of certain possible circumstances (or, in worldly terms, true of a possible world) and its being true in those possible circumstances (true in that possible world). No singular proposition concerning Aristotle can be true in circumstances in which Aristotle would not exist, because no such

proposition would exist in such circumstances. But this does not mean—and it is not true—that no singular proposition concerning Aristotle can be true of circumstances in which Aristotle would not exist. For one thing, the proposition that Aristotle doesn't exist, which is actually false, is true of circumstances in which he doesn't exist (and indeed, it can be true *only* of such circumstances). But more to our present purpose, the modal proposition that Aristotle might have been a cobbler, while it would not exist and hence could not be *true* in such circumstances, may perfectly well be true *of* them. So long as what is required by the S5 principle is taken to be that if $\Diamond p$ is true, it is necessarily true in the sense that there are no possible circumstances of *which* it would not be true, there need be no conflict with S5.

This is not by itself enough to resolve the conflict, however. At least, it is not enough if, as Menzel claims, my essentialist theory forces me to hold that what is possible with respect to a world (or more generally, counterfactual situation) w is always determined entirely by the essences which happen to exist in w . It is this which obliges me, he thinks, to adopt the existence requirement in ETP* in order to avoid the original problem—the problem that, for example, Aristotle's being a frog would have been possible, had Aristotle's essence not existed (cf. Menzel, 2015, 422 & ff., and especially 426).

There is, it seems to me, no escaping the conclusion that the root of all evil lies in the key claim in my earlier discussion—viz. that had Aristotle not existed, there would have been no possibilities concerning him. In making this claim, I was implicitly identifying a possibility concerning Aristotle with a true proposition of the form $\varphi(\text{Aristotle})$, and inferring that there would, had Aristotle not existed, have been no true propositions of that form because, in that situation, there would be been no propositions about Aristotle at all. But it now seems to me that this implicit reasoning was confused—or better, that it ignores a crucial ambiguity in the key claim. Given the identification of possibilities concerning Aristotle with true propositions of the form $\varphi(\text{Aristotle})$, and given that a proposition of this form would exist in a certain counterfactual

situation only if Aristotle existed in that situation, I should agree that if Aristotle had not existed, there would (in that situation) be no proposition of the form $\varphi(\text{Aristotle})$ which is true (i.e. *true* in that situation). But I should not agree that there is no proposition of the form $\Box\varphi(\text{Aristotle})$ such that, had Aristotle not existed, that proposition would have been true (i.e. *true* of that situation). And I should insist that what is required for the necessity of a proposition p is not that this proposition be true in every situation (i.e. true in every counterfactual situation as well as in the actual situation), but rather that it should be *true of every situation*. Thus in particular, the proposition that necessarily Aristotle might have been a cobbler (and generally, any proposition of the form $\Box\varphi a$) will be true (i.e. true as things are, true of (and indeed in) the actual world) provided that the proposition that Aristotle might have been a cobbler (or generally, $\Box\varphi a$) is true of every possible situation, including situations in which Aristotle would not exist.

3.2.6. *The actual determinants of necessity and possibility*

If, as I am claiming, the necessity of a proposition consists, not in that proposition's being true in, but in its being true of every possible situation, and the possibility of a proposition consists, not in its being *true in*, but in its being *true of* some possible situation, then –to the extent that what essences there are is a contingent matter– which modal propositions are true of a given situation is not, in general, determined by which essences exist in that situation. So what *does* determine their truth-values? The answer for which I am arguing is quite simple: their truth-values are determined by those essences which exist –that is, those essences which *actually* exist, as distinct from any essences there *merely might have been*.⁽¹⁹⁾ If actualism is the philosophical position that everything there is *exists*, or is *actual* (Menzel, 2014, §1), then what we might term *actualist essentialism* is the thesis that the determinants of necessity and possibility are exactly *the essences of the things which exist*, and not essences of things which don't but might have

existed –for there are no such essences, any more than there are things which might have existed but don't. What makes it necessarily true (assuming it to be true at all) that Aristotle might have been a cobbler is that the proposition that Aristotle might have been a cobbler is true of every possible situation. What makes it true of counterfactual situations in which Aristotle doesn't exist (i.e. wouldn't exist, were such situations not to be counterfactual) is that there is at least one possible situation (i.e. possible relative to those possible situations in which Aristotle wouldn't exist) of which (and indeed in which) it is true that Aristotle is a cobbler. And what makes that true is that nothing in any actually existing essence – either Aristotle's, or any other– rules out his being a cobbler. What ensures that the proposition that Aristotle might have been a frog is not true of any possible situation –including those possible situations in which neither Aristotle nor his essence would exist– is that it is part of Aristotle's essence (his actual essence, for there is no other) to be a man, and so not a frog.²⁰

