From Essence to Necessity via Identity

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Abstract

An Essentialist Theory of Modality claims that the source of possibility and necessity lies in essence, where essence is (obviously) then not to be defined in terms of necessity. Hence, such theories owe us an account of why it is that the essences of things give rise to necessities in the way required. A new approach to understanding essence in terms of the notion of generalized identity promises to answer this challenge by appeal to the necessity of identity. I explore the prospects for this approach, and argue that it fails. If one favours an account of essence in terms of generalized identity, then one will not, I argue, be able satisfactorily to defend an essentialist theory of modality against the challenge; if one wishes to defend an essentialist theory of modality, and thereby to give an explanation of how necessity arises from essence, one should not understand essence in terms of generalized identity.

1 Essence and necessity

The essentialist theory of modality (ETM) provides an account of modality—typically metaphysical modality and a range of other alethic modalities—in terms of the essences of things. Such a view has enjoyed much recent attention, with well-known versions to be found in the work of, in particular, Kit Fine (e.g. 1994; 1995) and
Bob Hale (2002; 2013). We might take the following as representative statements of the view:\footnote{The more common locution is ‘true in virtue of the nature of’ rather than ‘true in virtue of the essence of’, but I want to avoid confusion here by using the word ‘nature’ rather than ‘essence’. The main line of argument here does not rest on this choice.}

\begin{enumerate}
\item[(ETM□)] It is (metaphysically) necessary that \(p\) just when it is true in virtue of the essences of things that \(p\).\footnote{Note: not all essentialists will try to account for all alethic necessities in terms of essence. For example, Fine (2002) concludes that natural necessity has its source, not in the essences of natural things, but in ‘the natural order’.}
\item[(ETM♦)] It is (metaphysically) possible that \(p\) just when it is not true in virtue of the essences of things that \(¬p\).\footnote{Note: not all essentialists will try to account for all alethic necessities in terms of essence. For example, Fine (2002) concludes that natural necessity has its source, not in the essences of natural things, but in ‘the natural order’.}
\end{enumerate}

Metaphysical necessity is usually taken to be primary, insofar as it concerns the essences of all things. Further types of alethic necessary may then be defined in terms of various restrictions of things.\footnote{Note: not all essentialists will try to account for all alethic necessities in terms of essence. For example, Fine (2002) concludes that natural necessity has its source, not in the essences of natural things, but in ‘the natural order’.

F o r example, logical modalit y is taken to have its source in the essences of the logical things (for Fine (1994), these are logical concepts; for Hale (2013), they are logical functions).

Such an account of modality faces at least two obvious and important questions:

(1) What is essence? (2) Why should essence generate necessity? My aim in this paper is to consider the prospects of a promising new direction in our understanding of essence—in terms of generalized identity—for providing a distinctive kind of answer to question (2). I aim to show first why this approach appears to be so promising, but second, why, ultimately, I believe it fails. This is not merely a spurious and negative conclusion if one agrees, as I believe one should, that any respectable essentialist theory of modality owes us an answer to both questions. For then my conclusion transforms into the following: if one favours this answer to (1), giving an account of essence in terms of generalized identity, then one will not, I argue, be able satisfactorily to answer (2) (at least not along the lines explored below); and if one wishes to defend an essentialist theory of modality, and thereby to give a decent answer to (2), one should not understand essence in terms of
generalized identity. This does not show that one cannot be an essentialist about modality, based on some other account of essence; and it does not show that one cannot understand essence in terms of generalized identity whilst refraining from endorsing a version of (ETM); but it does show that a new and seemingly promising approach to understanding essence and necessity at best faces a serious challenge, and at worst should not be pursued.

My plan is as follows. First, I outline in a little more detail the challenge to answer question (2), and how that interacts with answers to question (1). Next, I introduce an account of essence in terms of generalized identity, and outline a promising answer to (2) based on this approach. I then highlight a significant drawback: the proposed route from essence to necessity via identity rests upon a particular necessity—the necessity of self-identity—in a potentially problematic way. I then consider some responses to this problem, my misgivings with which will lead to my negative conclusion. One might read this paper as something of a road map to the essentialist about modality: The essentialist needs to get from Essence to Necessity. A promising route passes through Identity. This route, however, will turn out to involve travelling through some difficult—perhaps impassable—terrain. In the end, the onus will lie with the essentialist, either to find a better route, avoiding Identity altogether; or to find a way through the difficult terrain; or, the option remains, to get to Necessity from a different starting point altogether.

2 From essence to necessity

 Whilst an essentialist theory of modality has much to recommend it, it nevertheless faces a major challenge. I put this informally above as question (2): Why should essence generate necessity? More precisely, the challenge concerns what Penelope
Mackie calls the Necessity Principle (NP) (Mackie 2020, p.3).\(^3\)

\((\text{NP})\) If being (an) \(F\) is an essential property of \(x\), then being (an) \(F\)

is a necessary property of \(x\).

We might characterise (NP) as a bridging principle between essence and necessity. For, one might reasonably ask: why should one agree that essence gives rise to necessity, in the way that essentialism about modality suggests? Why, just because, for example, Plato is essentially human, should it therefore be the case that Plato is necessarily human? Essentialism about modality thus requires a reason to endorse (NP) (or something suitably similar). And of course, how one goes about defending (NP) will depend upon what you think essence is.

