6

Essence and Thisness

Sungil Han

6.1 Introduction

Many philosophers were once skeptical about metaphysics mainly because we did not have a semantic framework with which to understand modal claims as intelligible. Against this skeptical backdrop, Saul Kripke made a significant contribution to rehabilitating metaphysics in the analytic tradition.[1] With the help of possible worlds framework, Kripke showed how modal claims in general can intelligibly be made and how certain claims of necessity are indeed plausible or even undeniable.[2] Nevertheless, Kripke has left a lacuna concerning the source of modality. In virtue of what, are necessary truths and modal truths in general true? How to ground modality is a task we need to take up if we wish to complete Kripke's project of vindicating metaphysics.[3]

Kit Fine has proposed a promising way to undertake this remaining task.[4] Since the framework of possible worlds was given, essence has often been assimilated to necessity: an object has a certain property essentially just in case the object has the property necessarily—that is, it has the property in all possible worlds in which it exists. According to Fine, however, the assimilation of essence to necessity can't be right because essence is prior to, and the source of, necessity: every necessary truth is grounded in some essential truth. Let us call this claim 'Fine's thesis.' If Fine's thesis is true, necessary truths have their source in essential truths, which provides us with resources with which to ground modal truths in general.

If essence is prior to necessity, how is essence to be understood? For Fine, essence is conceptually primitive. This, however, does not prevent us from having a model of how the concept of essence works. Fine proposes a 'definitional' model of essence. Among properties of an object are properties that explain what it is. According to Fine, the collection of the identity-explaining properties of an object or 'the definition' of an object makes up the constitutive portion of the essence of the object, while the rest of the essence consists of the consequences of the definition. On the definitional model of essence, the essence of an object is the collection of properties that are in the definition of the object or consequences of the definition.

I accept Fine's thesis, for I believe that the project of grounding modality should be pursued along the line of Fine's thesis. But I have qualms about the definitional model. The definition of an object comprises the constitutive essence of it. This much is uncontroversial. But the definitional model suggests more than that: on this model, the definition of an object *is* the constitutive essence of it. Therein, I think, lies a problem. Socrates is identical to Socrates. That's necessary. If we are to ground this necessary truth, we must acknowledge that Socrates has a primitive individuality we cannot capture except by an act of naming— viz. his being *this* one—and that the 'thisness' of Socrates is in his constitutive essence, though it doesn't belong in the definition of him. If modality is to be grounded, the constitutive essence of an object must not be assimilated to the definition of it. This is what I aim chiefly to establish in the chapter.

The chapter has two main parts. The first is concerned with setting up the problem for the definitional model. In Section 6.2, I will look closely at the definitional model and uncover a problem. The problem is this: if Socrates being necessarily identical to Socrates is to be grounded, being-identical to Socrates or the identity property of Socrates must be essential to Socrates; but, the definitional model prevents us from regarding the identity property of Socrates as an essential property of him. In order to appreciate the problem properly, we need to consider what the basic form of modal/essence statements is. In Section 6.3, I will consider two approaches, sentential and predicational, and argue that the basic form of modal/essence statements is predicational. Once this is done, it will become clearer why the problem should be taken seriously.

The second part of the chapter will be devoted to arguing that the problem is not solvable. The problem would be solved if we could show that the definitional model, contrary to the appearance, doesn't really prevent us from regarding the identity property of Socrates as essential to him or that, even if the identity property of Socrates is not essential to him, there is an essential ground for Socrates being necessarily identical to Socrates. In Section 6.4, I will argue that neither of these is true, showing that within the definitional model, the identity property of Socrates can't be deemed an essential property of him: it is neither in the definition of him nor a consequence of the definition. And it will be argued in Section 6.5 that if the identity property of Socrates is not essential to Socrates, prospects for finding an essential ground for Socrates being necessarily identical to Socrates are extremely dim.

If I am right, the identity property of Socrates is in the constitutive essence of him though it is not in the definition of him. So, the definitional model must give way to an alternative model of essence that makes room for this kind of essential properties. The aim of Section 6.6 is to offer one such model. In some cases, the essence of an object is fully determined by the definition of it because its constitutive essence amounts to its definition, but as a general rule, this will not be the case. For concrete objects such as you and me or substances as it were, their constitutive essence involves not only their definition or whatness that makes them intelligible to the intellect but also their thisness that is not graspable without the help of the sensible intuition. To generalize, the essence of an object, I propose, should be determined in terms of the identity property of it. Finally, I will close by drawing a few distinguishing features of the alternative model.

6.2   The definitional model

Let us begin by considering Fine's view of essence in more detail. The central element of Fine's view is Fine's thesis:

<u>Fine's thesis</u>   Every necessary truth is grounded in some essential truth or, put another way, every necessary truth has an essential ground.[5]

Fine's thesis assumes that essence is prior to modality. This makes a stark contrast to the modal account of essence, according to which what it is for an object to have a certain property essentially is for the object to have that property necessarily. Before proposing Fine's thesis, Fine persuasively argues against the modal account. To use his celebrated example, Socrates necessarily belongs to {Socrates}, but that doesn't seem to be essential to Socrates, for there seems to be nothing in the essence of Socrates that indicates the existence of sets.[6] For Fine, essence cannot be understood in modal terms.

How then is essence to be understood? According to Fine, "we have an informal way of saying that an object essentially has a certain property." When we say that an object has a property essentially, we mean that "the object must have that property if it is to be the object that it is."[7] It seems to me that this accurately captures our grasp of essence, which can be formulated as follows:

<u>The Fine equivalence</u>   For any object x and any property F, x is essentially F if and only if x must be F to be the object that it is.

The term 'must' in the right-hand side has a pre-modal sense. When we say that x in the relevant sense must be F to be the object that it is, we are not considering how x is in all possible worlds in which it exists. We are rather focused on x and F and saying that x's *being* F or x's *having* of F is so 'strong' that x is 'inseparable' from being F.[8]

This is not to say that the Fine equivalence provides a reductive analysis of essence. The sense of 'strong' or 'inseparable' used in explaining the sense of 'must' is neither physical nor modal. It has a peculiar metaphysical sense. And it seems that we cannot understand the metaphysical sense except through the concept of essence: an essential property of an object is inseparable from the object (even in thought) not because of some physical or modal bond between them but owing to the *essential* connection of the property to the object. The metaphysical *must* on the right-hand side relies on the concept of essence. The concept of essence is after all primitive.

Nevertheless, the Fine equivalence is not unilluminating. The concept of essence stands in relation to other primitive concepts so as to form a conceptual circle. Every single one of the concepts in the circle is not subject to reductive analysis. Yet, the circle is useful and informative: we may grasp the sense of each concept in terms of the others. The Fine equivalence illuminates one aspect of the circle of basic concepts. Fine calls the Fine equivalence 'informal' perhaps because he thinks that it is a pre-theoretic construal of

essence and thus might need refinement. But, in any case, the Fine equivalence itself is unproblematic and captures our intuitive grasp of essence. The Fine equivalence is a minimal necessary condition for the concept of essence. Or so I assume.

The concept of essence is primitive. Nonetheless, we may have a model of how the essence of an object is determined. To see what Fine offers as a model of essence, we should note that, for Fine, the essence of an object divides into the constitutive portion of the essence and the rest. For any object x and any properties F and G, let us say that G is a consequence of F (or F entails G) just in case it is a logical truth, for any x, that x is G if x is F;[9] and that F is in the constitutive essence of x just in case there are no properties in the essence of x such that F is in the essence of x in virtue of being a consequence of the properties, while F is in the derivative essence of x just in case F is in the essence of x but not in the constitutive essence of x.[10] Both having Socrates as a sole member and having something as a member are essential to {Socrates}. Presumably, however, the former but not the latter is in the constitutive essence of {Socrates}: it is fundamental that the former is in the essence of {Socrates}, whereas the latter is in the essence of {Socrates} in virtue of being a consequence of the former. For Fine, the essence of an object consists of the constitutive and derivative essences of the object.[11]

If the essence of an object is given, we know how to determine *which* properties are in the constitutive essence of the object. But *what* properties are (candidates for inclusion) in the constitutive essence in the first place? The definition of an object has a key role to play in this matter. While the definition of a word explains what the word means, the definition of an object explains what the object is. Let us say that F explains what x is if and only if that x is F explains what x is. Among properties of an object are properties that explain what the object is. Call the collection of such identity-explaining properties the 'definition' of the object. According to Fine, the constitutive essence of an object is the definition of the object. I will call any model of essence that is committed to the assimilation of constitutive essence to definition 'the definitional model' of essence.

What is notable about the definitional model is that it puts a certain constraint on essence that is not found in the Fine equivalence. On this model, all essential properties of an object are in the definition of it or consequences of the definition. So, the essence of an object is fully determined by the definition of it. Recall that the definition of an object are its properties that *explain* its identity. At the heart of the definitional model is an explanatory constraint on essence: if a property of an object is to be an essential one, it must explain the identity of the object or be consequential from what explains the identity. This is something beyond what the Fine equivalence suggests. Let F be a constitutive essential property of x. On the definitional model, F must explain what x is. But all the Fine equivalence implies is that x must be F to be the object that it is whether F explains what x is or not.

So, the definitional model of essence can be understood as the Fine equivalence combined with the explanatory constraint on essence. Indeed, this is how advocates of the definitional model characterize the essence of an object. For example, E. J. Lowe, a notable espouser of Fine's view on essence, understands the essence of an object as "what makes it the thing that it is,"[12] and in grounding modality along the line of Fine's proposal, Bob Hale characterizes

the essence of an object X as "the property which anything must possess, if it is to be X, and possession of which makes it X."[13] It is clear that their construal of essence is based on the Fine equivalence. And, although they don't use the term 'explain', it is also clear that they assume the explanatory constraint on essence, for the intended sense of 'make' in the above characterizations is explanatory while the choice of the word 'make' is to highlight that the explanation in question is in nature metaphysical.

Fine's view of essence consists of Fine's thesis and the definitional model, while the definitional model consists of the Fine equivalence and the explanatory constraint on essence. Fine's thesis should be accepted if we are to take up the task of grounding modality. Or so I assume. But I think the definitional model is open to question. Indeed, the definitional model fits well with Fine's favored example, {Socrates}, and its ilk. The definition of the null set, $\varnothing$, is being a set with no member, while all other essential properties of it seem to be consequential from the definition. The definition of {Socrates} is being a set with Socrates as a sole member, while all other essential properties of it seem to be consequential from the definition. So, their essences are fully determined by their definitions. The definitional model seems to work very well for most or even all 'abstract' objects.

When it comes to agents or individual substances we encounter in the causal realm, however, some of their essential properties might not get caught in the net of the definitional model. What is Socrates? He is a person. Being a person belongs in the definition of Socrates and thus is in the constitutive essence of him. This much is what the definitional model correctly predicts about the essence of Socrates. Now consider this. Socrates is identical to Socrates. This is also necessarily true. Given Fine's thesis, the necessary truth requires an essential ground. What grounds it? We may plausibly think that this necessity holds because Socrates is essentially identical to Socrates—that is, because being identical to Socrates or the identity property of Socrates is essential to him.[14] On reflection, however, the definitional model doesn't seem to allow us to regard the identity property of Socrates as an essential property of him.

On the one hand, it seems that the identity property of Socrates cannot be understood except through Socrates, so it can't explain what Socrates is on pain of being circular and thus doesn't belong in the definition of him. On the other hand, it seems that the identity property of Socrates cannot be understood except through Socrates *alone*, so it can't be explained by things other than Socrates and thus isn't a consequence of the definition of Socrates either. So, within the definitional model, it seems impossible for us to regard the identity property of Socrates as an essential property of him. It seems to me that the identity property of Socrates is in the constitutive essence of Socrates though it isn't in the definition of him. Space for constitutive and yet non-definitive essential properties is a blind spot of the definitional model.

This leads us to suspect that the definitional model is tailored to abstract objects but not a general model for all objects. Of course, the suspicion is in need of much justification. Does the definitional model really prevent us from accepting the identity property of Socrates as an essential property of him? And do we really have to accept the identity property of Socrates as an essential property of him in order to ground the fact that necessarily, Socrates is

identical to Socrates? Much of my subsequent discussion will be devoted to answering these questions. But before embarking on a detailed discussion, I should address one issue to set up the stage for the subsequent discussion. In the next section, I will consider what the basic form of modal/essence statements is. Once the basic form of modal/essence statements is identified, we will be in a better position to see the problem more clearly.

6.3   A clarification on the problem with the definitional model[15]

Socrates is identical to Socrates. And this is necessarily so. So, the following must be true:

(N)   Necessarily, Socrates is Socrates.

But we should note that (N) is potentially ambiguous, meaning either of the following two:

(1)   Necessarily, Socrates is self-identical.
(2)   Necessarily, Socrates is identical-to-Socrates.

To say that Socrates is self-identical is to ascribe to Socrates being-self-identical—a property shared by all objects. On the other hand, to say that Socrates is identical-to-Socrates is to ascribe to Socrates being-identical-to-Socrates—a property had by Socrates only. Given that being-self-identical and being-identical-to-Socrates are different properties, (1) and (2) must mean different things. And when I said that (N) requires an essential ground, my concern was with (2) rather than (1).

But it might be claimed that (1) and (2) mean the same. It is true that being-self-identical and being-identical-to-Socrates are different properties. Even so, the claim goes, it does not follow that (1) and (2) are not the same. In the language of the lambda calculus, 'Socrates is self-identical' and 'Socrates is identical-to-Socrates' are expressed as 'Socrates is $\lambda z(z=z)$' and 'Socrates is $\lambda z(z=Socrates)$'. And 'Socrates is $\lambda z(z=z)$' and 'Socrates is $\lambda z(z=Socrates)$' are logically equivalent: by the rules of lambda transformation, from 'Socrates is $\lambda z(z=z)$', 'Socrates=Socrates' is derivable, and from 'Socrates=Socrates', 'Socrates is $\lambda z(z=Socrates)$' is derivable; and vice versa. If 'Socrates is self-identical' and 'Socrates is identical-to-Socrates' are logically equivalent, the two after all express the same thing: when we say that Socrates is identical-to-Socrates, we mean in a roundabout way that he is self-identical, and vice versa.