It may be thought that the original worry – that if, say, Aristotle's essence had not existed, then the constraint which, as things are, renders it impossible that he should have been a frog would be removed, so that it would then be possible that he should have been a frog –could be resurrected as follows. Consider any counterfactual situation, w , in which Aristotle's essence (and so Aristotle himself) would not exist. Since w is a situation in which Aristotle's non-existence is a contingent matter, it would remain true (i.e. true of, though not in, w) that Aristotle might have existed. But since, by hypothesis, were w to obtain, Aristotle's essence would not exist, there would be nothing to exclude the possibility that he should have been a frog. But this reasoning, I contend, is just confused. It is, of course, perfectly true that the singular proposition that Aristotle might have existed does not have to exist in w if it is to be true of w . But it –that very proposition– has to exist (i.e. actually exist) if it is to be true of w , and that proposition actually exists only because Aristotle actually exists.²¹ The possibility in question is the possibility that that very man should have existed. But that is the possibility that a particular man with certain essential properties –which include

being essentially human— should have existed. It is therefore not a possibility, with respect to w , that Aristotle should have existed but been a frog (i.e. the proposition that Aristotle might have existed but been a frog is not, and cannot be, true of w). The error in the confused reasoning lies in its tacitly assuming, in effect, that Aristotle might have existed without his essence.²²

Notes

1. A succinct and compelling statement of these questions may be found in Michael Dummett's article on Wittgenstein's philosophy of mathematics: 'The philosophical problem of necessity is twofold: what is its source, and how do we recognize it?' (Dummett, 1959, 169).
2. As we shall see much later, both principles will require an important modification, if we both hold that the modal logic of metaphysical necessity and possibility is S5 and accept that what essences there are is, to some extent, a contingent matter. But I think it is best to allow the need for amendment to emerge from the more detailed discussion of these matters in what follows. See footnote 20.
3. The notation $_x p$ to abbreviate 'It is true in virtue of x 's nature that p ' is borrowed from Kit Fine (Fine, 1994), but it should not be assumed that my use of the notation coincides with his. In particular, while I am sympathetic to the structured interpretation, Fine may prefer the austere one (I am not sure whether he commits himself to it in published work, but I seem to recall a conversation in which he suggested this).
4. Both problems are discussed in some detail in Hale, 2013, chapter 9. My aim here is to improve upon that earlier discussion in two ways. First, I shall try to clarify some points which, with hindsight, seem to me not to have been as well explained as I should like, and are vulnerable to misinterpretation, and to make some further points which seem to me to tell in favour of the kind of solution I propose there. Second, I have come to think that part of my proposed solution to the second problem is unsatisfactory, and so requires more radical revision.
5. See, for example, David Wiggins note on the correct formulation of essentialist claims (Wiggins, 1976).
6. For supporting argument, see Hale, 2013, §5.4; for further argument of a rather different kind, see Williamson, 2013.
7. It might seem that the first of these claims is disputable, and simply begs the question against dialetheists, who think that some contradictions are true. However, dialetheists do not think that contradictions are true in any possible world – instead, they hold that besides possible worlds, there are impossible worlds – worlds at which the laws of logic break down. (cf. Priest, 2005, 15-18). Nor is any question begged against Fine. For he agrees that instances of the Law of Excluded Middle, for example, are true in all *possible worlds*; and there is no reason to think that he would not take the same view of instances of the Law of Non-Contradiction.
8. My solution is thus quite different from those which Fine discusses and rejects as inadequate, both of which rely upon a distinction between more and less demanding interpretations of the necessity operator. I shall not discuss these here. For some brief remarks, highlighting the difference between the alternatives Fine considers and my solution, see Hale, 2013, 218, footnote 42.
9. In the discussion of Fine's puzzle in Hale, 2013, 217-218, I propose a quite different solution, observing that once we replace premise (1) with (1'), we should, assuming we are working in a negative free logic, require an atomic premise involving 'Socrates', and that this will block the step of necessitation needed to get to ' \Diamond (Socrates is a man)', which is needed if we are to reach the original conclusion, ' \Diamond (Socrates is a man \wedge Socrates does not exist)'. The present objection does not rely on the assumption that the underlying quantificational logic should be free.
10. This is similar to Robert Adams's usage. According to him,

a singular proposition is, roughly, a proposition that involves or refers to an individual directly, and not by way of its qualitative properties or its relations to another individual. (Adams, 1981, 5)
11. The requirement that any objects to which reference is made in a singular proposition must exist, if the proposition is to exist, may be understood in more and less demanding ways. The objects in question may not be eternal but transient beings like ourselves. An extremely demanding, but rather implausible, version of the requirement would allow that a singular proposition exists only at