We cannot, in answer, provide a definition of essence that builds in necessity, for the aim is precisely to give an account of necessity in terms of essence, and not vice versa. For example, it is clearly unhelpful and circular, for present purposes, to define essence as follows:

\[
\text{a is essentially } F \iff \text{ necessarily, if } a \text{ exists, then } a \text{ is } F.
\]

Yes, (NP) will be true according to such an account of essence, but we can hardly then give an account of necessity as having its source in essence. The same point will hold for refinements of this kind of account of essence that define essence in terms of a subset of necessary properties (for example, sparse necessary properties, as in Wildman (2013)).

The challenge applies whether one takes a reductive or a non-reductive stance on the essentialist theory of modality. In proposing something like (ETM), one might intend one of (at least) three options: (i) necessity can be reduced to essence, the latter being understood as a non-modal phenomenon; (ii) necessity can be reduced to essence, the latter being understood as belonging to the family of modal

\(^3\)Page numbers for Mackie (2020) refer to her chapter manuscript; the published version is not yet available.
phenomena, but remaining importantly distinct from necessity; (iii) necessity is not reducible to essence, but it is nevertheless illuminating to show how necessities can be generated from a base class of necessities that have their source in essence. I think there is reason to take Fine’s own view to fall under (ii) (see Fine 2007, p.85), and to take Hale’s view to fall under (iii) (see Hale 2013, pp.158–9). However, for present purposes, these differences (and whether I am right about Fine and Hale) are not significant. The challenge to defend (NP) stands. Under option (i), the essentialist owes us an account of how a non-modal phenomenon gives rise to a modal one—as Mackie puts it, how one can ‘deliver a modal rabbit out of a non-modal hat’ (Mackie 2020, p.7); under option (ii), the essentialist owes us an account of how a phenomenon that is distinct from necessity gives rise to necessities; under option (iii) the essentialist owes us an explanation of why we should agree that a class of essentialist statements or facts are, as claimed, a class of necessities. For example, Hale writes,

The point of the essentialist theory is not, then, to provide a reductive explanation of any necessities. It is, rather, to locate a base class of necessities—those which directly reflect the natures of things—in terms of which the remainder may be explained. The kind of explanation it offers, then, is not one which provides, as it were, an entry point into any class of necessities from outside ... but one which exhibits the class of necessities as structured in a certain way, by identifying some necessities as basic or fundamental. (Hale 2013, pp.158–9)

The challenge applies here to the assumption that there are indeed necessities that ‘directly reflect the natures of things’. Why think that these essentialist statements or facts are necessary? In other words, why think that essentialist statements or essentialist facts have gained admission to the class of necessities in the first place? That even such a non-reductive essentialist view requires a defence of (NP) in this
way is further supported by the fact that Hale does appear to offer an argument for
the claim (which I'll discuss shortly).

One might retort that something like (NP) is *obviously* true, to the extent that
if you don't endorse (NP), then you simply don't understand the notion of essence.⁴
(NP) needs no defence, for to question it is to misunderstand it. One might almost
say that (NP) is akin to an analytic truth about essence, although that may sail too
close to defining essence in terms of necessity. Even if one instead takes essence to
be a primitive notion, one may have a similar reaction, taking (NP) to be akin to
axiomatic for, if not strictly definitive of, essence. But why should (NP) be thus
compelling? Is it really so very obvious that if $x$ is essentially $F$, then $x$ is necessarily
$F$? It's not clear how to assess such claims of obviousness, but let me offer the
following remarks. First, consider members of the philosophical community. At
least Mackie and I—and others who have responded positively to our work on these
topics—do not find (NP) to be analytic or otherwise primitively compelling. I take
it that we are otherwise competent English speakers, and competent speakers of the
specialist language used in metaphysics. It doesn't seem to me that we are simply
misunderstanding the essentialist, so much as disagreeing with an assumption that
they find to be extremely compelling. Relatedly, one can find examples of serious
work on essence where room is explicitly left for contingent essence, for example,
Gorman (2014).⁵ Second, consider the wider, non-specialist linguistic community.
It is not clear to me that general usage of the word 'essence' beyond the metaphysics
classroom has a clear and unequivocal meaning that adequately reflects what the
essentialists have in mind. For example, anecdotally, in presenting work about
essence to audiences including non-philosophers, I've had to spend a lot of time
and effort simply setting up what philosophers have in mind. This suggests to me,

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⁴Thank you to an anonymous referee for pressing this point.

⁵Gorman defines essential features as 'foundational' features, and comments that 'the definitions of essence and accident given here allow for two things: necessary accidents and contingent essentials' (Gorman 2014, p.131).
again, that (NP) is not taken to be obvious or analytic more generally.

But why do so many philosophers find (NP) to be so compelling? One plausible partial explanation is that this may well be informed by the recent tradition of defining essence in terms of necessity. Because we have been in the habit of simply defining essence as a kind of necessity, even when rejecting that definition, the tendency to think of essence as necessary remains. However, once we reject an account of essence in terms of necessity, and rethink our notion of essence anew, it becomes an open question whether we should expect essence to imply necessity in the way required by (NP). The essentialist should not be swayed by a hangover from a view they reject.