However, even if 'Socrates is self-identical' and 'Socrates is identical-to-Socrates' are logically equivalent, it does not follow that the two are *semantically* equivalent. When we make a simple subject-predicate statement, we ascribe a property expressed by the predicate to an object regarded as the subject. If we ascribe the same property to different objects, we make different statements. If we ascribe to the same object different properties, we make different statements. It is true that in many contexts, logically equivalent statements can be

used interchangeably for the purpose given in the contexts. But logically equivalent propositions are not always semantically equivalent. And I think that 'Socrates is self-identical' and 'Socrates is identical-to-Socrates' are such a case in point. Given that 'Socrates is self-identical' and 'Socrates is identical-to-Socrates' are semantically different, (1) and (2) should mean different things.[16]

Admittedly, it is controversial to claim that 'Socrates is self-identical' and 'Socrates is identical-to-Socrates' are not semantically equivalent although they are logically equivalent. It would be better for the current discussion not to rely on the controversial claim. To avoid the unnecessary controversy, let me assume, for the sake of argument, that 'Socrates is self-identical' and 'Socrates is identical-to-Socrates' are semantically equivalent. Even so, however, that doesn't undermine the claim that (1) and (2) mean different things. Although being-self-identical and being-identical-to-Socrates are different properties, when we ascribe these properties to Socrates by way of simple predication, we might end up proposing the same proposition. Or so we assumed. But in saying (1) and (2), we are ascribing these properties to Socrates by way of *modal* predication, in which case, we may be saying different things.

To see how that can be, we should distinguish two approaches to the logical form of modal statements: sentential and predicational. How is a modal statement 'Necessarily, x is F' to be understood? One approach is to take 'Necessarily' as a sentential modifier. So, in the sentential approach, in making a modal statement, 'Necessarily, x is F', we take a sentence 'x is F' first and add 'Necessarily' to the sentence to get a new one. To make explicit the logical form, 'Necessarily, x is F' may be parsed as 'It is necessary that x is F' or '□(x is F)'. So, in the sentential approach, (1) and (2) are regimented as follows:

(1') □(Socrates is self-identical).

(2') □(Socrates is identical-to-Socrates).

As assumed, to say that Socrates is self-identical is to say that Socrates is identical-to-Socrates. Then, clearly, (1') and (2') mean the same. In the sentential approach, (1) and (2) mean the same thing.

On the other hand, in the predicational approach, things are not the same. In this approach, 'Necessarily' is a predicate modifier to the effect that when we make the modal statement 'Necessarily, x is F', 'Necessarily' is added to a predicate 'F' to produce a new predicate 'Necessarily F', and we use the new predicate to make a modal statement. So, 'Necessarily, x is F' may be parsed as 'x is necessarily F' or 'x is ℕ~F' in which case, (1) and (2) are regimented as follows:[17]

(N1) Socrates is necessarily self-identical—i.e., Socrates is ℕ~self-identical.

(N2) Socrates is necessarily identical-to-Socrates—i.e., Socrates is ℕ~identical-to-Socrates.

Clearly, being-self-identical and being-identical-to-Socrates are different properties. Then, being-ℕ~self-identical and being-ℕ~identical-to-Socrates should be different properties. In

the language of the lambda calculus, (N1) is that Socrates is ℕ~λz(z=z), and (N2) is that Socrates is ℕ~λz(z=Socrates). Note that the rules of lambda transformation do not license us to infer (N2) from (N1) as the rules are not applicable to 'Socrates is ℕ~λz(z=z)'. In the predicational approach, (1) and (2) mean different things.

(1) and (2) express two distinct propositions if the basic form of modal statements is predicational. But should we accept the predicational approach to modal statements? It is true that the sentential approach to modal statements is far more popular in the literature than the predicational approach. This is understandable because it is technically convenient to take the sentential approach, while in most contexts, we don't need to choose between the two approaches as it makes no significant difference for the purposes of the given context. But I think we nonetheless have good reason for thinking that the basic form of modal statements is predicational. The necessity of identity is true—that is, for any x and y, if x is y, then necessarily, x is y. And it is true as Kripke proved it. This much is familiar. But a close examination shows that if we are to think that Kripke's proof goes through, we should accept the predicational approach.

Assuming that names behave like individual constants, let 'a' and 'b' be names of the same object.[18] Kripke's proof goes as follows:[19]

(A) $\Box(a=a)$.

(B) $(a=b) \supset (\Box(a=a) \supset \Box(a=b))$.

(C) $(a=b) \supset \Box(a=b)$.

The basic idea is this. If *a=b*, then any property of *a* including *a*'s modal properties must be had by *b*. (A) tells us that *a* has a certain modal property. (B) tells us that if *a=b*, *b* also has that modal property. Given (A) and (B), (C) truth-functionally follows.

This proof seems to be intuitive and straightforward. On reflection, however, things are not so simple. What modal property is it that is ascribed to *a* in (A) and thereby claimed to be shared with *b*? Kripke takes (A) as obviously true, saying that "every object surely is necessarily self-identical."[20] This might suggest that the modal property Kripke has in mind is the property of being necessarily self-identical. However, this can't be right. If the shared modal property in question were being necessarily self-identical, it would follow only that *b* is necessarily self-identical. This being the case, all we can have would be this: $(a=b) \supset (\Box(a=a) \supset \Box(b=b))$, which is weaker than (B). And this does not license us to infer (C).

What then is the shared modal property? In explaining the idea behind the proof, Kripke also says that "if *x* and *y* are the same object and *x* has a certain property F, then *y* has to have the same property F…even if the property F is itself of the form of necessarily having some other property G, in particular that of necessarily being identical to a certain object…—in particular, even if 'F' stands for the property of necessary identity with *x*."[21] This suggests that the shared modal property Kripke has in mind is the property of being necessarily identical to *a* rather than the property of being necessarily self-identical.

Kripke oscillates between the two properties perhaps because he assumes that (i) *a* being necessarily self-identical and (ii) *a* being necessarily identical to *a* are the same thing. However, if the proof is to get off the ground, (i) and (ii) must be distinguished. For if (i) and (ii) were the same, the proof would be open to serious question as opponents of the necessity of identity would interpret (A) as (i) and insist that all we can get is the weaker claim than (B)—i.e., $(a=b) \supset (\Box(a=a) \supset \Box(b=b))$.[22] So, if Kripke's proof is to go through, (i) and (ii) must be distinguished, and (ii) must be taken as the intended meaning of (A).

In the sentential approach, however, (i) and (ii) are not distinguishable. We can't distinguish the two by claiming that (i) means that *a* is $\lambda z \Box(z=z)$ whereas (ii) means that *a* is $\lambda z \Box(z=a)$. Clearly, '*a* is $\lambda z \Box(z=z)$' and '*a* is $\lambda z \Box(z=a)$' are logically equivalent: both come down to '$\Box(a=a)$.' If '*a* is $\lambda z \Box(z=z)$' and '*a* is $\lambda z \Box(z=a)$' are logically equivalent, as assumed for the sake of argument, '*a* is $\lambda z \Box(z=z)$' and '*a* is $\lambda z \Box(z=a)$' are semantically equivalent: (i) and (ii) mean the same thing.

On the other hand, in the predicational approach, we can properly distinguish between (i) and (ii). In the predicational approach, 'Necessarily, x is F' is parsed as 'x is ℕ~F.' So, (i) and (ii) are respectively expressed as (i*) '*a* is ℕ~self-identical' and (ii*) '*a* is ℕ~identical-to-*a*.' As has been seen, (i*) is not derivable from (ii*) and vice versa. So, (i) and (ii) are not logically equivalent. And when we say that x is ℕ~F, we say of x *being* F, the connection between x and F, that its mode is necessary.[23] (i*) is concerned with the mode of *a being* self-identical, the connection between *a* and the property of being self-identical, while (ii*) is concerned with the mode of *a being* identical-to-*a*, the connection between *a* and the property of being-identical-to-*a*. Clearly, (i) and (ii) are distinct.

Now, with the distinction between (i) and (ii) in hand, we may restate Kripke's proof as follows:

(A*)   *a* is ℕ~identical-to-*a*.

(B*) $(a=b) \supset ((a$ is ℕ~identical-to-*a*$) \supset (b$ is ℕ~identical-to-*a*$))$

(C*) $(a=b) \supset (b$ is ℕ~identical-to-*a*$)$.

The argument is clearly sound. And if '*b* is ℕ~identical-to-*a*' is given, we may legitimately derive '$\Box(b$ is identical-to-*a*$)$': '*b* is ℕ~identical-to-*a*' says of *b*'s *having* of being-identical-to-*a* that its mode is necessary; and we may then plausibly think that the necessary mode of *b*'s *having* of being-identical-to-*a* gives rise to a universal truth '*b* has being-identical-to-*a* in all possible worlds in which it exists' or, put in sentential mode, '$\Box(b$ is identical-to-*a*$)$', which is equivalent to '$\Box(a=b)$.' So, from (C*), we can also get (C): $(a=b) \supset \Box(a=b)$.

The consideration so far strongly suggests that the basic form of modal statements is predicational. This motivates us to rethink about the basic form of essence statements too. Note that corresponding to the two approaches to modal statements, there are two approaches to essence statements: in the sentential approach, 'Essentially' is a sentential operator to the effect that 'Essentially, x is F' is parsed as 'It is essential to x that x is F' or, to use Fine's

notation, '$\Box_x$(x is F)'; while in the predicational approach, 'Essentially' is a predicate modifier to the effect that 'Essentially, x is F' is parsed as 'x is essentially F' or 'x is $\mathbb{E}{\sim}F$.'[24]

Fine often assumes the sentential approach to essence statements in discussing issues about essence. Perhaps it is due to this assumption of his that it became a rule of the game to assume the sentential approach in the literature. Fine's motivation is methodological. He usually adopts the sentential approach for the purpose of making essence and modal statements structurally similar and thereby making the reduction of necessity to essence smooth as we can have the following scheme:

$\underline{\Box_x/\Box}$-Ground   For any x and any F, if $\Box_x$(x is F), then [$\Box_x$(x is F)] grounds [$\Box$(x is F)].[25]

Note that Fine's assumption of the sentential approach to essence statements was made against the backdrop of the sentential approach to modal statements. If, however, the predicational approach should be preferred over the sentential approach in the case of modal statements, Fine would have no reason for holding onto the sentential approach in the case of essence statements.[26] As has been argued, we should adopt the predicational approach to modal statements. Then, we should adopt the predicational approach to essence statements for the purpose of making essence and modal statements structurally similar and thereby making the reduction of necessity to essence smooth as we can have the following scheme:

$\underline{\mathbb{E}/\mathbb{N}\text{-Ground}}$ For any x and any F, if x is $\mathbb{E}{\sim}F$, then [x is $\mathbb{E}{\sim}F$] grounds [x is $\mathbb{N}{\sim}F$].

I am now in a better position to explain more clearly why I think the definitional model is problematic. Consider the following modal claims:

(N1)   Socrates is necessarily self-identical—i.e., Socrates is $\mathbb{N}{\sim}$self-identical.

(N2)   Socrates is necessarily identical-to-Socrates—i.e., Socrates is $\mathbb{N}{\sim}$identical-to-Socrates.

Obviously, (N1) and (N2) are true. According to Fine's thesis, (N1) and (N2) must be grounded in some essential truths. What essential truths ground them? Well, the answer is simple: (N1) and (N2) are respectively grounded in the following essentialist claims:

(E1)   Socrates is essentially self-identical—i.e., Socrates is $\mathbb{E}{\sim}$self-identical.

(E2)   Socrates is essentially identical-to-Socrates—i.e., Socrates is $\mathbb{E}{\sim}$identical-to-Socrates.

If, however, the definitional model is true, (N2) is in danger of lacking an essential ground, for on the definitional model, (E2) can't be true, and if so, no essential truth would ground (N2). If we hold onto the definitional model, the project of grounding modality along the line of Fine's thesis is jeopardized. This calls the definitional model into serious doubt.

Let me recapitulate my worry about the definitional model as follows:

(P1) If the definitional model is true, then it is not the case that Socrates is essentially identical-to-Socrates.

(P2) If it is not the case that Socrates is essentially identical-to-Socrates, then the fact that Socrates is necessarily identical-to-Socrates has no essential ground.

(C) There is an ungrounded necessary truth or else the definitional model is false.

The argument is clearly valid. So, if (P1) and (P2) are true, unless we give up Fine's thesis, we must deny the definitional model and find another model that makes room for (E2). In the ensuing two sections, I will explain in detail why I think (P1) and (P2) are true.

6.4 In defense of (P1)

Why is (P1) true? My reason is as follows. The essence of an object divides into the constitutive and the derivative essences of the object. If the definitional model is true, then the constitutive essence of an object amounts to the definition of it, so the essence of an object would consist of the definition of the object and its derivative essence. This implies that on the definitional model, if the identity property of Socrates (i.e., being-identical-to-Socrates) is in the essence of Socrates, it is either in the definition of him or in his derivative essence. However, on the definitional model, the identity property of Socrates is neither in the definition of him nor in his derivative essence. So, if the definitional model is true, Socrates is not essentially identical-to-Socrates. (P1) is thus vindicated. In what follows, I will argue for this in greater detail.

For the sake of argument, suppose, for the moment, that the definitional model is true. To defend (P1), I need only to show that the following two claims are true:

(I) The identity property of Socrates is not in the definition of Socrates.

(II) The identity property of Socrates is not in the derivative essence of Socrates.