- times when its objects exist. A less demanding and more plausible version would require that the relevant objects exist or existed at some earlier time. This would allow that the proposition that Aristotle taught Alexander exists now, even though Aristotle and Alexander themselves have long since ceased to be. A fuller account would need to address the somewhat delicate and controversial question whether there can be singular propositions concerning objects which will but do not yet exist, and whether we should adopt an even less demanding version which would require only that the relevant objects either exist, or existed at some past time, or will exist at some future time. As far as I can see, nothing I say here depends on how precisely these matters are resolved. When I envisage circumstances in which certain objects would not exist, I mean circumstances in which the objects in question would have existed at all, at any time past, present, or future.
12. This change of mind has been brought about, at least in part, by two very careful and perceptive reviews of my book, one by Penelope Mackie (Mackie, 2014), and the other by Christopher Menzel (Menzel, 2015), to whom I am also grateful for an extensive correspondence.
 13. The argument is simple. Let φ be any purely general property, p the proposition that φ exists, and q the proposition that there exists a predicate standing for φ . Then by the abundant theory: $\Box(p \leftrightarrow \Diamond q)$. It follows from this by the K-principle that $\Box p \leftrightarrow \Box \Diamond q$, and by the T-principle that $p \leftrightarrow \Diamond q$. By the S5-principle, $\Diamond q \leftrightarrow \Box \Diamond q$. So by the transitivity of \leftrightarrow , $p \leftrightarrow \Box p$.
 14. For an argument for the necessary existence of 0 and the other natural numbers, see Hale, 2013, §7.4.
 15. That is, the essence will be what Robert Adams labels an α -relational essence. See Adams, 1981, 5.
 16. Here, I am especially indebted to Penelope Mackie, who plausibly conjectures, in her review of *Necessary Beings* (Mackie, 2014), that the general essentialist theory of modality I defend may be independent of my more controversial and problematic claims about (strong) individual essences.
 17. The most widely discussed argument is, of course, the argument Kripke gives in footnote 56 of *Naming and Necessity* (Kripke, 1972; Kripke, 1980). In my view, that argument fails, ultimately because it implicitly relies on the assumption of merely possible objects. Others have, of course, given wildly divergent diagnoses of what goes wrong.
 18. Defended in Hale, 2013, 5.4.
 19. Talk of essences there merely might have been is, of course, loose talk, because it encourages the bad idea that there are, in addition to the essences there are, some shadowy, merely possible essences, waiting –as it were– to attach themselves to objects, or perhaps already attached to merely possible objects. But a consistent actualist will reject merely possible essences every bit as firmly as she rejects merely possible objects. The sober truth is simply that there might have been objects distinct from any of the objects there are, and had there been, they would have had essences. The ‘they’ lies squarely within the scope of ‘there might have been’.
 20. More generally, actualist essentialism requires a further modification to the essentialist theory’s explanation of metaphysical possibility –since what is possible is what is not ruled out by any of those essences which actually exist, we must replace ETP* by ETP*_@: $\Box(\Diamond p \leftrightarrow @\exists x_1 \dots x_n \Box x_1 \dots x_n \neg p)$. Similarly, since it is the actually existing essences which determine what is necessary, the essentialist theory’s explanation of metaphysical necessity should run: $\Box(\Box p \leftrightarrow \neg @\exists x_1 \dots x_n \Box x_1 \dots x_n \neg p)$. Thanks, once again, to Christopher Menzel for drawing my attention to this point. It might also be noted that without the amendment, we could distribute the outer necessity operator the necessitated formulations to obtain $\Box \Box p \leftrightarrow \Box \exists x_1 \dots x_n \Box x_1 \dots x_n p$ and $\Box \Diamond p \leftrightarrow \Box \neg \exists x_1 \dots x_n \Box x_1 \dots x_n \neg p$, which in S5 simplify –disastrously– to $\Box p \leftrightarrow \exists x_1 \dots x_n \Box x_1 \dots x_n p$ and $\Diamond p \leftrightarrow \Box \neg \exists x_1 \dots x_n \Box x_1 \dots x_n \neg p$.
 21. As before, ‘exists’ here is shorthand for ‘exists or existed’.
 22. I am indebted to the participants and organizers of the workshop “Individuación y permanencia de objetos”, held in July 2015 in the Universidad Autónoma Metropolitana, México, D. F., for helpful discussion of an earlier incarnation of this material, and to friends and colleagues who took part in subsequent discussions at work in progress seminars in Sheffield and King’s College London.

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Bob Hale. Department of Philosophy,
University of Sheffield (United Kingdom).

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