Whether the essentialist takes essence to be a primitive notion, or to be definable in other (non-modal) terms, they almost always have more to say. Even in the case where essence is taken to be a primitive notion, one can offer an elucidation in terms of its relations to other notions. One option that has proved popular is an account of essence (answering my earlier question (1)) that draws on the Aristotelian idea of a real definition (whether this is taken to be akin to a definition of essence or an elucidation of essence as a primitive). For example,

It has been supposed that the notion of definition has application to both words and objects—that just as we may define a word, or say what it means, so we may define an object, or say what it is. The concept of essence has then taken to reside in the "real" or objectual cases of definition, as opposed to the "nominal" or verbal cases. (Fine 1994, p.2)

The nature (or essence or identity) of a thing is simply what it is to be

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6 In his original trailblazing paper on this topic, Fine (1994) suggests that essence be understood in terms of real definition. But in later work (Fine 2015) he proposes a unified account of essence and grounding in terms of constitutively necessary conditions and constitutively sufficient conditions respectively, alongside an account of real definition in terms of constitutively necessary and sufficient conditions.
that thing. It is what distinguishes that thing from every other thing.

... A thing's nature or essence is what is given by its definition. ... one might think of a full dress, or canonical, definition as specifying what type of thing it is and what distinguishes it from everything else within its type. (Hale 2013, p.151)

[a] key notion . . . is that of a real definition . . . . A real definition of an entity, E, is to be understood as a proposition which tells us, in the most perspicuous fashion, what E is – or more broadly, since we do not want to restrict ourselves solely to the essences of actually existing things, what E is or would be. This is perfectly in line with the original Aristotelian understanding of the notion of essence, for the Latin-based word 'essence' is just the standard translation of a phrase of Aristotle's which is more literally translated into English as 'the what it is to be' or the 'what it would be to be'. (Lowe 2012, p.935, emphasis in original)\(^7\)

How might appeal to real definition help the essentialist to defend (NP)? The aim of this paper is not to assess this option in detail, but given its popularity as a broad approach for essentialists, I shall offer a brief review. Insofar as the route from Essence to Necessity via Real Definition has been found lacking, this provides more motivation for considering the alternative proposal of going via Identity, which will be my main focus below.

Hale (2013) offers one of the more explicit arguments that might be used to defend (NP) from the starting point of real definition. He begins:

Once it is granted (vide infra) that we can intelligibly speak of a thing's nature, or identity, it must be agreed that truths about it are necessary.

(Hale 2013, p.133)

This is clearly a statement of something like (NP), if we allow that the essential

\(^7\)As cited in Mackie (2020, p.7).
properties of something \( x \) are those properties attributed by the real definition of \( x \). Hale continues:

For the supposition that a thing might have had a different nature immediately raises an obvious problem. Let \( \alpha \) be the thing in question, and let \( \Phi \) be its nature—that is, \( \Phi \alpha \) says what it is for \( \alpha \) to be the thing it is. Then the supposition that \( \alpha \) might have had a different nature is the supposition that it might not have been the case that \( \Phi \alpha \), and might have been that \( \Phi \alpha' \) instead. Now there is, we may assume, no difficulty in the supposition that something else, and perhaps even something as the same type as \( \alpha \), lacks the property \( \Phi \) and has the property \( \Phi' \). But our supposition has to be that \( \alpha \) itself might have lacked \( \Phi \) and been \( \Phi' \) instead. This is equivalent to the suggestion that for some \( \beta \), it might have been the case that

\[
\beta = \alpha \land \neg \Phi \beta \land \Phi' \beta.
\]

But how could this possibly be true? Given that \( \Phi \alpha \) tells us what it is for \( \alpha \) to be the thing it is, and that \( \neg \Phi \beta \), \( \beta \) lacks what it takes to be that thing, it must be that \( \beta \neq \alpha \). In short, the supposition that a thing’s nature might have been different breaks down because it is indistinguishable from the supposition that something else lacks that nature. ([ibid.], emphasis in original)

It seems to me that this argument presents an excellent example of where a deep disagreement between the essentialists and their opponents lies. The challenge to defend (NP) is precisely a challenge to give reasons to agree that just because, for example, \( \alpha \) is \( \Phi \), and it is part of what it is to be \( \alpha \) to be \( \Phi \), that therefore, \( \alpha \) must be \( \Phi \), and it must necessarily be part of what it is to be \( \alpha \) to be \( \Phi \). But this kind of argument seems to appeal to that very claim: ‘Given that \( \Phi \alpha \) tells us what it is for \( \alpha \) to be the thing it is, and that \( \neg \Phi \beta \), \( \beta \) lacks what it takes to be that thing, it must be that \( \beta \neq \alpha \).’ And insofar as it does, it does not help to support (NP). Romero
(2019) makes the same point, adding: ‘the essence of an object is what defines it, but ... the metaphysical necessity of such a definition is a further posit’ (Romero 2019, p.126, emphasis in original). That ‘further posit’ corresponds to (NP), and so with what is at issue here.8

Note that this passage perhaps sheds further light on why the essentialist may find (NP) to be obvious. They take it to follow from being what it is to be something that such features are necessary. However, the passage also articulates the point at which I—and others—see a grave lacuna. Is what it is to be something also what it must be to be something? Put in this way, the answer does not appear to be obviously, or primitively, or analytically, ‘yes’. ‘Musts’ do not in general follow from ‘is’s’ without further argument. And indeed, the fact that Hale has in this passage offered something that looks like a brief argument for (NP) suggests that even the essentialist may see that there is something calling for justification.