Let me begin with (I). If the identity property of Socrates is to belong in the definition of Socrates, it must explain what Socrates is. Explanation of identity is "a form of explanation" and thus "must conform to a noncircularity condition and not yield an explanation of something in terms of the very thing to be explained."[27] Thus, if the identity property of Socrates is to explain what Socrates is, it must conform to a noncircularity condition. But note that the identity property of Socrates or being-identical-to-Socrates 'presupposes' Socrates—i.e., it contains Socrates as a constituent.[28] So, the identity property of Socrates can't do the explaining because it presupposes the very object to be explained. The identity property of Socrates, on pain of being circular, can't explain what Socrates is. So, it doesn't belong in the definition of Socrates.[29]

Let us say that, for any x, the identity property of x is primitive just in case it presupposes x and that x is primitive just in case the identity property of x is primitive. In arguing for (I), I

have assumed that the identity property of Socrates is primitive or that Socrates is primitive. In defense of the definitional model, one might question the assumption. The identity property of $\varnothing$ appears to presuppose $\varnothing$, but it really doesn't: being-identical-to-$\varnothing$ is ultimately being a set with no member—it presupposes no individual. The identity property of {Socrates} appears to presuppose {Socrates}, but it really doesn't: being-identical-to-{Socrates} is ultimately being a set with Socrates as a sole member—it presupposes some individual but not {Socrates}. Can't we think that the identity property of Socrates, despite the appearance to the contrary, is not primitive either because it presupposes no individual or because it presupposes some individual but not Socrates? If we can, why can't we think also that the identity property of Socrates belongs in the definition of him?

Let me call this defense of the definitional model 'the Denial of Primitiveness'. The Denial of Primitiveness is based on two claims: first, (i) the identity property of Socrates is not primitive; and second, (ii) it belongs in the definition of him. But the Denial of Primitiveness fails because (i) and (ii) can't be true at the same time: if (i) is true, (ii) is false. Or so I will argue. Before proceeding, we should note that the Denial of Primitiveness commits its proponents to rejecting primitive individuals altogether. This is so because if we assume that there is a primitive individual (call it 'PI'), the question of how the identity property of Socrates can be deemed as essential to him would switch to the question of how the identity property of PI can be deemed as essential to PI. Consistency should force the proponents of the Denial of Primitiveness to reject the assumption that PI is primitive.

Suppose that (i) is true: the identity property of Socrates is not primitive. This is so either because it presupposes no individual (i.e., it is ultimately qualitative) or because it presupposes some individual but not Socrates. It is hard to think that it is qualitative. Being identical-to-Socrates is partly being a person. But being identical-to-Socrates is not being a person: the former is ascribable to Socrates only, but the latter is ascribable to many. Is being identical-to-Socrates being a person whose name is 'Socrates'? No, there might have been someone other than Socrates who is a person whose name is 'Socrates'. Similarly, for any finite number n, it would not be the case that being identical-to-Socrates is being $F_1 \ldots F_n$, where $F_1, \ldots, F_n$ are all qualitative, because there is no principled reason not to think that being a person who is F_1, $F_2, \ldots,$ and F_n might have been had by someone other than Socrates.[30] So, if the identity property of Socrates is qualitative, it should be a conjunction of infinitely many (and even all) qualitative properties Socrates actually has. But this is hard to believe, for it forces us to believe that the conjunction of infinitely many or even all actual qualitative properties of Socrates are essential to Socrates. Leibniz would be happy to embrace this counterintuitive consequence for his theoretical motivation.[31] But I suspect that whatever the motivation, the proponents of the definitional model with whom I engage now are not ready to accept the Leibnizian position. We may assume that the identity property of Socrates is not qualitative.[32]

This implies that if the identity property of Socrates is not primitive, that is so because it presupposes some individual but not Socrates. Call that individual 'α'. Then, being identical-to-Socrates amounts to being in R1 to α. Recall that given the Denial of Primitiveness, there are no primitive individuals. So, the identity property of α is not primitive. On the other hand,

the identity property of α is not qualitative, for the identity property of Socrates is not qualitative. So, the identity property of α presupposes some other individual α^*. So, being identical-to-Socrates amounts to being in R1 to an object that is in R2 to α^*. Then, for the same reason, α^* is not primitive, and the identity property of α^* presupposes some other individual α^{**}. So, being identical-to-Socrates amounts to being in R1 to an object that is in R2 to an object that is in R3 to α^{**}. And this will go on and on indefinitely. The identity property of Socrates is ultimately an indefinite property analyzed in terms of a series of indefinitely many objects: being identical-to-Socrates is being in R1 to an object that is in R2 to an object that is in R3 to an object and so on and so forth.

So, if the identity property of Socrates is not primitive, it turns out to be the above indefinite property. Once this is noted, it is hard to think that the identity property of Socrates is in the definition of him. We should note first that the indefinite property is supposed to be non-qualitative. But it is unclear how that can be. If it is non-qualitative, it contains as a constituent some particular individual. But what particular individual does it contain as a constituent? It is not Socrates. He is defined away by α. It is not α either. It is defined away by α^*. And so on and so forth. Where does the singularity of the indefinite property come from? We have no clue. This consideration strongly suggests that the indefinite property can't explain what Socrates is. I am not saying that there cannot be an indefinite property. Nor do I say that an indefinite property cannot be an essential property of an object. What is hard to accept is that an indefinite property does a *defining* job.

An explanation delivered by definition must be noncircular and definite. This is what I have assumed. The assumption should be uncontroversial. An attempt to define a word w in terms of a word or words w* would not succeed if w* presupposes w or consists of a never-ending list of many words whose whole meaning is never determined but is indefinitely deferred. A definition of an object is a real or objectual counterpart of a definition of a word. Thus, in the intended sense of 'explain' employed in the definitional model of essence, no property can explain what an object is if it presupposes the very object to be explained or consists of a never-ending list of many objects whose singularity is never determined but indefinitely deferred.[33]

The Denial of Primitiveness relies on the idea that if the identity property of Socrates is not primitive, it belongs in the definition of him as in the case of $\varnothing$ or as in the case of {Socrates}, wherein lies a problem. Proponents of the Denial of Primitiveness cannot claim that the identity property of Socrates is in the definition of Socrates as in the case of $\varnothing$: the identity property of $\varnothing$ can define $\varnothing$ because it is qualitative; but the identity property of Socrates isn't. Proponents of the Denial of Primitiveness cannot claim that the identity property of Socrates is in the definition of Socrates as in the case of {Socrates}: the identity property of {Socrates} can define {Socrates} only if Socrates is primitive so that it is definite; but given the Denial of Primitiveness, Socrates isn't primitive, so neither the identity property of {Socrates} nor the identity property of Socrates can do the defining job.

Insisting that the identity property of Socrates is not primitive doesn't support and rather undermines the claim that it belongs in the definition of Socrates. So, the Denial of Primitiveness fails. Indeed, it is hard to deny that Socrates is a primitive individual. $\varnothing$ and {Socrates} are in a sense a derivative individual. However, intuitively, Socrates is

fundamental or a 'substance' as it were. This being the case, it is not surprising that being-identical-to-Socrates cannot be understood except through Socrates himself. The identity property of Socrates is primitive. So, it can't explain what Socrates is and thus doesn't belong in the definition of Socrates. This vindicates (I).

Let me turn now to (II). The identity property of Socrates doesn't belong in the definition of him. Is it then in the derivative essence of Socrates? In the remainder of this section, I will argue that the answer is 'No.' If the identity property of Socrates is in the derivative essence of him, it is in the essence of Socrates because it is a consequence of some property F in the essence of him. And if F is in the derivative essence of Socrates, that is so because F is a consequence of some other property F' in the essence of him. And the same goes for F', F'', and so on until we reach a property in the definition of Socrates in which the essentiality of F has its ultimate source. So, if the identity property of Socrates is in the derivative essence of him, it is in the essence of Socrates because it is a consequence of some property in the definition of him.[34] In what follows, I will argue that it is extremely unlikely that there is such a property in the definition of Socrates.

Being a person belongs in the definition of Socrates. Obviously, the identity property of Socrates is not a consequence of being a person. Plato is a person. But he is not identical-to-Socrates. So, it is not a logical truth, for any x, that x is identical-to-Socrates if x is a person. This helps us see that for any property, if it can be had by something other than Socrates, the identity property of Socrates is not a consequence of that property. So, if the identity property of Socrates is a consequence of some property in the definition of Socrates, the property in question must be a property that can be had by Socrates and Socrates only. What would be such a property?

Perhaps, the best we can think of is the origin property of Socrates. Suppose that it is in the definition of Socrates that he came from his actual origin source O.[35] Then, since being a person is also in the definition of him, being a person who came from O is in the definition of Socrates. For simplicity, let me use the phrase 'the origin property of Socrates' to express the property of being a person who came from O, not just the property of having come from O. If the identity property of Socrates is to be a consequence of the origin property of Socrates, it must be the case that the origin property of Socrates can be had by Socrates only. But what prevents us from thinking that there might have been some person other than Socrates who came from O? If we are to think that the origin property can be had by Socrates only, we must also commit ourselves to what we may call 'the sufficiency of origin', according to which if it is possible that y came from z, it is necessary that anything that came from z is y and no other.[36]

The sufficiency of origin is contentious.[37] And I don't think it's true. But, for the sake of argument, let us assume that the sufficiency of origin is true and thus that the origin property of Socrates can be had by Socrates only. Even so, however, the identity property of Socrates is not a consequence of the origin property of Socrates. Suppose that x is a person who came from O. Given the sufficiency of origin, it follows that x is a unique person who could have come from O. Yet, this doesn't entail that x is identical-to-Socrates. If the fact that x is a unique person who could have come from O is to entail the fact that x is identical-to-

Socrates, it must also be assumed that Socrates came from O. But that Socrates came from O is an actual historical fact, not a logical truth however broadly 'logical truth' is construed. Thus, even if the sufficiency of origin is assumed, it is not a logical truth, for any x, that x is identical-to-Socrates if x is a person who came from O.

This consideration points in a direction of seeing that the identity property of Socrates is a consequence of *no* property (or properties) in the definition of Socrates. Let D be a property in the definition of Socrates. Since D is in the definition of him, D does not presuppose him (on pain of circularity). Suppose that x is D. Then this may entail that x is a unique thing that is possibly D. Even so, that does not entail that x is identical-to-Socrates unless it relies on a non-logical fact that Socrates is actually D. Thus, it is not a logical truth, for any x, that x is identical-to-Socrates if x is D. The identity property of Socrates is not a consequence of D. This shows that the identity property of Socrates is not in the derivative essence of him.

I have argued that the identity property of Socrates is not in the derivative essence of him because it is not a consequence of any property in the definition of Socrates. And the argument has operated with the following notion of derivative essence:

(DE)   A property F is in the derivative essence of an object x just in case F is in the essence of x because it is a consequence of some property G in the definition of x, where F is a consequence of G if and only if it is a logical truth, for any x, that x is F if x is G.

Proponents of the definitional model might call (DE) into question, claiming that strictly speaking, (DE) is false, and once (DE) is revised properly, the identity property of Socrates can be taken to be in the derivative essence of him. In the remainder of this section, I will consider two possible responses in this line of thought and argue that both fail.

Note that (DE) is made for the property conception of essence, according to which the essence of an object is a collection of properties of the object. But what if, instead, we adopt the proposition conception of essence, according to which the essence of an object is a collection of propositions true in virtue of the nature of the object? If we adopt the proposition conception of essence, perhaps (DE) needs to be revised in the following way:

(DE1)   A proposition P is in the derivative essence of an object x just in case P is in the essence of x because it is a consequence of some proposition Q in the definition of x, where P is a consequence of Q if and only if it is a logical truth that P if Q.

With the proposition conception of essence and (DE1) in hand, the defender of the definitional model might respond to my argument in the following line. Socrates is essentially self-identical. On the proposition conception of essence, this means that 'Socrates is self-identical' is in the essence of Socrates. Moreover, 'Socrates is identical-to-Socrates' is a consequence of 'Socrates is self-identical': it is a logical truth that Socrates is identical-to-Socrates if Socrates is self-identical. Then, according to the response, 'Socrates is identical-to-Socrates' is in the derivative essence of Socrates.[38]

However, the response does not work, for two reasons. If we assume the proposition

conception of essence and (DE1), we may think that 'Socrates is self-identical' is in the essence of Socrates and that 'Socrates is identical-to-Socrates' is a consequence of 'Socrates is self-identical'. Even so, however, it doesn't follow that 'Socrates is identical-to-Socrates' is in the derivative essence of Socrates. If the responder is to conclude that 'Socrates is identical-to-Socrates' is in the derivative essence of Socrates, she must show that 'Socrates is identical-to-Socrates' is in the essence of Socrates *because* it is a consequence of 'Socrates is self-identical'.[39] But what reason is there for thinking that Socrates has being-identical-to-Socrates, the property particular to him, *because* he has being-self-identical, the property universal to all? If there is some such reason, I don't see what it is.

Moreover, the response does not work anyway because we should adopt the property conception of essence, not the proposition conception. Indeed, the two conceptions are often assumed to be interchangeable in the literature. And for some specific purposes, it might be harmless to make the assumption. However, strictly speaking, the two conceptions are not equivalent. Recall that we have adopted the predicational approach to essence statements and thus that being-self-identical and being-identical-to-Socrates are treated as two distinct essential properties of Socrates. On the proposition conception, however, corresponding to the two essential properties, there is only one essential proposition: 'Socrates is Socrates'. In order not to ignore subtle distinctions made in the predicational approach, which is crucial for our purposes, we should accept the property conception, not the proposition conception.

Let me turn now to the second response. Some properties of an object are in the derivative essence of the object in virtue of being consequences of some properties in the definition of it. (DE) is meant to accommodate this kind of derivative essential properties. However, according to the response, some properties enter the derivative essence of an object by the back door thanks to a logical truth. (DE) ignores this kind of derivative essential properties. So, the response goes, what we should accept is not (DE) but the following:

(DE2)   A property F is in the derivative essence of an object x just in case *either* (i) F is in the essence of x because it is a consequence of some property G in the definition of x *or* (ii) F is in the essence of x because it is an instance of some logical truth that x is F.

Given (DE2), the identity property of Socrates is in the derivative essence of him. It is a logical truth that for any z, z is identical-to-z. Then, it is an instance of the logical truth that Socrates is identical-to-Socrates. So, by (DE2), we may think that being-identical-to-Socrates is in the derivative essence of Socrates. So, according to the response, we have no difficulty in thinking that the identity property of Socrates is in the derivative essence of him.[40,41]

At first glance, the response might sound plausible. On examination, however, it doesn't work. Consider the following logical truths:

(L1)   For every z, z is self-identical.

(L2)   For every z, z is identical-to-z.