There is a different line of argument that one might take from the Hale passage, concerning the conditions of our being able to genuinely think about $\alpha$ in various different scenarios, and whether, in fact, we are incapable of conceiving of $\alpha$ without some of its actual properties: part of Hale’s conclusion is that ‘the supposition that a thing’s nature might have been different breaks down’, suggesting a problem here for what we are able coherently to suppose. I will not discuss this line of argument in detail here,9 but confine myself to the following remark: that it seems surprising at best that an essentialist about modality, who takes metaphysical modalities to have their source in the (typically) mind-independent natures of things, should take our powers of conceiving to be a reliable guide to modal reality.10

There are further reasons to doubt the promise of this general approach. The

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8The metaphysical necessity of a definition is not the same as (NP), but the same broad concern is at issue, namely, whether essential properties understood as given by real definitions of things are thereby also necessary properties. If the real definition of a thing is metaphysically necessarily true, then whatever features the definition ascribes to the thing defined will have to be metaphysically necessary features of it.

9But see Hazlett (2010); Leech (2018); Mackie (2006); Wiggins (2001).

10See also Leech (2019); Wright (2002, 2018).
challenge to defend (NP) or a version of (NP), and various ways to respond, taking seriously the idea of real definition as a starting point, have been considered in recent work, such as Leech (2018), Mackie (2020), and Romero (2019).

First, Mackie complains that she does not see how it is possible to isolate a notion of real definition that will generate a conception of essence that delivers the result that essential properties are necessary properties (as the Necessity Principle (NP) demands), unless we appeal to modal notions — in particular, to the notion of metaphysical necessity — in explaining what the relevant notion of real definition is. (Mackie 2020, p.7, emphasis in original)

Her argumentative strategy is to draw out a list of plausible criteria for an essence understood in terms of real definition — what she calls a 'D-essence' — and then to argue that there are plausible and consistent candidate accounts of D-essence that do not entail that a thing's D-essential properties are necessary properties. The aim is not to argue that any conception of essence that satisfies those criteria for being a D-essence will not entail that a thing's D-essential properties are necessary, but rather to show that insofar as there are some such conceptions, there is no general path from D-essence to necessity.

To give one brief example: Locke wrote that real essence is ‘the real internal ... constitution of things, whereon their discoverable qualities depend’ (Essay III.3.15, quoted in Mackie 2020, p.12). Such a conception of real essence satisfies Mackie’s suggested criteria for D-essence, yet one can hold, as does Lowe (2011), that real essences, thus understood, do not correspond to necessary properties.

According to Lowe, although it is indeed true that the ‘internal constitution’ of water is $H_2O$, this does not represent the discovery of a necessary property of water, in the sense of a metaphysically necessary property — a property that water has in every possible world in which it
exists. At most, Lowe holds, this Lockean real essence of water represents a feature that water has in all possible worlds that share relevant laws of nature with the actual world (2011: 1718). (Mackie 2020, p.13)

Second, in Leech (2018) I raise a similar line of argument: (i) Role X is a plausible way to understand the role of real definition; (ii) but role X can be fulfilled by contingent properties; hence (iii) this way of understanding real definition, and by association essence, gives us no positive reason to think that essential properties are necessary. For example, a plausible way to understand the role of real definition is to provide an account of creation and destruction conditions; what changes can an individual survive, and what changes will constitute its destruction? One might take the real definition of a thing to isolate a privileged set of properties that determine answers to these questions. For example, if Daisy is a cow—if what it is to be Daisy is, at least in part, to be a cow—then this property determines that she will survive eating grass, being milked, having her horns trimmed, etc., but that she will not survive falling off a high cliff, and so on. However, arguably, a real definition in this sense can provide answers to these questions without requiring that the crucial properties be necessary. For example, given that Daisy is a cow, she couldn’t now cease to be so without thereby ceasing to exist, but that is compatible with claiming that she might have been a rubber ball, and if she had, her creation and destruction conditions would have been accordingly different (e.g. she would be able to survive falling off the high cliff).

To summarize: essentialist theories are various and diverse, but insofar as they share the core claim of (ETM□), they face the challenge to defend (their version of) (NP). There are reasons to doubt that the essentialist about modality who appeals to real definitions will be able to explain why real definitions imply necessity, i.e., to defend (NP). I thus now turn to consider a different approach.
3 Essence and identity

The notion of generalized identity is receiving increasing interest from metaphysicians (see Correia and Skiles 2019; Dorr 2016; Rayo 2013). Furthermore, it has been proposed that one can give an account of essence in terms of this notion of identity. Identity, in turn, is necessary. Hence, a perhaps obvious option is to support (NP) by these two links: that between essence and identity, and that between identity and necessity.

Recall: I have characterised essentialism about necessity as (ETM□). Someone who holds this view may also, but need not, take essence to be primitive. The suggestion to be explored in what follows takes essence to be defined in terms of generalized identity, rather than primitive. Such a view still needs to answer my questions (1) and (2) as posed earlier. The answer to (1) is given in terms of generalized identity. The answer to (2) must then be informed by one's account of generalized identity. One is not thereby absolved of the need to answer (2)—and thereby to defend (NP)—because essence is no longer taken to be primitive.\footnote{Thank you to an anonymous referee for pressing this point.}

Indeed, one might think that taking this approach has the advantage that, in giving an account of essence rather than taking it to be primitive, one has more resources with which to defend (NP), and perhaps also to explain why (NP) should be seen as obvious.

According to Correia and Skiles (2019), statements of essence are to be understood as statements of conjunctive part, and statements of conjunctive part are to be understood in terms of statements of generalized identity.

First, then, generalized identity. Examples of statements of generalized identity include

1. For a thing to be a bachelor is for it to be an unmarried adult male.

2. For a thing to know a proposition is for it to truly, justifiably believe that
3. For the Atlantic Ocean to be filled with water is for it to be filled with $\text{H}_2\text{O}$ molecules. (Correia and Skiles 2019, p.643, emphasis in original)

Notably, such statements need not, although they might, state identities that hold between objects, or between any kinds of entities at all. This thus leaves room for one to state identities such as (1) without committing oneself to the existence of bachelors, men, or to the existence of properties such as being a man or bachelorhood. If statements of essence are a species of identity statement, then again, one will be able to take seriously the explanatory role of statements of essence without needing to commit oneself to the existence of entities that have essences. For example, one might want to state the essence of knowledge, or the essence of what it is to know—relating in some way to (2)—without committing oneself to the existence of a special entity called 'knowledge'.

Correia and Skiles (2019, p.644), following Rayo (2013), express generalized identity as follows.

\[
p \equiv q
\]

(For it to be the case that \(p\) is for it to be the case that \(q\).)

\[
F x \equiv x \ G x
\]

(For a thing to be \(F\) is for it to be \(G\).)

\[
p \equiv x, y, \ldots q
\]

(For some things \(x, y, \ldots\) to be such that \(p\) is for them to be such that \(q\)).

So, for example, we can translate (1) as

\[
\text{Bachelor}(x) \equiv x \ \text{Unmarried-man}(x)
\]
The operator ‘≡’ then has many of the familiar properties of identity: reflexivity, symmetry, transitivity, and further plausible principles, such as ‘\(p \land q \equiv q \land p\)’ (Correia and Skiles 2019, pp.645–647). Most importantly for present purposes, Correia and Skiles also allow a version of Leibniz’s Law.

LL: If \(p \equiv v \land q\) and \(\Phi\), then \(\Phi[q//p]\)

where \(\Phi[q//p]\) results from sentence \(\Phi\) by replacing one or more occurrences of \(p\) by \(q\), with the condition that no variable that is free in \(p \equiv v \land q\) is bound in \(\Phi\) or \(\Phi[q//p]\). (Correia and Skiles 2019, p.645)\(^{12}\)

So, for example, if \(\text{for it to be the case that Marco is a bachelor is for it to be the case that Marco is an unmarried man, and Marco is a bachelor and } 2+2=4\), then \(\text{Marco is an unmarried man and } 2+2=4\).

Next, essence. A statement of essence might state the essence of something in full or in part. For example, one might think that all there is to being human, essentially, is being a rational animal. Hence, the following is a statement of full (generic) essence: ‘It’s essential to being a human to be a rational animal’. Correia and Skiles (p.649) treat statements of full generic essence straightforwardly as statements of generalized identity.

**Full-Generic-Essence**  
Being \(F\) is what it is to be \(G\) in full iff:  
\(Gx \equiv x \land Fx\).

Most statements of essence, however, state only part of the essence of something, for example, that it’s essential to Plato to be human. (Presumably there is more to being Plato than being human.) Correia and Skiles thus offer a more complex statement of generalized identity in this case. The basic idea is that, in making a statement of partial essence, we are leaving something out of one side of a generalized identity; hence, in the statement of partial essence we are stating part of a conjunction that would amount to the full essence. More precisely:

\(^{12}\)Correia and Skiles reference Dorr 2016, p.49.
Being $F$ is partially what it is to be $G$ if: there is some $H$ such that $Gx \equiv x Fx \land Hx$.

In this context, then, being $F$ is a conjunctive part of what it is to be $G$; being $F$ is part of what it is to be $G$.\textsuperscript{13} We can introduce further notation to capture this: $Fx \subseteq Gx$. Finally, one can treat statements of objectual essence, such as that Plato is essentially human, as a special case of generic essence (e.g., being human is what Plato is in part if: being human is part of what it is to be Plato; human$(x) \subseteq x = \text{Plato}$). (See Correia and Skiles 2019, pp.649-650.)

4 Identity and necessity

So, statements of essence are a special case of a statement of identity.\textsuperscript{14} Statements of identity are necessary. Hence, statements of essence are necessary too. Correia and Skiles do not themselves propose to support (NP) in these terms (or at all), but this is a natural application of their view. For they do, as we have seen, propose to understand statements of essence as statements of identity; and they also endorse the necessity of generalized identities.