Given (DE2), being-identical-to-Socrates is in the derivative essence of Socrates because it is an instance of (L2) that Socrates is identical-to-Socrates.But note that (L1) and (L2) are the same as it has been assumed that z being self-identical and z being identical-to-z are the same. So, the responder amounts to claiming that being-identical-to-Socrates is in the derivative essence of Socrates because it is an instance of (L1) that Socrates is self-identical. This strongly suggests that something goes wrong in (DE2). How can we conclude that being-identical-to-Socrates, the property particular to him, is in the derivative essence of him on the ground that being-self-identical, the property universal to all, is had by Socrates?

Where does (DE2) go wrong? Condition (ii) in (DE2) assumes that derivative essential properties an object has thanks to logic are understood as properties abstracted from propositions following from logical truths. The assumption is problematic as it is not in keeping with the property conception of essence. On the property conception, if there are derivative essential properties an object has thanks to logic, those properties are derivative essential properties not because they occur in some logical proposition but because they are a consequence of some logical *property*—a property shared by all objects by logic. So, what we should accept is not (DE2) but the following:

(DE2*)   A property F is in the derivative essence of an object x just in case *either* (i) F is in the essence of x because it is a consequence of some property G in the definition of x *or* (ii) F is in the essence of x because it is a consequence of some logical property.

With (DE2*) in hand, let us see if being-identical-to-Socrates is in the derivative essence of Socrates. Consider the property of being such that for every z, z is identical-to-z.[42] This is a logical property. Call it 'the logical identity property'. Being self-identical is a consequence of the logical identity property: it is a logical truth, for any x, that x is self-identical if x is such that for every z, z is identical-to-z.[43] So, we may think by (DE2*) that being self-identical is in the derivative essence of Socrates. However, being identical-to-Socrates is not a consequence of the logical identity property: it is clearly not the case that it is a logical truth, for any x, that x is identical-to-Socrates if x is such that for every z, z is identical-to-z.[44] This comes as no surprise: no logical property presupposes Socrates as it is had by all objects by logic, but the identity property of Socrates presupposes Socrates. The identity property of Socrates is not a consequence of any logical property.

So far, I have argued, assuming the definitional model, that the identity property of Socrates is neither in the definition of Socrates nor in the derivative essence of him. So, if the definitional model is true, then Socrates is not essentially identical-to-Socrates. This completes my defense of (P1). Of course, this alone does not show that the definitional model is false. For it is still open for proponents of the definitional model to insist that the identity property of Socrates should be dismissed as a bogus essential property precisely because it is not identity-explaining.[45] But this will put Fine's thesis into jeopardy. If the identity property of Socrates is not in the essence of him, the necessary truth that Socrates is necessarily identical-to-Socrates turns out to be groundless. This is what I will argue in the next section.

6.5   In defense of (P2)

Consider the following modal truths:

(N1)   Socrates is necessarily self-identical—i.e., Socrates is ℕ~self-identical.

(N2)   Socrates is necessarily identical-to-Socrates—i.e., Socrates is ℕ~identical-to-Socrates.

Given Fine's thesis, they require essential grounds. What ground them? It was my proposal that (N1) and (N2) are respectively grounded in the following essential truths:

(E1)   Socrates is essentially self-identical—i.e., Socrates is 𝔼~self-identical.

(E2)   Socrates is essentially identical-to-Socrates—i.e., Socrates is 𝔼~identical-to-Socrates.

But, in the previous section, it has been argued that (E2) finds no home in the definitional model. So, unless proponents of the definitional model give up Fine's thesis, they need to find an essential ground for (N2) without relying on (E2). In this section, assuming that (E2) is not true, I will consider various attempts to do so and argue that they all fail. Of course, this will not directly show that there is *no* way for the proponents of the definitional model to ground (N2). Nevertheless, once we see how these attempts fail, we will be more certain that it is extremely unlikely for them to find an essential ground for (N2).

Let us assume, for the sake of argument, that (E2) is false. What then grounds (N2)? The proponents of the definitional model might consider four possibilities: they might appeal to an essential truth about Socrates other than (E2); an essential truth about some object other than Socrates; an essential truth about plural objects; or an essential truth about some property rather than an object. In what follows, I will consider best versions of the four possibilities and argue that they all fail.[46]

6.5.1 Is there an essential truth about Socrates other than (E2) that grounds (N2)?

On the definitional model, we have (E1). (E1) grounds (N1). And that in principle doesn't prevent (E1) from grounding (N2): one fact may ground two distinct facts. This might lead the proponents of the definitional model to the idea that (E1) grounds (N2), so we don't need (E2) in grounding (N2).

Let us take a closer look at this idea. If the proponents of the definitional model think that (E1) grounds (N2), on what basis would they think so? As far as I can imagine, what they have in mind is something like the following argument:

(a)   [Socrates is 𝔼~self-identical] grounds [Socrates is ℕ~self-identical].

(b)   'Socrates is ℕ~self-identical' entails 'Socrates is ℕ~identical-to-Socrates'.

(c)   So, [Socrates is 𝔼~self-identical] grounds [Socrates is ℕ~identical-to-Socrates].

Is this argument sound? Recall that the following is true as a general principle:

𝔼/ℕ-Ground   For any x and any F, if x is 𝔼~F, then [x is 𝔼~F] grounds [x is ℕ~F].

Socrates is 𝔼~self-identical. So, by 𝔼/ℕ-Ground, (a) is true.

How about (b)? Clearly, 'Socrates is ℕ~self-identical' entails '□(Socrates is self-identical)' as we may think that if the former is true, the former grounds the latter: if the mode of Socrates's *being* self-identical is necessary, then it is in virtue of this fact that Socrates is self-identical in all possible worlds in which he exists. In general, we may accept the following as a general principle:

ℕ/□-Ground   For any x and any F, if x is ℕ~F, then [x is ℕ~F] grounds [□(x is F)].

And '□(Socrates is self-identical)' entails '□(Socrates is identical-to-Socrates)' as they are equivalent. So, 'Socrates is ℕ~self-identical' would entail 'Socrates is ℕ~identical-to-Socrates' if '□(Socrates is identical-to-Socrates)' entails 'Socrates is ℕ~identical-to-Socrates.' However, it is not true as a rule that '□(x is F)' entails 'x is ℕ~F', for it might be the case that x is F in all possible worlds in which x exists though the mode of x's having F is not necessary.[47]

Nevertheless, we may think that (b) is true. But if (b) is true, that is not because 'Socrates is ℕ~self-identical' entails 'Socrates is ℕ~identical-to-Socrates' as a rule but because we may infer 'Socrates is ℕ~identical-to-Socrates' independently of 'Socrates is ℕ~self-identical'. This being the case, (a) and (b) are true, but (c) doesn't follow. [Socrates is 𝔼~self-identical] grounds [Socrates is ℕ~self-identical], which grounds [□(Socrates is self-identical)] or, equivalently, [□(Socrates is identical-to-Socrates)]. However, [□(Socrates is identical-to-Socrates)] entails but doesn't ground [Socrates is ℕ~identical-to-Socrates]. Rather, [Socrates is ℕ~identical-to-Socrates] is grounded in [Socrates is 𝔼~identical-to-Socrates].

Essential grounding is not transferable through consequence between propositions: it is not the case that (*) for propositions p and q, if [x is 𝔼~F] grounds [p], and q is a consequence of p, then [x is 𝔼~F] grounds [q]. If an essential truth grounds a necessary truth, the grounding relation tracks down the source of the necessity. (*) fails to meet this constraint on essential grounding. When [x is 𝔼~F] grounds [p], the necessity in [p] has its source in [x is 𝔼~F]. On the other hand, when p entails q, the entailment might hold owing to the necessity of q whose source lies not in [x is 𝔼~F] but in some other essential truth.

On the other hand, we may think that essential grounding is transferable through consequence between *properties* as follows:

E/ℕ-Ground **by PE**   For any x and any F and G, if x is 𝔽~F, and G is a consequence of F, then [x is 𝔽~F] grounds [x is ℕ~G].

Indeed, E/ℕ-Ground by PE is true.[48] However, this doesn't support the claim that (E1) grounds (N2). Given E/ℕ-Ground by PE, [Socrates is 𝔽~self-identical] would ground [Socrates is ℕ~identical-to-Socrates] if being identical-to-Socrates is a consequence of being self-identical. But clearly, being identical-to-Socrates is not a consequence of being self-identical.

If there is an essential truth about Socrates other than (E2) that grounds (N2), (E1) would be the best candidate. But it is a mistake to think that (E1) grounds (N2). This plausibly suggests that no essential truth about Socrates other than (E2) grounds (N2).

6.5.2 Is there an essential truth about plural objects that grounds (N2)?

We have considered essence statements that ascribe an essential property to a single object. For example, 'Socrates is essentially a person' ascribes being a person to Socrates, which is of the form 'x is 𝔽~F.' Essence statements of this form are meant to express individual essences. On the other hand, there are essence statements that ascribe an essential property to plural objects. For example, 'Socrates and Eiffel Tower are essentially distinct' ascribes being distinct to Socrates and Eiffel Tower taken together, which is of the form 'x and y are 𝔽~F.' Essence statements of this form are meant to express collective essences.

Now consider the following:

(d)   Socrates and Socrates are 𝔽~identical.

'Socrates and Socrates are 𝔽~distinct' is a collective essential statement of a legitimate form. And it is false. Then, (d) should be a collective essential statement of a legitimate form. And it is true. With this collective essential truth, the proponents of the definitional model might claim that (d) grounds (N2), so we don't need (E2) in grounding (N2).

However, it is unclear how (d) grounds (N2). How could they think that (d) grounds (N2)? They can't think that (d) grounds (N2) because when x and y are in 𝔽~R, it follows that x is in 𝔽~R-to-y or that y is in 𝔽~R-to-x: Socrates and Eiffel Tower are 𝔽~distinct, but it doesn't follow that Socrates is 𝔽~distinct-from-Eiffel-Tower or that Eiffel Tower is 𝔽~distinct-from-Socrates.[49] On what basis, then, could they think that (d) grounds (N2)?

Well, what the proponents of the definitional model have in mind after all seems to be the following argument:

(e)   [Socrates and Socrates are 𝔽~identical] grounds [Socrates and Socrates are ℕ~identical].

(f) 'Socrates and Socrates are ℕ~identical' entails 'Socrates is ℕ~identical-to-Socrates'.

(g) So, [Socrates and Socrates are 𝔼~identical] grounds [Socrates is ℕ~identical-to-Socrates].

However, the argument (e)–(g) is problematic just as the argument (a)–(c) is: (g) doesn't follow from (e) and (f). If (f) is true, it is true because [□(Socrates and Socrates are identical)] entails [Socrates is ℕ~identical-to-Socrates]. But the former does not ground the latter: the former says of Socrates and Socrates that 'they' have the same properties in all possible worlds in which 'they' exist, which indicates nothing about which properties 'they' share, whereas the latter says of Socrates that he has the specific property of being-identical-to-Socrates, and the mode of his having the property is necessary. The latter holds in virtue of the fact that Socrates is 𝔼~identical-to-Socrates. There is no reason for thinking that [Socrates and Socrates are 𝔼~identical] grounds [Socrates is ℕ~identical-to-Socrates].

6.5.3 Is there an essential truth about an object other than Socrates that grounds (N2)?

{Socrates} essentially contains Socrates as a sole member. So, it might be thought that the following must be true:

(h) {Socrates} is 𝔼~λz(Socrates ∈ z & (x)(if x ∈ z, x is identical-to-Socrates)).

Now the proponents of the definitional model might claim that (h) grounds (N2), so we don't need (E2) in grounding (N2).
     Why would they think that (h) grounds (N2)? If they think that (h) grounds (N2) based on the following argument, they would be committed to the same error as before:

(i) [{Socrates} is 𝔼~λz(Socrates ∈ z & (x)(if x ∈ z, x is identical-to-Socrates))] grounds [{Socrates} is ℕ~λz(Socrates ∈ z & (x)(if x ∈ z, x is identical-to-Socrates))].

(j) '{Socrates} is ℕ~λz(Socrates ∈ z & (x)(if x ∈ z, x is identical-to-Socrates))' entails 'Socrates is ℕ~identical-to-Socrates.'

(k) So, [{Socrates} is 𝔼~λz(Socrates ∈ z & (x)(if x ∈ z, x is identical-to-Socrates))] grounds [Socrates is ℕ~identical-to-Socrates].

Why then would they think that (h) grounds (N2)? They might do so for the following reason:

(l)   {Socrates} is $\mathbb{E}{\sim}\lambda$z(Socrates $\in$ z & (x)(if x $\in$ z, x is identical-to-Socrates)).

(m)   Being identical-to-Socrates is a consequence of λz(Socrates $\in$ z & (x)(if x $\in$ z, x is identical-to-Socrates)).

(n)   So, Socrates is $\mathbb{E}{\sim}$identical-to-Socrates.

(o)   So, [Socrates is $\mathbb{E}{\sim}$identical-to-Socrates] grounds [Socrates is $\mathbb{N}{\sim}$identical-to-Socrates].

However, this doesn't work either. First of all, (m) is not true: it is not the case that it is a logical truth, for any y, that y is identical-to-Socrates if y is λz(Socrates $\in$ z & (x)(if x $\in$ z, x is identical-to-Socrates)): {Socrates} is λz(Socrates $\in$ z & (x)(if x $\in$ z, x is identical-to-Socrates)), but {Socrates} is not identical-to-Socrates. And even if (m) is true, from (l) and (m), (n) doesn't follow. Given (DE2*), what follows would be that {Socrates} is $\mathbb{E}{\sim}$identical-to-Socrates, which is false.