As with objectual identity, generalized identity is tightly linked to metaphysical necessity. Specifically (and ignoring non-monadic cases):

\begin{align*}
(8) \text{If } Fx \equiv Gx \text{ then } \Box \forall x (Fx \iff Gx) \\
(9) \text{If } p \equiv q \text{ then } \Box (p \iff q)
\end{align*}

(Correia and Skiles 2019, p.646)

\textsuperscript{13}It is easiest to understand this notion of partial generic essence in the simple case where $F$ and $H$ are something like genus and differentia, providing a species $G$, such as: to be human just is to be rational and animal. However, for reasons I do not need to go into here, Correia and Skiles allow for cases where the supplementary part $H$ on the right-hand-side could simply be $G$. For example, to be human just is to be human, hence, to be human just is to be rational and human.

\textsuperscript{14}Note that this is already a more precise way to understand essence than the suggestive notion of a real definition. And indeed, in other work, Correia (Correia, 2017) provides a more precise account of real definition in terms of generalized identity.
For example, suppose Plato is essentially human. Then there is some $F$ such that
$\forall x (x = \text{Plato}) \equiv (\text{human}(x) \land Fx)$. In which case, there is some $F$ such that
$\Box \forall x (x \text{ is Plato} \iff x \text{ is human and } Fx)$. If necessarily, something is Plato if and only if it’s human and $F$, then necessarily, something is Plato only if it’s human. We have the link between Plato’s being essentially human and his being necessarily human, in the sense that necessarily, if something is Plato, then it is human.

Note: Correia and Skiles express these principles in terms of a necessitated biconditional following from a generalized identity, but it seems plausible that, if this kind of consequence holds, then that is because the generalized identity itself is necessary. For, if the generalized identity held only contingently, one would expect the correlation between, say, $p$ and $q$ to also hold contingently, and not necessarily. Hence, for now, I will take the following principle instead:

(9*) If $p \equiv q$ then $\Box(p \equiv q)$

Of course, though, this just moves the bump in the carpet. For why, according to the essentialist, should we accept the necessity of identity in general, or of generalized identity in particular? As a first answer, one could appeal to proof, for there is indeed a proof of the necessity of identity.

1. $\forall x \forall y ((x = y) \supset (Fx \supset Fy))$  
   LL

2. $\forall x \Box(x = x)$  
   Necessity of self-identity

3. $\forall x \forall y ((x = y) \supset (\Box(x = x) \supset \Box(x = y)))$  
   Instance of (1) from (2).

4. $\forall x \forall y ((x = y) \supset \Box(x = y))$  
   From (2), (3).

(See Barcan 1947; Kripke 1971). Leibniz’s Law tells us that if $x$ and $y$ are identical, then $y$ has all and only the same properties as $x$ (or, if you prefer, all and only the same predicates truly apply to $x$ and $y$). $x$ is necessarily self-identical, that is, $x$ is necessarily identical to $x$, so, given Leibniz’s Law, $y$ must also be necessarily identical to $x$. That is, if $x = y$, then necessarily $x = y$. Identity is necessary.
We can now modify this proof to show the necessity of generalized identity.\footnote{I have omitted the restrictions on (1) here for clarity as they do not affect the proof. But recall: (1) holds only where \(\Phi[q//p]\) results from sentence \(\Phi\) by replacing one or more occurrences of \(p\) by \(q\), with the condition that no variable that is free in \(p \equiv q\) is bound in \(\Phi\) or \(\Phi[q//p]\).}

1. If \(p \equiv q\) and \(\Phi\), then \(\Phi[q//p]\)  
   LL for \(\equiv\)
2. \(\Box(p \equiv p)\)  
   Necessity of self-generalized-identity
3. \(p \equiv q \supset (\Box(p \equiv p) \supset \Box(p \equiv q))\)  
   Instance of (1) from (2).
4. \(p \equiv q \supset \Box(p \equiv q)\)  
   From (2), (3).

Leibniz’s Law for generalized identity tells us that if for it to be the case that \(p\) just is for it to be the case that \(q\), and \(\Phi\) is true, then the result of replacing one or more occurrences of \(p\) by \(q\) in \(\Phi\) (given that no variable that is free in \(p \equiv q\) is bound in \(\Phi\) or \(\Phi[q//p]\)) will also be true. But, necessarily, for it to be the case that \(p\) just is for it to be the case that \(p\). So, given this version of Leibniz’s law, if \(p \equiv q\), we can substitute, such that it will also be true that necessarily, for it to be the case that \(p\) just is for it to be the case that \(q\). Generalized identity is necessary.

There remains, however, a significant problem. The reader may well already have noticed that both proofs depend upon a necessity claim, namely, the necessity of (generalized) self-identity from which the necessity of (generalized) identity is derived. But how can the essentialist account for this necessity? I.e., why agree that \(\Box(p \equiv p)\)? If they are to remain true to their essentialism, the crucial necessity must have its source in essence.\footnote{Romero (2019) briefly considers a similar argument via the necessity of generalized identity, but in relation to a slightly different proposal, based on Correia (2017). His main criticism is thus related to the specifics of that proposal.} Perhaps the most natural, essentialist option is then: it is true in virtue of the essence of generalized identity that \(p \equiv p\), and hence necessary that \(p \equiv p\). If we appeal to such an essentialist statement about generalized identity itself, then this will be, according to the proposal under discussion, a (perhaps partial) statement of generalized identity about generalized identity. In which case, our question stands: why should a statement of generalized identity—about \textit{anything}, including about generalized identity—give rise to a
This brings forth the crucial and general objection here: one should not appeal to the essence of anything to account for this necessity. For any statement of essence will be a statement of (full or partial) generalized identity. And then we may ask: why take that generalized identity to be necessary? I have proposed an answer to this question above, building a bridge between generalized identity and necessity that runs via a proof of the necessity of generalized identity, making appeal to the necessity of generalized self-identity. But we cannot rely upon this proof to also build a bridge from a statement of essence to the necessity of generalized self-identity itself, on pain of circularity. We will have to look elsewhere to account for the necessity of \( p \equiv p \).

A second option is semantic: just as a plausible semantics for a logic containing identity may take \( \forall x (x = x) \) to be a theorem, so a plausible semantics for generalized identity make take something like \( \forall p (p \equiv p) \) also to be a theorem.\(^{17}\) Indeed, Correia and Skiles specify that they take \( \equiv \) to be reflexive, such that \( p \equiv p \) holds for any \( p \), and any sequence \( v \) of zero or more variables (Correia and Skiles 2019, p.645). This would seem to confer something like the status of logical necessity on \( p \equiv p \)—assuming that this logic of \( \equiv \) genuinely captures the true behaviour of generalized identity, and that taking its theorems to be logically necessarily true is thereby licensed. Even assuming that this logic is 'correct' in the required sense, and hence that \( p \equiv p \) has the status of theoremhood, important questions remain. (A) What is the source of these semantic constraints on \( \equiv \)? And (B) what is the link between theoremhood and necessity? If we give an answer to (A) that does not appeal to essence—e.g. to the essence of generalized identity, or to the essence of the meaning of 'just is'—then ultimately the source of the necessity of generalized identity will not be essence, but something else. Hence, the essentialist about modality would have to concede that there is at least one necessity that does

\(^{17}\) This option was suggested by Alex Skiles in discussion and correspondence.
not have its source in essence. But then if we give an answer to (A) in terms of essence, we will fall back into the same circularity problem as before. Similarly: if we give an answer to (B) that gives an account of the necessity of logical theorems that does not appeal to essence, then again, we have a case of necessity that does not have its source in essence. But if we instead appeal to essence—if we take the familiar essentialist line that it is logically necessary that \( p \) just when it is true in virtue of the nature of logical things that \( p \)—we fall back into our problem of needing to explain the link between essence and necessity. (Of course, one might deny that theoremhood has any relation to modality at all, in which case, one can hardly appeal to it as the source of necessity.) In sum: the semantic approach either suffers from the same problems as our first essentialist response, or concedes that there are necessities that do not have their source in essence.

Hopeless as it may seem, this second option leads on to a third. For why, one might ask, must the essentialist insist that all necessity has its source in essence? Surely they have already made a significant philosophical advance if they can conclude that metaphysical necessity has its source in essence, with an accompanying defence of (NP) for the link between essence and metaphysical necessity, along with a concession that logical necessity is to receive a different, non-essentialist treatment. This would be to depart from the essentialist theory of modality that is extended to logical necessity as a species of metaphysical necessity, as proposed by the likes of Fine and Hale, but it is no less an essentialist theory as applied to metaphysical modality.

This, then, so far as I can see, is the most promising line of response available: to divorce metaphysical necessity and logical necessity, offering an essentialist account of the former and an alternative account of the latter. It would then be open to support (NP) as outlined above. The necessity of identity is a logical necessity: one can start by assuming the logical necessity of \( p \equiv \neg p \)—whatever account we
want to give of that kind of necessity—and via a logical proof, extend that to the logical necessity of \( p \equiv q \) (on the condition that \( p \equiv q \) is true). So we are thereby assured the necessity of generalized identity statements, and hence the necessity of essentialist statements. Whilst in giving an account of metaphysical modality the essentialist must appeal to a logical necessity, there is no circularity, because logical necessities are not in turn subsumed under the account of metaphysical necessities. The essentialist would of course have to give up the claim that logical necessity is just a sub-species of metaphysical necessity. For if logical necessities are just a special case of metaphysical necessities, then any appeal to a logical necessity will be an appeal to a metaphysical necessity, ultimately arising from essence, in which case, we can hardly appeal to that logical necessity to explain the connection between essence and necessity. In taking such a view, the scope of the essentialist project would be reduced, but not wholly undermined. Perhaps it is a reasonable view, after all, to hold that metaphysical modality has its source in the essences of things, but that logical necessity is rather different, and has its source in something else. And after all, there may be independent reasons to think that these two kinds of necessity should indeed be understood as having different sources (see, for example, Edgington 2004).

However, this proposal faces two significant challenges.

First, the proposal raises a difficult question concerning the relationship between metaphysical and logical modality. The following logical relationship between logical and metaphysical necessity is typically accepted: if it is logically necessary that \( p \), then it is metaphysically necessary that \( p \). For it seems unacceptable to suppose that some logical impossibility may nevertheless be metaphysically possible. The standard essentialist about modality—à la Fine and Hale—has a neat explanation of this relationship; logical necessities are just a special case of metaphysical necessities, namely, those true in virtue of the nature of the logical things. If one divorces one's
account of logical necessity from the essentialist account of metaphysical necessity, however, this explanation is no longer available. One will have to explain why it is that necessities with such different sources—the essences of things, and something else—should have turned out to line up so perfectly.