It is a logical truth that Socrates is identical-to-Socrates if {Socrates} is λz(Socrates $\in$ z & (x)(if x $\in$ z, x is identical-to-Socrates)). So, being such that Socrates is identical-to-Socrates if {Socrates} is λz(Socrates $\in$ z & (x)(if x $\in$ z, x is identical-to-Socrates)) is a logical property. If being identical-to-Socrates were a consequence of this logical property, then it would follow, by (DE2*), that being identical-to-Socrates is in the derivative essence of Socrates, which implies (n) and thus (o). But clearly, being identical-to-Socrates is not a consequence of the logical property: it is not a logical truth, for any y, that y is identical-to-Socrates if y is such that Socrates is identical-to-Socrates if {Socrates} is λz(Socrates $\in$ z & (x)(if x $\in$ z, x is identical-to-Socrates)).[50]

It is tempting to think that some essential truth about {Socrates} grounds (N2), but on close examination, the tempting idea is misguided. And we may plausibly think that things are not so different when we consider another object other than {Socrates}: it might be tempting to think that, for some object, some essential truth about the object grounds (N2), but a close examination will show in a similar vein that the tempting idea is misguided.

6.5.4 Is there an essential truth about a property that grounds (N2)?

The consideration of 6.5.1 to 6.5.3 suggests that no essential truth about *objects* (whether a single object or plural ones) grounds (N2). This might lead the proponents of the definitional model to the idea that (N2) is grounded in some essential truth about entities other than objects. What if we consider, for example, essential truths about *properties*? Can't we think that (N2) is grounded in an essential truth about a property? If there were such a property in question, the best candidate would be being-self-identical or being-identical-to-Socrates. I will consider if essential truths about these properties can serve as a ground for (N2) and argue that there are no such essential truths about the properties.

Before proceeding, we should distinguish two ways of conceiving essences of properties.

How is the essence of F to be understood? We may treat F as something objectual or saturated in nature, in which case, we pursue the essence of it by answering the question of what it is. On the other hand, we may treat F as something predicational or unsaturated in nature, in which case, we pursue the essence of it by answering the question of what it is to be F.[51] If properties are treated as something objectual, attempts to show that (N2) is grounded in some essential truth of some property collapse into attempts to show that (N2) is grounded in some essential truth of some object, which should fail for the reason similar to the one given in 6.5.3.[52] If the proponents of the definitional model are to think that essences of properties do the grounding job, they must treat properties as predicational.

What is it to be F? The answer is of the form: to be F is to be $G_1...G_n$. Given this, we may think that F is $\mathbb{E}$~such that for any x, x is F if and only if x is $G_1...G_n$.[53] This grounds [F is $\mathbb{N}$~such that for any x, x is F if and only if x is G1...Gn] which in turn grounds [$\square$(For any x, x is F if and only if x is G1...Gn)]. What is it to be a vixen? To be a vixen is to be a female fox. This grounds [Being a vixen is $\mathbb{N}$~such that for any x, x is a vixen if and only if x is a female fox] which in turn grounds [$\square$(For any x, x is a vixen if and only if x is a female fox)].

Now consider being self-identical. What is it to be self-identical? To be self-identical is to have all and only properties of itself. So, the following is true:

(p) Being self-identical is $\mathbb{E}$~such that for any x, x is self-identical if and only if x has all and only properties of itself.

This essential truth grounds [Being self-identical is $\mathbb{N}$~such that for any x, x is self-identical if and only if x has all and only properties of itself], which in turns grounds [$\square$(For any x, x is self-identical if and only if x has all and only properties of itself]. [Being self-identical is $\mathbb{N}$~such that for any x, x is self-identical if and only if x has all and only properties of itself], which in turns grounds [$\square$(For any x, x is self-identical if and only if x has all and only properties of itself]. However, this is far from showing that (p) grounds (N2) -- i.e., the fact that Socrates is $\mathbb{N}$~identical-to-Socrates.

Consider being identical-to-Socrates. What is to be identical-to-Socrates? Let us say that to be identical-to-Socrates is to be $G_1...G_n$ whatever $G_1...G_n$ are. (More will be said about this in the last section.) Then, the following is true:

(q) Being identical-to-Socrates is $\mathbb{E}$~such that for any x, x is identical-to-Socrates if and only if x is $G_1...G_n$.

This essential truth grounds [Being identical-to-Socrates is $\mathbb{N}$~such that for any x, x is identical-to-Socrates if and only if x is $G_1...G_n$], which in turn grounds [$\square$(For any x, x is identical-to-Socrates if and only if x is G1...Gn.)]. But this gives us no reason for thinking that (q) grounds (N2) -- i.e., the fact that Socrates is $\mathbb{N}$~identical-to-Socrates.

So far, I have considered various attempts to ground (N2) without relying on (E2). If my argument is right, all fail. Are there other kind of attempts that I didn't consider? I don't

know. But I suspect that if there are such attempts, they will turn out to fail for some reason like the ones I've given. In any case, the consideration so far strongly suggests that if (E2) is false, prospects for finding an essential ground for (N2) are extremely dim. This puts the definitional model into serious doubt. From the previous section, we know that we can't have (E2) in the definitional model. But if we don't have (E2), we have no way to ground (N2). (N2) is an ungrounded necessary truth, which contradicts Fine's thesis.[54] Thus, Fine's thesis is false or else the definitional model must go.

It is an open possibility to give up Fine's thesis in favor of the definitional model. But this doesn't seem to be well motivated. The principal motivation for adopting the framework of real definition is that within the framework, we can ground modality. If Fine's thesis is given up, there is not much point in insisting on the definitional model. This leaves us with only one option. The definitional model must go. Of course, this is not to say that we should reject the framework of real definition altogether. All we need to do is to find an alternative model of essence in the framework of real definition in which for objects such as you and me, some essential property of an object does not explain what it is and thus doesn't belong in the definition of it but is nonetheless in its constitutive essence. In the next section, I will offer an alternative model in this line of thought.

6.6   Toward an alternative model of essence

On the definitional model of essence, the constitutive essence of an object is assimilated to the definition of it. The discussion so far suggests that the assimilation of constitutive essence to definition is problematic. On the one hand, the identity property of Socrates is in the constitutive essence of him as it is not a consequence of any other property. On the other hand, it is not in the definition of him either as it does not explain what he is. The definitional model should give way to an alternative model in which the identity property of an object may be in the constitutive essence of it though it is not in the definition of it. How then is the constitutive essence of an object to be understood if it is not regarded as the definition of it? I think we should approach the constitutive essence of an object in terms of the identity property of it.

Let's take a close look at the identity property of Socrates. What is it to be identical-to-Socrates? To be identical-to-Socrates is partly to be a person. But to be identical-to-Socrates is not just to be a person. Then what more is there? It will be instructive to imagine a situation in which someone (say, Xanthippe) encountered Socrates for the first time. Her knowledge of him is minimal: nobody told her about him, and this is the very first time she has met him. Nonetheless, she knows him to some extent. She asks herself: Who is this? This question presupposes things about him, and that much, if true, she knows about him. The 'who' of 'Who is this?' indicates that she takes him as a person. She ascribes being a person to him. If that's true, she knows that he is a person. What then does the 'this' of 'Who is this?' indicate? What it indicates seems to be that she takes him as a particular one among others. What property is it, then, that is being ascribed to him?

The property in question is not some of his sensory qualities, though those qualities might help her discern the property in question. It is not some of his historical properties about his family, friends, career and so on either: these are properties she wishes to know *further* by asking the question 'Who is this?'. Then what is it? It is no accident that she uses the demonstrative 'this' because we don't seem to have purely conceptual resources with which to express it and thus cannot capture it except by the act of naming. What she talks about when she talks about Socrates in that situation is *this* man. And the property Xanthippe ascribes to him by her use of 'this' is the irreducible individuality of the particular man or, to coin a name for it, his *thisness*. We don't have a natural language predicate for this kind of property, but we may construct one. Let $\ulcorner$is/am/are this$_c\urcorner$ be a predicate, where c is a schematic letter for a name, such that for any primitive object c, c is this$_c$ if and only if c has its thisness. The property in question is being this$_{Socrates}$.

This provides an opportunity to understand the identity property of Socrates: being identical-to-Socrates is being this$_{Socrates}$ person. This sheds light on how the constitutive essence of Socrates is to be understood. What is Socrates? He is a person. Socrates is definitionally a person. It is not that Socrates is an object, and on top of that, he is also a person. It is that Socrates is a person, and only in virtue of that, he is an object. The definition of Socrates is the central element of the constitutive essence of him.[55] The definitional model is right about this. But it implies that the definition of Socrates *is* the constitutive essence of him, and here it goes wrong. Being this$_{Socrates}$ person is not in the definition of Socrates because being this$_{Socrates}$ doesn't do the defining as it presupposes Socrates. Nonetheless, it is also a core element of the constitutive essence of Socrates. This naturally hints at the idea that the constitutive essence of Socrates is the identity property of him—i.e., being this$_{Socrates}$ person.

How is the constitutive essence of an object to be understood in general? My proposal is that for any object, the constitutive essence of it should be assimilated to the identity property of it. Two remarks are worth making. Having said that the definition of Socrates and the thisness of Socrates are central elements of the constitutive essence of Socrates or, equivalently, that being this$_{Socrates}$ person is partly being a person and partly being this$_{Socrates}$, I am not saying that [Socrates is a person] and [Socrates is this$_{Socrates}$] are prior to [Socrates is this$_{Socrates}$ person]. Socrates is not a person independently of being this$_{Socrates}$. He is not an 'ideal' or 'Meinongian' person but an *actual* one we encounter in history—a person that is a person in virtue of being a person that is this or that person. Socrates is not this$_{Socrates}$ one independently of being a person. He is not a 'bare' particular but an *intelligible* individual—an individual that is an individual in virtue of being an instance of a certain sortal kind or in virtue of a fact about what it is. It is not that Socrates is this$_{Socrates}$ person because he is a person and he is this$_{Socrates}$ but that he is a person and he is this$_{Socrates}$ because he is this$_{Socrates}$ person. This being the case, what is (in) the constitutive essence of Socrates is being this$_{Socrates}$ person, while the definition of Socrates, being a person, and the thisness of Socrates, being this$_{Socrates}$, are in the derivative essence.[56]

In the case of Socrates, the constitutive essence of him is not the same as the definition of him. This is not to say that the definition of an object *as a rule* does not exhaust the constitutive essence of it. What is {Socrates}? It is a set with Socrates as a sole member. The definition of {Socrates} is being a set with Socrates as a sole member. What is it to be identical-to-{Socrates}? To be identical-to-{Socrates} is to be a set with Socrates as a sole member. The identity property of {Socrates} is being a set with Socrates as a sole member. Thus, in the case of {Socrates}, the constitutive essence of {Socrates} *is* the definition of {Socrates}. This may well be generalized. For any non-primitive object such as {Socrates}, the constitutive essence of it collapses into the definition of it. For any primitive individual such as Socrates, however, the definition of it does not exhaust its constitutive essence because the thisness of it is also part of the constitutive essence of it.[57]

This way of determining the constitutive essence of an object fits well with the intuitive conception of essence behind the Fine equivalence. According to the Fine equivalence, the essence of Socrates is the collection of properties he must have to be the object that he is— that is, the collection of properties he must have *to be identical-to-Socrates*. Fine himself has recently proposed something like this.[58] His suggestion is, roughly, that essential truths about Socrates can be equated with truths required for something (an arbitrary object) to be identical to Socrates except truths involving Socrates due to the explanatory constraint—put in property talk, essential properties of Socrates can be equated with properties something must have to be identical to Socrates except properties presupposing Socrates due to the explanatory constraint. I agree with him on this proposal except that there is an essential property of Socrates that presupposes Socrates. In my view, the explanatory constraint is a constraint on definition but not a constraint on essence in general.

It might be thought that the model of essence I propose is only a little revision of the definitional model: in the case of primitive individuals, extend the constitutive essence of an object to include its thisness, and we get the new model of essence that would be otherwise indiscernible from the definitional model. Upon inspection, however, consequences of accepting this model are more significant than it might first seem. And once those consequences are noticed, it will become clearer how it is fundamentally different from the definitional model.

In keeping with Kripke's insight, we think that Elizabeth II essentially came from her parents. But we might not want to say that her origin, having come from her parents, is in the definition of her: if her origin is in her definition, she is defined by her parents, which puts her into danger of losing her ontological status as an independent being.[59] So, we might want to say that her origin is not in the definition of her. But this is not what we can do within the definitional model, for it seems hopeless to think that her origin is a consequence of her definition or of a logical property. On the other hand, the alternative model leaves open the possibility that her origin is essential to her but nonetheless not in her definition. Why could Elizabeth II not have come from different parents from her actual parents? Well, "[how] could a person originating from different parents…be *this very woman*?"[60] Perhaps, her origin is a consequence of being $this_{Elizabeth}$: to be $this_{Elizabeth}$ is partly to have come from Elizabeth II's actual parents.[61]

If the alternative model is right, in the case of primitive individuals such as you and me, essences are ultimately singular, for they presuppose individuals. This departs from one traditional way of using the term 'essence', according to which 'essence' should mean something general. I have no intention to debate over terminology. If the traditional terminological convention is firmly entrenched in our philosophical culture, I would be happy to follow it. All I want to claim is that for individuals such as you and me, they have some ultimately singular and primitive properties in virtue of which some necessary truths about them hold whether those properties are called 'essential properties' or not. If my claim is right, either Fine's thesis should be restated in different terms or the traditional terminological convention should be revised. Since I hold onto Fine's thesis as Fine presents it, I chose the latter.[62]

Perhaps behind the traditional convention is an epistemological view, according to which knowledge of essence is purely intellectual. If that is the case, I should reject the traditional convention because I reject the epistemological view associated with it. And, from the post-Kripke essentialist perspective, this is as it should be. True, it is not by perceiving sensory qualities of you that I know your essence: I don't perceive being this$_{you}$ as I perceive colors, sounds, tastes, and so on. But it is also not purely by the intellect that I know your essence. If I attempt to grasp it by the intellect only, I must grasp it through its general features, but I am then doomed to miss it, for it has a *primitive* singularity. I know your essence by experiencing you as one particular person, perceiving human actions of yours, which is not possible without the help of 'sensible intuition' in Peirce's sense of the term.[63] My knowledge of your essence is ultimately experiential in a nonparochial sense of 'experience.'

The 'discovery' of a posteriori essence was a great achievement in contemporary metaphysics. Truths of identity are often considered as a paradigm case of a posteriori essence on the grounds that although it is knowable a priori that Cicero is Cicero, it is only knowable a posteriori that Cicero is Tully. But if I am right, even the fact that Cicero is Cicero is in a way knowable only a posteriori. It is knowable a priori that Cicero is Cicero if that means that Cicero *is self-identical*. If, on the other hand, that Cicero is Cicero means that Cicero *is identical-to-Cicero*, it is knowable only a posteriori that Cicero is Cicero: to know that Cicero is Cicero, we must know that Cicero is this$_{Cicero}$ person, knowing that Cicero is this$_{Cicero}$ is an experiential matter.[64]

When Kripke proposed his essentialist theses, he implicitly assumed the modal account of essence. So, those theses were meant to be modal theses, not in a proper sense essentialist ones. If Fine's thesis is true, the modal account is false. But Fine's thesis should be taken not as an objection to Kripke's view but as a welcome opportunity to make it sophisticated. With Fine's thesis in hand, we can complete Kripke's project by essentially grounding modality, while reconstruing Kripke's modal theses as their essentialist counterparts. Nonetheless, it seems to me that advocates of Kripke's view have not welcomed Fine's thesis with open arms. Perhaps that is because they assumed that Fine's thesis is committed to the definitional model, while the definition model is potentially in tension with the essentialist counterparts of Kripke's theses. However, if I am right, Fine's thesis is not committed to the definitional model and even recommends denying it. I hope my discussion soothes Kripkeans' worries

about Fine's thesis and helps them see how Kripke's view can be reconstrued and strengthened along the line of Fine's thesis.[65,66]

References

Adams, Robert. (1979), "Primitive Thisness and Primitive Identity," *Journal of Philosophy* 76, 5–26.

Adams, Robert. (1981), "Thisness and Actualism," *Synthese* 49, 3–41.

Aristotle. (1984), *The Complete Works of Aristotle* vols. I and II, ed. Jonathan Barnes, Princeton, NJ: Princeton University Press.

Almog, Joseph. (1986), "Naming without Necessity," *Journal of Philosophy* 83, 210–242.

Almog, Joseph. (2003), "The Structure-in-Things: Existence, Essence and Logic," *Proceedings of the Aristotelian Society* 103, 197–225.

Anscombe, G. E. M. (1974), "Times, Beginnings, and Causes," in her *Metaphysics and the Philosophy of Mind*, Minneapolis–St Paul, MN: University of Minnesota Press (1981), 148–162.

Aquinas, Thomas. (1948), *Summa Theologica* vol. I, trans. The Fathers of the English Dominican Province, New York: Benziger Brothers.

Black, Max. (1952), "The Identity of Indiscernibles," *Mind* 61, 153–164.

Boersema, David. (2009), *Pragmatism and Reference*, Cambridge, MA: MIT Press.

Brody, Baruch. (1980/2014), *Identity and Essence*, Princeton, NJ: Princeton University Press.

Burgess, John. (2014), "On a Derivation of the Necessity of Identity," *Synthese* 191, 1567–1585.

Cowling, Sam. (2013), "The Modal View of Essence," *Canadian Journal of Philosophy* 43(2), 248–266.

Correia, Fabrice. (2006), "Generic Essence, Objectual Essence, and Modality" *Nous* 40(4), 753–767.

Correia, Fabrice. (2012), "On the Reduction of Necessity to Essence," *Philosophy and Phenomenological Research* 84, 639–653.

Della Rocca, Michael. (1996), *Representation and the Mind-Body Problem in Spinoza*, Oxford: Oxford University Press.

Della Rocca, Michael. (2005), "Two Spheres, Twenty Spheres, and the Identity of Indiscernibles," *Pacific Philosophical Quarterly* 86, 480–492.

DiLeo, Jeffrey. R. (1991), "Pierce's Haecceitism," *Transactions of the Charles S. Peirce Society* 27, 79–109.

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

Fine, Kit. (1984), "Reference, Essence, and Identity," in his *Modality and Tense: Philosophical Papers*, Oxford: Oxford University Press (2005), 19–39.

Fine, Kit. (1985), "Plantinga on the Reduction of Possibilist Discourse," in J. E. Tomberlin and P. van Inwagen (eds.), *Alvin Plantinga*, 145–186, Dordrecht: Reidel.

Fine, Kit. (1994), "Essence and Modality," *Philosophical Perspectives* 8, 1–16.

Fine, Kit. (1994), "Senses of Essence," in Walter Sinnott-Armstrong, Diana Raffman, and Nicholas Asher (eds.), *Modality, Morality and Belief. Essays in Honor of Ruth Barcan Marcus*, Cambridge University Press, 53–73.

Fine, Kit. (1995), "Ontological Dependence," *Proceedings of the Aristotelian Society* 95, 269–290.

Fine, Kit. (1995), "The Logic of Essence," *Journal of Philosophical Logic* 24, 241–273.

Fine, Kit. (2002), "The Varieties of Necessity," in T. S. Gendler and J. Hawthorne (eds.), *Conceivability and Possibility*, 253–282 New York: Clarendon Press.

Fine, Kit. (2002), "The Problem of Possibilia," in D. Zimmerman (ed.), *The Oxford Handbook of Metaphysics*, Oxford: Oxford University Press, 161–179.

Fine, Kit. (2012), "Guide to Ground," in Fabrice Correia and Benjamin Schnieder (eds.), *Metaphysical Grounding*, Cambridge: Cambridge University Press, 37–80,

Fine, Kit. (2015), "Unified Foundations for Essence and Ground," *Journal of the American Philosophical Association* 1, 296–311.

Forbes, Graham. (1985), *The Metaphysics of Possibility*, Oxford: Clarendon Press.

Geach, Peter (1968), *Reference and Generality*, Ithaca, NY: Cornell University Press.

Hacking, Ian. (1975), "The Identity of Indiscernibles," *Journal of Philosophy* 72, 249–256.

Hale, Bob. (2013), *Necessary Beings: An Essay on Ontology, Modality, and the Relations Between Them*, Oxford: Oxford University Press.

Kaplan, David. (1989), "Demonstratives," in J. Almog, H. Wettstein, and J. Perry, (eds.), *Themes From Kaplan*, Oxford: Oxford University Press, 481–564.

Koslicki, Katherine. (2012), "Essence, Necessity and Explanation," in T. Tahko, (ed.), *Contemporary Aristotelian Metaphysics*, Cambridge: Cambridge University Press, 187–206.

Kripke, Saul. (1971), "Identity and Necessity," in Milton K. Muniz, (ed.), *Identity and Individuation*, New York: New York University Press, 135–164.

Kripke, Saul. (1980), *Naming and Necessity*, Cambridge, MA: Harvard University Press.

Leibniz, Gottfried Wilhelm. (1968/1989), "Discourse on Metaphysics," in Roger Ariew and Daniel Garbert (eds.), *G. W. Leibniz: Philosophical Essays*, Indianapolis, IN: Hackett Publishing Company, 35–68.

Lewis, David. (1973), *Counterfactuals*, Cambridge, MA: Harvard University Press.

Lewis, David. (1986), *On the Plurality of Worlds*, Oxford: Blackwell Publishers.

Lowe, E. Jonathan. (1982), "On the Alleged Necessity of True Identity Statements," *Mind* 91, 579–584.

Lowe, E. Jonathan. (2007), "A Problem for a posteriori Essentialism concerning Natural Kinds," *Analysis* 67, 286–292.

Lowe, E. Jonathan. (2008), "Two Notions of Being: Entity and Essence," *Royal Institute of Philosophy Supplement* 62, 23–48.

Lowe, E. Jonathan. (2009), *More Kinds of Being: A Further Study of Individuation, Identity, and the Logic of Sortal Terms*, Oxford: Wiley-Blackwell.

Mackie, Penelope. (2006), *How Things Might Have Been*, Oxford: Oxford University Press.

Marcus, Ruth. (1947), "Identity of Individuals in a Strict Functional Calculus of Second-Order," *Journal of Symbolic Logic* 12, 12–15.

McGinn, Colin. (1976), "On the Necessity of Origin," *Journal of Philosophy* 73, 134–135.

McGinn, Colin. (2000), *Logical Properties*, Oxford: Clarendon Press.

Morvarid, Hashem. (2019), "Essence and Logical Properties," *Philosophical Studies* 176, 2897–2917.

Nutting, Eileen, Caplan, Ben, and Tillman, Chris. (2018), "Constitutive Essence and Partial Grounding," *Inquiry* 61, 137–161.

Oderberg, David. (2011), "Essence and Properties," *Erkenntnis* 75, 85–111.

Plantinga, Alvin. (1974), *The Nature of Necessity*, Oxford: Oxford University Press.

Plantinga, Alvin. (1976), "Actualism and Possible Worlds," *Theoria* 42, 139–160.

Robertson, Teresa. (1998), "Possibilities and the Arguments for Origin Essentialism," *Mind* 107, 729–749.

Rohrbaugh, Guy and deRosset, Louis. (2004), "A New Route to the Necessity of Origin," *Mind* 113, 705–725.

Rosen, Gideon. (2010), "Metaphysical Dependence: Grounding and Reduction," in Bob Hale and Aviv Hoffmann, (eds.), *Modality: Metaphysics, Logic, and Epistemology*, Oxford: Oxford University Press, 109–36.

Rosen, Gideon. (2015), "Real Definition," *Analytic Philosophy* 56 (3), 198–201.

Rosenkrantz, Gary. (1993), *Haecceity: An Ontological Essay*, Dordrecht: Kluwer.

Russell, Bertrand. (1912), *The Problems of Philosophy*, London: Williams and Norgate.

Salmon, Nathan. (1979), "How not to Derive Essentialism from the Theory of Reference," *Journal of Philosophy* 76, 703–725.

Salmon, Nathan. (2005), *Reference and Essence*, Amherst, NY: Prometheus Books.

Sidelle, Allen. (1989), *Necessity, Essence, and Individuation: A Defense of Conventionalism*, Ithaca, NY: Cornell University Press.

Spinoza, Baruch. (1994), *A Spinoza Reader: The Ethics and other Works*, ed. Ed Curley, Princeton, NJ: Princeton University Press.

Stalnaker, Robert. (1973), "Possible Worlds," *Nous* 2, 303–314.

Wiggins, David. (1976), "The De Re 'Must': A Note on the Logical Form of Essentialist Claims," in G. Evans and J. McDowell, (eds.), *Truth and Meaning*, Oxford: Clarendon Press.

Wiggins, David. (2001), *Sameness and Substance Renewed*, Cambridge: Cambridge University Press.

Wildman, Nathan. (2013), "Modality, Sparsity, and Essence," *The Philosophical Quarterly* 63(253), 760–782.

Williamson, Timothy. (2002), "Necessary Existents," A O'Hear, ed., *Logic, Thought and Language*, Cambridge: Cambridge

University Press.

Williamson, Timothy. (2013), *Modal Logic as Metaphysics*, Oxford: Oxford University Press.

Zimmerman, Dean. (1996), "Could Extended Objects Be Made out of Simple Parts? An Argument for 'Atomless Gunk'," *Philosophy and Phenomenological Research* 56, 1–29.

Zylstra, Justin, (2019), "Constitutive and Consequentialist Essence," *Thought* 8, 190–199.

[1] S. Kripke, *Naming and Necessity*, (Harvard University Press, 1980).

[2] In this chapter, by 'necessity', I mean *metaphysical* necessity. And I will be concerned primarily with necessary truths about *individuals*. Kripke assumes or proposes three kinds of necessary truths about individuals: the necessity of sortal kind; the necessity of origin; and the necessity of identity. These are not universally accepted. But here I assume that they are all true.

[3] Here I set aside the view that modal truths are brute facts and the view that modal truths hold as a matter of convention. For the primitivist view about modal truths, see D. Lewis, *Counterfactuals*, (Harvard University Press, 1973); *On the Plurality of Worlds*, (Blackwell Publisher, 1986); and R. Stalnaker, "Possible Worlds," *Nous* 2 (1973), 303–314. Lewis is in a sense not a primitivist, for he claims that the notion of modality is reducible to the non-modal notion of worlds. Nonetheless, he is a primitivist in the sense that he takes facts about nonactual worlds as primitive. For the conventionalist view, see A. Sidelle, *Necessity, Essence, and Individuation: A Defense of Conventionalism*, (Cornell University Press, 1989).

[4] K. Fine, "Essence and Modality," *Philosophical Perspectives*, 8 (1994), 1–16.

[5] If Fine's thesis is true, we can also think that necessity is reducible to essence with the help of what Gideon Rosen calls "the Grounding-Reduction link." See G. Rosen, "Metaphysical Dependence: Grounding and Reduction," in B. Hale and A. Hoffmann (eds.), *Modality: Metaphysics, Logic, and Epistemology*, Oxford University Press, 2010, 109–36.

[6] Fine, "Essence and Modality," p. 5. For defenses of the modal account against Fine's objection, see S. Cowling, "The Modal View of Essence," *Canadian Journal of Philosophy* 43(2), 248–266; and N. Wildman, "Modality, Sparsity, and Essence," *The Philosophical Quarterly* 63(253), 760–782. I assume here without argument that Fine's objection is successful.

[7] Fine, *ibid.*, p. 4.

[8] It is due to this strong metaphysical connection between x and F that we cannot separate being F from it even in thought and that what we talk about can't be x unless we think of it as being F.

[9] K. Fine, "Senses of Essence," in W. Sinnott-Armstrong, D. Raffman, and N. Asher (eds.), *Modality, Morality and Belief: Essays in Honor of Ruth Barcan Marcus*, Cambridge University Press (1994), 53–73, p. 56. Here Fine identifies consequence as *logical* consequence, while suggesting that it corresponds to the traditional relation (*flowing from*) between essences and propria (p. 57). But Fine's construal of consequence as logical consequence may be called into question as we may think that being rational flows from, and thus is a consequence of, being human, but the former is not a logical consequence of the latter. (See D. Oderberg, "Essence and Properties," *Erkenntnis* 75, 2011, 85–111; and K. Koslicki, "Essence, Necessity and Explanation," in T. Tahko (ed.), *Contemporary Aristotelian Metaphysics*, Cambridge University Press, 2012, 187–206.) Perhaps, consequence in the relevant sense is broader than Fine thinks and should be understood as follows: G is a consequence of F if and only if *either* G is a logical consequence of F *or* to be F is (partly) to be G. But, for simplicity, I will say as if consequence is logical consequence. My argument will not turn on this, for when I consider whether G is a consequence of F in the logical sense of the term, my main point will stand even with the non-logical reading of 'consequence'.