Of course, the devil will be in the details of the proposed alternative account of logical necessity, and how it relates to the essentialist theory of metaphysical necessity. But details aside, for any combination of views here, the question will arise: given that we have a (non-essentialist) account of logical necessity, is there a way to give an account of metaphysical necessity as derivative of logical necessity (rather than vice versa, as was proposed by our essentialist above)? This would provide a template for an account of the relationship of the two kinds of necessity—whereas before logical necessity was a sub-species of (essentialist) metaphysical necessity, we could now say that metaphysical necessity is otherwise derived from (non-essentialist) logical necessity. For example, one might give an account of metaphysical (and other kinds of) necessity as relativizations of logical necessity: metaphysical necessity is a matter of what follows (logically) from the laws of metaphysics; metaphysical possibility is a matter of being (logically) compatible with the laws of metaphysics. The essentialist would need to show that we need to introduce a new source of necessity—essence—in addition to the theoretical resources already offered by logical necessity, independently understood, and a method for generating derivative necessities. Not only that: but a new source of necessity that may still honour and explain the logical relation between logical and metaphysical necessity.

Second, there is an oddity of the proposed approach which was all along lurking in the background, namely, that generalized identities turn out to be not merely metaphysically, but rather logically, necessary. So it will be logically necessary that $p \equiv p$, and so in particular, and for example, logically necessary that for something

\footnotetext{See Michels (2019); Nolan (2011); Rosen (2006) for discussion.}
x to be Socrates is for x to be human and Fx. One can understand the necessity of identity proof in informal terms, as transferring the box from □(p ≡ p) to □(p ≡ q) on the condition that p ≡ q, hence the necessity attaching to the former is the same as the necessity attaching to the latter. And the suggestion was to understand the box as signifying logical necessity in order to get us out of trouble. So, whilst the essentialist may have reassured themselves that the deliverances of essence are necessary, they might be said to have overshot, in generating no mere metaphysical necessities at all, but only logical necessities. If, as has just been suggested, the essentialist has conceded that it is metaphysical necessities—but not logical necessities—that have their source in essence, then the risk is that they may salvage their view at the cost of deleting the entire phenomenon of merely metaphysical necessity, and hence necessity that has its source in essence, wholesale.

The essentialist may reply: the necessities of informative identities such as Hesperus is Phosphorus are obviously not logical necessities. They are a posteriori and so that gives a clear reason for taking them to be not logical but merely metaphysical necessities. My response to this kind of objection is as follows. We start with the necessity of self-identity. One could perhaps just stipulate that □(p ≡ p), where '□' expresses logical necessity. Alternatively: if the logic for ≡ includes a necessitation rule, and if p ≡ p is a theorem of that logic, then it follows that □(p ≡ p) for the kind of necessity implicated by theoremhood in that logic. There are important questions how to think of the different 'necessities' expressed by the result of applying a necessitation rule in different logics, but it seems plausible to take '□' thus produced in a logic of identity to express a logical necessity. The proof then effectively acts by transferring, as I put it above, that necessity from p ≡ p to p ≡ q. Of course, this is not to say that p ≡ q is itself a theorem of the logic. The necessity of p ≡ q, in any given case, is still conditional upon the truth of p ≡ q. But nevertheless, the nature or variety of necessity which (however conditionally)
eventually attaches to \( p \equiv q \) is logical. This does not seem to me to be in and of itself a problem. Nor does it seem to me to be problematic if some of what we call 'metaphysical necessities' are also logically necessary for this kind of reason. The problem arises from wanting all metaphysical necessity—as a distinctive kind of necessity—to have its source in essence, but in turn, in being committed to all of the necessity that attaches to essentialist statements—understood as a kind of identity statement—being logical necessity.

To sum up: the essentialist account of modality, which takes (at least) metaphysical modality to have its source in the essences of things, faces the challenge to explain why we should agree that essence gives rise to necessity, that is, to defend something like (NP). One promising option seemed to be to appeal to an account of essence given in terms of generalized identity, and in turn to appeal to the necessity of generalized identity. I have argued that this response to the challenge is threatened by circularity. One way to avoid the circularity and resurrect the proposal is to retain an essentialist account of metaphysical modality whilst seeking a non-essentialist account of logical modality. This, however, risks erasing any distinctive kind of metaphysical necessity at all. If one favours an account of essence in terms of generalized identity, then, I have argued, one will not be able to defend (NP), and hence not also endorse an essentialist theory of modality. Or if one wishes to defend an essentialist theory of modality, and thereby to defend (NP), one should not understand essence in terms of generalized identity. This does not show that one cannot be an essentialist about modality, based on some other account of essence; and it does not show that one cannot understand essence in terms of generalized identity whilst refraining from endorsing a version of (ETM); but it does show that a new and seemingly promising approach to understanding essence and necessity at best faces a serious challenge, and at worst should not be pursued.\(^{19}\)

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References


Dorr, Cian. 2016. "To be F is to be G." *Philosophical Perspectives* 30 (Metaphysics):39–134.