[10] K. Fine, "Guide to Ground" in F. Correia and B. Schnieder (eds.), *Metaphysical Grounding*, Cambridge University Press, 2012, 37–80, p. 79. (See also G. Rosen, "Real Definition," *Analytic Philosophy* 56 (2015), 189–209, p. 195.) It should be noted that not all consequences of essential properties of an object are in the essence of the object. For example, being such that 2 = 2 may well be a consequence of some essential property of Socrates but not in the essence of him. Fine puts a general constraint on what can be in the essence of an object: a property can be in the essence of x only if the property

involves no particular object extraneous to x (Fine, *ibid.*, pp. 58–61).

[11] So, for Fine, the essence of an object includes mere consequences of the constitutive essence of it unless the consequences involve an extraneous object. But, instead of this 'consequentialist' conception of essence, it is possible to accept the 'constitutive' conception, according to which the essence of an object is confined to the constitutive essence of it, and mere consequences of the constitutive essence are not in a proper sense essential to it. Fine (*ibid.*, p. 58) prefers the consequentialist conception for the reason that if the essence of an object is identified with its constitutive essence and thus not closed under consequence, there is no principled way to distinguish essential properties from their logical equivalents. Fine's consequentialist conception is controversial. (See, for example, E. Nutting, B. Caplan, and C. Tillman, "Constitutive Essence and Partial Grounding," *Inquiry* 61 (2018), 137–161; H. Morvarid, "Essence and Logical Properties", *Philosophical Studies* 176 (2019), 2897–2917; and J. Zylstra, "Constitutive and Consequentialist Essence," *Thought* 8 (2019), 190–199.) But I will not go into this controversy because it will not be relevant to my main theme. Instead, I will follow Fine and assume the consequentialist conception. This should be harmless for my purposes because it will give proponents of Fine's model of essence more winning chance as they will thereby have more essential properties of an object with which to ground necessary truths.

[12] E. J. Lowe, "Two Notions of Being: Entity and Essence," *Royal Institute of Philosophy Supplement 62* (2008), 23–48, p. 37.

[13] B. Hale, *Necessary Beings: An Essay on Ontology, Modality, and the Relations Between Them*, (Oxford University Press, 2013), p. 222.

[14] For every object x, x is identical-to-x. For convenience, let me use the phrase ⌜the identity property of x⌝ to express the property of being-identical-to-x.

[15] I would like to thank Kit Fine for helpful discussion and suggestions for this section.

[16] David Wiggins is a notable espouser of this view. See D. Wiggins, "The De Re 'Must': A Note on the Logical Form of Essentialist Claims," in G. Evans and J. McDowell (eds.), *Truth and Meaning*, Clarendon Press, 1976, 131–160.

[17] I will henceforth use the sentence forms 'Necessarily, x is F', 'It is necessary that x is F', and 'x is necessarily F' distinctively in such a way that the first is a neutral one waiting to be disambiguated to mean either the second or the third, while the second is a construal of the first in the sentential approach, and the third a construal of the first in the predicational approach.

[18] Thanks to Zoltán Szabó for suggesting that the assumption needs to be made explicit.

[19] S. Kripke, "Identity and Necessity," M. K. Muniz (ed.), *Identity and Individuation* (New York University 1971), 135–164. Perhaps Kripke wasn't the first to come up with the proof of the necessity of identity. The thought that identity statements are necessary can go back to the pioneering work of Ruth Marcus, although the specific form of proof to be discussed above is due to Kripke. See R. Marcus, "Identity of Individuals in a Strict Functional Calculus of Second-Order," *Journal of Symbolic Logic* 12 (1947), 12–15. For a detailed historical remark on the proof, see J. Burgess, "On a Derivation of the Necessity of Identity," *Synthese* 191 (2014), 1567–1585.

[20] Kripke, "Identity and Necessity," p. 137.

[21] Kripke, *ibid.*, pp. 137–138.

[22] See, for example, E. J. Lowe, "On the Alleged Necessity of True Identity Statements," *Mind* 91 (1982), 579–584.

[23] Cf. C. McGinn, *Logical Properties*, (Oxford University Press, 2000), Ch. 4.

[24] For more on the logical form of essence statements, see K. Fine, "Senses of Essence"; and K. Fine, "The Logic of Essence," *Journal of Philosophical Logic* 24 (2005), 241–273. And, as in the case of modal statements, I will use the sentence forms 'Essentially, x is F', 'It is essential to x that x is F', and 'x is essentially F' distinctively.

[25] Fine, "Senses of Essence," p. 55; Fine, "The Logic of Essence," p. 241. And, borrowing Rosen's notation, I will write [p] for the fact that p. (Rosen, "Metaphysical Dependence: Grounding and Reduction," p. 115.) And I did and will embed a sentence within single quotation marks to mean the proposition expressed by the sentence.

[26] Indeed, Fine is inclined to take the basic form of essence statements as predicational owing to its expressive subtlety. See Fine, "Senses of Essence," p. 55.

[27] Fine, "Unified Foundations for Essence and Ground," *Journal of the American Philosophical Association* 1 (2015), 296–311, pp. 296–297.

[28] The notion of presupposition employed here is neither epistemic nor pragmatic. It is a metaphysical notion that I

borrowed from Fine. (See K. Fine, "Plantinga on the Reduction of Possibilist Discourse," in J. E. Tomberlin and P. van Inwagen (eds.), *Alvin Plantinga*, 145-186, Dordrecht: Reidel, 1985). Intuitively, to say that being-identical-to-Socrates presupposes Socrates is to say that the former involves the latter as a constituent so that the former is metaphysically explained in terms of the latter.

29 My discussion runs against the assumption that it is true by the concept of real definition that the definition of an object *explains* the identity of the object. Two remarks in defense of the assumption are in order. Firstly, the assumption is in keeping with the traditional framework of real definition that aims at the study of things, where the study of things is pursued in terms of a study of their 'causes', one of which is a formal cause of what they are or, in other words, an explanation of their identity. One can freely use the word 'definition' in such a way that the definition of an object doesn't have to explain what it is. But that is not the sense of 'definition' intended in the present discussion. Secondly, the assumption is also in keeping with an ordinary concept of definition. One might disagree, claiming that being-odd is defined as being-not-even, and being-even is defined as being-not-odd in which case, being-odd is not explained in terms of being-not-even on pain of circularity. However, the claim doesn't seem right. What is going on is not that being-odd is defined as being-not-even and *at the same time* being-even is defined as being-not-odd but that there are two alternative systems of definitions with respect to the two concepts. We may be indeterminate as to which system is to be adopted. This is not to say that we adopt both definitions. Once we choose one system, we adopt the definition in the chosen system and reject the definition in the other system on pain of circularity. (Cf. Fine, "Ontological Dependence," *Proceedings of the Aristotelian Society* 95 (1995), 269–290, p. 285.) I would like to thank an anonymous referee for pressing me on this matter.

30 This is not to say that no qualitative property can be had by one possible object only. There might be a single qualitative property or a conjunction of finitely many qualitative properties that is uniquely instantiable. For example, being a God or being a null set is ultimately finitely qualitative but uniquely instantiable. But, when it comes to so-called ordinary substances, no conjunction of finitely many qualitative properties seems to be uniquely instantiable.

31 G. W. Leibniz, "Discourse on Metaphysics," in R. Ariew and D. Garbert (eds.), G. *W. Leibniz: Philosophical Essays*, Hackett Publishing Company, 1989, 35–68, Section 8.

32 The locus classicus for the argument against the Leibnizian position is M. Black, "The Identity of Indiscernibles," *Mind* 61 (1952), 153–164; and R. Adams, "Primitive Thisness and Primitive Identity," *Journal of Philosophy* 76 (1979), 5–26. For skeptical discussions of the argument, see I. Hacking, "The Identity of Indiscernibles," *Journal of Philosophy* 72 (1975), 249–256; and M. Della Rocca, "Two Spheres, Twenty Spheres, and the Identity of Indiscernibles," *Pacific Philosophical Quarterly* 86 (2005), 480–492. I think that the conclusion of Adams's argument is true whether the argument for the conclusion is successful or not. Fine would also agree with Adams on this matter. See K. Fine, "The Problem of Possibilia," in D. Zimmerman (ed.), *The Oxford Handbook of Metaphysics*, Oxford University Press, 2002, 161–179.

33 Does my argument imply that it is not possible that some objects have parts but don't have ultimate parts? The argument would be in trouble if it implies the impossibility of these objects as infinitely complex matter (i.e., matter made of quarks, made of schmarks, made of darks,…) and gunk (i.e., an object composed of proper parts, composed of proper parts, …) seem to be possible. (For the possibility of gunk, see D. Zimmerman, "Could Extended Objects Be Made out of Simple Parts? An Argument for 'Atomless Gunk'," *Philosophy and Phenomenological Research* 56 (1996), 1–29.) But my argument does not imply the impossibility of gunk. I have a mug in front of me. Call it 'M.' My argument does not imply that M is not gunk. What it implies is only that if M is gunk, M is not defined by its parts, say, p_1, p_2,…. Suppose that M is gunk and thus that M is not defined by p_1, p_2,…. Being gunk may or may not be in the definition of M. If being gunk is in the definition of M, M is defined as an object composed of proper parts composed of proper parts and so on ad infinitum, which does not contradict that M is not defined by the *particular* parts p_1, p_2,…. If, on the other hand, being gunk is not in the definition of M, perhaps M is accidentally gunk. Then, M may have a definition that does not include being gunk: M may be defined as a cup, while it is accidentally gunk. Thanks to Dean Zimmerman for raising this issue that helps clarify my argument.

34 Recall that for properties F and G, G is a consequence of F if and only if it is a logical truth, for any x, that x is G if x is F as Fine suggests it. (See note 9.)

35 Is this supposition true? I believe that Socrates necessarily and essentially came from O. But I don't think that Socrates's origin (having come from O) is in his definition. My worry is that if his origin is in the definition of him, he ontologically depends upon O, which jeopardizes Socrates's ontological status as an independent being. I will talk about this very briefly in the final section. But, for the sake of argument, let me put this worry to one side for the moment.

36 The sufficiency of origin has been proposed to develop the sketchy argument for the necessity of origin Kripke offers in the celebrated note 56 of *Naming and Necessity*. See, for example, N. Salmon, "How not to Derive Essentialism from the

Theory of Reference," *Journal of Philosophy* 76 (1979), 703–725; N. Salmon, *Reference and Essence*, Prometheus Books (2005); C. McGinn, "On the Necessity of Origin," *Journal of Philosophy* 73 (1976), 134–135; G. Forbes, *The Metaphysics of Possibility*, Oxford: Clarendon Press, 1985.

37 For criticisms of the sufficiency of origin, see, for example, T. Robertson, "Possibilities and the Arguments for Origin Essentialism," *Mind* 107 (1998), 729–749; P. Mackie, *How Things Might Have Been*, Oxford University Press, 2006.

38 I would like to thank an anonymous referee for this line of response.

39 Suppose that 'x is F and G' is in the essence of x. Surely, 'x is F' is a consequence of 'x is F and G'. But this doesn't imply that 'x is F' is in the derivative essence of x. It might be the case that 'x is F' and 'x is G' are each in the constitutive essence of x, and 'x is F and G' is in the derivative essence of x: it is not that 'x is F' is in the essence of x because 'x is F' is a consequence of 'x is F and G' in the essence of x but that 'x is F and G' is in the essence of x because it is a consequence of 'x is F' and 'x is G' that are each in the essence of x.

40 Thanks to Kit Fine for suggesting something like this response, though his suggestion might not be the same. Thanks also to Nikolaj Pedersen for pressing me to explain why I think that this response fails.

41 This response implies that for *every* object, the identity property of it is in the derivative essence of it, not in the definition of it. But this seems wrong. Being identical-to-$\varnothing$ is ultimately being a set with no member. Intuitively, there is no reason not to take this as the definition of $\varnothing$. Being identical-to-{Socrates} is ultimately being a set with Socrates as a sole member. Intuitively, there is no reason not to take this as the definition of {Socrates}. So, I think the response is problematic. But let me set aside this problem. Even if this problem is set aside, we will see that the response does not work anyway.

42 Under the assumption that z being identical-to-z and z being self-identical are the same, this is the same as the property of being such for every x, x is self-identical.

43 Given that x is such that for every z, z is identical-to-z, it logically follows that x is identical-to-x, which is that x is self-identical. So, it is a logical truth, for any x, that x is self-identical if x is such that for every z, z is identical-to-z.

44 For example, it is not a logical truth that Plato is identical-to-Socrates if Plato is such that for every z, z is identical-to-z: it is true that Plato is such that for every z, z is identical-to-z; but it is false that Plato is identical-to-Socrates.

45 Bob Hale considers identity properties briefly and dismisses them as non-essential properties precisely because the identity property of a particular individual "tells us nothing about what it is to be that individual." (Hale, *Necessary Beings*, 222, n. 27.) Part of what I am doing here is to show that he is mistaken about this.

46 I would like to thank anonymous referees for suggesting several possible attempts to ground (N2). Thanks to Youngchan Lee for suggesting that (N2) might be grounded in an essential truth about being identical-to-Socrates in particular.

47 For example, it is true that □(Socrates is a member of {Socrates}), but, from this, we may not infer that Socrates is $\mathbb{N}{\sim}$a member of {Socrates} because □(Socrates is a member of {Socrates}) is true not because the mode of Socrates's being a member of {Socrates} is necessary but because the mode of {Socrates}'s having Socrates as a member is necessary.

48 Suppose that x is $\models_{\sim}$F, and G is a consequence of F. Since x is $\models_{\sim}$F, and G is a consequence of F, x is $\models_{\sim}$G, for essence is closed under consequence. On the one hand, by $\mathbb{E}/\mathbb{N}\text{-Ground}$, [x is $\models_{\sim}$G] grounds [x is $\mathbb{N}{\sim}$G]. On the other hand, [x is $\models_{\sim}$F] grounds [x is $\models_{\sim}$G]: x is $\models_{\sim}$G because x is $\models_{\sim}$F (and G is a consequence of F). So, [x is $\models_{\sim}$F] grounds [x is $\mathbb{N}{\sim}$G].

49 It is not the case that Socrates is $\models_{\sim}$distinct-from-Eiffel-Tower because nothing in the essence of Socrates indicates Eiffel Tower. And the same goes for Eiffel Tower. See Fine, "Essence and Modality," p. 5. See also F. Correia, "On the Reduction of Necessity to Essence," *Philosophy and Phenomenological Research* 84 (2012), 639–653, section 2. This is not to say that the collective essential truth that Socrates and Eiffel Tower are $\models_{\sim}$distinct cannot be explained in terms of individual essential truths about Socrates and Eiffel Tower. Indeed, I think, *pace* Correia, that the collective essential truth in question is grounded in individual essential truths about Socrates and Eiffel Tower, although I will not go into the details here. I am not saying, though, that collective essence is reducible to individual essence or that *any* collective essential truth is grounded in some individual essential truths.

50 An anonymous referee suggested a defense of the definitional model along the above line of thought. In an earlier version of the chapter, I responded by claiming that not (h) but something in the vicinity is true, while agreeing with the referee that (m) is true. I was mistaken to think that (m) is true or that being identical-to-Socrates is a consequence of some logical property. The above defense of the definitional model fails even if (h) is taken for granted though I still do think that my response in the previous version stands.

51 For a perceptive observation on the distinction between the essence of a property qua something objectual (or, objectual essence) and the essence of a property qua something predicational (or, generic essence), see F. Correia, "Generic Essence, Objectual Essence, and Modality," *Nous* 40(4) (2006), 753–767. See also Fine, "Unified Foundations for Essence and Ground."

52 Suppose, for example, that being-identical-to-Socrates is conceived as an object. Let me use 'O(being-identical-to-Socrates)' to refer to the property qua an object. O(being-identical-to-Socrates) is ⊨~ a property such that anything having it is Socrates. But considering this essential property about O(being-identical-to-Socrates) gets us nowhere: first, being identical-to-Socrates is not a consequence of this property; and second, even if it were a consequence of the property, it would follow only that O(being-identical-to-Socrates) is ⊨~ identical-to-Socrates, which is false. It is a logical truth that anything having O(being-identical-to-Socrates) is Socrates. Consider the logical property, being such that anything having O(being-identical-to-Socrates) is Socrates. If being identical-to-Socrates were a consequence of this logical property, it would follow, by (DE2*), that Socrates is ⊨~ identical-to-Socrates. But clearly, being identical-to-Socrates is not a consequence of the logical property.

53 This is based on a principle, according to which to be F is to be G1…Gn if and only if it is in the essence of F that for any x, x is F if and only if x is G1…Gn. The principle is weaker than the proposal offered in Rosen, "Real Definition," according to which to be F is to be G1…Gn if and only if (assuming Weak Formality) it is in the essence of F that for any x, if x is F, then [x is F] is grounded in [x is G]. When we say that to be F is to be G1…Gn, in some cases, 'is' in 'To be F is to be G1…Gn' has an *explanatory* reading on which x being F is *explained* by x being G1…Gn. Rosen's principle is meant to accommodate this reading. But I think 'is' in 'To be F is to be G1…Gn' basically has an explanatorily neutral reading on which to say that to be F is to be G1…Gn does not automatically imply that [x is F] is grounded in [x is G1…Gn] or that [x is G1], [x is G2],…, [x is Gn] are each metaphysically prior to [x is F]. For example, we may say that to be F is to be G1…Gn to mean that x being F is *identical* to x being G1…Gn. For the identity reading and logic of 'To be F is to be G', see C. Dorr, "To be F is to be G," *Philosophical Perspectives* 30 (2016), 39–134.

54 This is so because (N2) is a truth of *metaphysical* necessity. If (N2) is not a truth of metaphysical necessity but a truth of some other kind of necessity, (N2) would not require an essential ground. (For the view that there are various kinds of necessity, see K. Fine, "The Varieties of Necessity," in T. S. Gendler and J. Hawthorne, (eds.), *Conceivability and Possibility*, Oxford University Press, 2002, 253–282; and to see that Fine's thesis is meant to be about metaphysical necessity, see Fine, "Guide to Ground," pp. 77–78.) For example, one might think that (N2) does not require an essential ground, claiming that (N2) or the necessity of identity in general is a consequence of semantic convention on direct reference. (See E. J. Lowe, "Two Notions of Being: Entity and Essence," p. 25.) But I think that (N2) is not derivable from the theory of direct reference, though I can't go into this issue in any detail for lack of space. Here I will simply assume without argument that (N2) is a truth of metaphysical necessity. For the well-discussed point that the theory of direct reference alone is not committed to any view of metaphysically necessary truths, see D. Kaplan, "Demonstratives," in *Themes From Kaplan*, J. Almog, H. Wettstein, J. Perry, (eds.), Oxford University Press, 1989, 481–564; Salmon, "How not to Derive Essentialism from the Theory of Reference"; Salmon, *Reference and Essence*; J. Almog, "Naming without Necessity," *Journal of Philosophy* 83 (1986), 210–242; K. Fine, "Reference, Essence, and Identity," in his *Modality and Tense: Philosophical Papers*, Oxford University Press, 2005, 19–39.

55 This view implies the essentiality of sortal kind, according to which for any x, x is essentially of the sortal kind it falls under. The essentiality of sortal kind serves as an essential ground for the necessity of sortal kinds, according to which for any x, x is necessarily of the sortal kind it falls under. The necessity of sortal kind has been widely accepted. For defenses of the necessity of sortal kind, see D. Wiggins, *Sameness and Substance Renewed*, Cambridge University Press, 2001; B. Brody, *Identity and Essence*, Princeton University Press, 1980/2014. (Cf. E. J. Lowe, *More Kinds of Being: A Further Study of Individuation, Identity, and the Logic of Sortal Terms*, Wiley-Blackwell, 2009.) Kripke also commits himself to the necessity of sortal kind. See Kripke, *Naming and Necessity*, p. 115, n. 57. The necessity of sortal kind is not universally accepted though. For example, see T. Williamson, "Necessary Existents," in A O'Hear (ed.), *Logic, Thought and Language*, 233-251 Cambridge University Press, 2002; T. Williamson, *Modal Logic as Metaphysics*, Oxford University Press, 2013; and Mackie, *How Things Might Have Been*.

56 The term 'thisness', which is an English counterpart of the Latin word 'haecceitas', is due to Duns Scotus. But the view just characterized is not Scotist. In Scotus's view, an individual is analyzed into its general essence and its particular thisness that are formally (though not really) distinct from each other. The view suggested here is rather Suarezian: an individual is not analyzable into metaphysical constituents; it is a substance, as it were. So, the Suarezian view comes closer to Aristotle's view than the Scotist view. (For a useful historical remark, see J. Gracia, "Introduction," in J. Gracia (ed.), *Individuation in Scholasticism: The Later Middle Ages and the Counter-Reformation*, 1-19 State University of New York,

1994.)

Alvin Plantinga and Gary Rosenkrantz are notable contemporary advocates of the Scotist view. See A. Plantinga, *The Nature of Necessity*, Oxford University Press, 1974; A. Plantinga, "Actualism and Possible Worlds," *Theoria* 42 (1976), 139–160; and G. Rosenkrantz, *Haecceity: An Ontological Essay* (Dordrecht: Kluwer, 1993). For a contemporary instance of the Suarezian view, see Adams, "Primitive Thisness and Primitive Identity"; and R. Adams, "Thisness and Actualism," *Synthese* 49 (1981), 3–41.

[57] Some terminological remarks are worth making. My use of the terms 'thisness' and 'primitive' is different from Robert Adams's use of the terms. Adams uses 'thisness' to mean what I have called 'identity property'. So, in his terminology, $\varnothing$ has a thisness as it has an identity property, while in my terminology, it doesn't have a thisness though it has an identity property. While Adams uses 'primitive' to distinguish non-qualitative properties from qualitative ones, I use it to distinguish identity properties of objects that presuppose the objects from identity properties that don't. So, in his terminology, {Socrates} has a primitive thisness or a primitive identity property, as the identity property is not qualitative; but in my terminology, {Socrates} does not have a primitive identity property, as the identity property does not presuppose {Socrates}.

[58] Fine, "Unified Foundations for Essence and Ground."

[59] Perhaps this is why Aquinas said in *Summa Theologica*, I, 44, art.: "Habitudo ad causam non intrat in definitionem entis quod est causatum" which in English is that the relation to a cause does not enter into the definition of the thing that is caused. The English translation is due to E. Anscombe, "Times, Beginnings, and Causes," in her *Metaphysics and the Philosophy of Mind*, University of Minnesota Press, 1981, p. 152. Of course, from the essentiality of origin, one might simply conclude that familiar objects such as Elizabeth II are all non-independent beings: she depends upon her parents, while her parents depend upon parents of their own and so on and so forth. Perhaps Spinoza has this view or something in the vicinity. (Spinoza, *A Spinoza Reader: The Ethics and other Works*, ed. E. Curley, Princeton University Press, 1994, Part I. See also M. Della Rocca, *Representation and the Mind-Body Problem in Spinoza*, Oxford University Press, 1996). Thanks to Michael Della Rocca for discussion about Spinoza's view on this matter.

[60] Kripke, *Naming and Necessity*, p. 113, italics original.

[61] Three remarks are in order. (1) The relevant sense of 'consequence' is the non-logical one: to be $this_{Elizabeth}$ is (partly) to have come from the parents. (See note 9.) (2) To be $this_{Elizabeth}$ is also (partly) to have $this_{Elizabeth}$ agential power. In my view, to be identical-to-Elizabeth is to be a person with $this_{Elizabeth}$ agential power who came from the actual parents. My proposal that the origin of an object is a consequence of its non-definitive constitutive essence requires a substantive defense. It lies beyond the scope of the chapter to discuss how this can be done in detail, which is what I hope to do elsewhere. I wish only to add that if my proposal is right, the defense of the essentiality of origin should be pursued in a different line from the usual ones found in N. Salmon, "How not to Derive Essentialism from the Theory of Reference"; and G. Rohrbaugh and L. deRosset, "A New Route to the Necessity of Origin," *Mind* 113 (2004), 705–725.

[62] Perhaps the traditional convention can be traced back to Aristotle. (It should be noted, though, that it is unclear that Aristotle *always* used the term 'essence' to signify something general. While Aristotle in *Metaphysics* Z suggests that the essence of an object is general, identifying the essence of an object with its form, which is for Aristotle shareable by many objects, he also suggests that the essence of an object is singular and unshareable, identifying the essence of an object with the object qua itself. It is also worth noting that in Aristotle, definitions are of kinds and there are no definitions of individuals. In this respect, Fine's use of 'definition' is broader than Aristotle's.) However, not all philosophers follow the traditional convention. When Locke says that "essence," in the "proper original signification" of the word, denotes "the very being of any thing, whereby it is, what it is," he seems to assume that the essence of an object is singular and unique to the object, because if the essence of an object were a general feature, it would not be the case that the object is or exists by its essence. (J. Locke, *An Essay Concerning Human Understanding*, ed. P. H. Nidditch, Clarendon Press, 1975, III, III, 15.) Spinoza might be another instance in point. (See note 60.) And Fine should have no objection to the view that singular properties can be called 'essences', as he regards the property of containing Socrates as a sole member as an essential property of {Socrates}. Thanks to Tim Clarke, Michael Della Rocca, and Ken Winkler for discussion on this matter.

[63] For helpful discussions about Peirce's view on naming and thisness, see J. R. DiLeo, "Pierce's Haecceitism," *Transactions of the Charles S. Peirce Society* 27 (1991), 79–109; and D. Boersema, *Pragmatism and Reference*, MIT Press, 2009, Ch. 4.

[64] E. J. Lowe, a prominent espouser of the definitional model, forcefully objects to Kripkean essentialism, claiming that essences are knowable a priori. See Lowe, "On the Alleged Necessity of True Identity Statements"; Lowe, "Two Notions of Being: Entity and Essence"; E. J. Lowe, "A Problem for a posteriori Essentialism concerning Natural Kinds," *Analysis* 67

(2007), 286–292. I believe that his criticism of a posteriori essentialism is based on the failure to acknowledge the essentiality of thisness which is knowable only a posteriori. But this is a larger issue that I cannot properly discuss here.

65 I should mention that Joseph Almog proposed a construal of essence that seems to be similar to what I propose here. (J. Almog, "The Structure-in-Things: Existence, Essence and Logic," *Proceedings of the Aristotelian Society* 103 (2003), 197–225.) He objects to Fine's definitional account of essence on the grounds that the essence of an object is not exhausted by the definition of the object, while the essence of an object should be understood in terms of a generative process by which the object came into being. I find Almog's proposal insightful, but my proposal is different from his in several respects. I should note first that it is hard to tell if Almog's account is intended to account for the *notion* of essence or the *content* of the essence of an object. If he meant the former, I must disagree with him. It isn't and shouldn't be built into the concept of essence that the essence of an object arises from a generative process. I don't see that there is a generative process from which the null set or God came into being. If he meant the latter, I basically agree with him in spirit, but I disagree with him about details. He rejects the modal account of essence but nonetheless thinks that essentiality is extensionally equivalent to necessity. So, he claims that Socrates is not only necessarily but also essentially a member of {Socrates}. But the notion of essence proposed here doesn't require or recommend it.

66 Versions of this chapter were presented at the spring meeting of the Korean Society for Analytic Philosophy (KSAP), Seoul, 2019, to the Analytic Philosophy workshop at Yonsei University, and to the conference on Truth, Metaphysics and Epistemology at Peking University. I am grateful to everyone who participated in these discussions, including my commentator, Jaeho Lee, at the meeting of KSAP. I should like to thank Tim Clarke, Michael Della Rocca, Kit Fine, Zoltán Szabó, Dean Zimmerman as well as anonymous referees for helpful comments and suggestions.