

ON THE REDUCTION OF CONSTITUTIVE TO CONSEQUENTIAL ESSENCE

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Fine has introduced an important distinction between *constitutive* and *consequential* essence. The constitutive essence of an object comprises truths directly definitive of the object whereas the consequential essence comprises the class of truths following logically from the directly definitive truths (subject to certain constraints). Essence theorists then face a challenge: how shall we draw the line between the truths directly definitive of an object and those that are mere consequences of them? Fine offers an answer. We start with the object's consequential essence and then filter out from its consequential essence the propositions that are there on account of being partly grounded in others. The object's constitutive essence comprises what's left. I argue against this account by presenting a range of cases where it is clear that certain truths ought to count as constitutively essential for certain objects but where Fine's account rules them out.

IN "Senses of Essence" Kit Fine introduces a distinction between *constitutive* and *consequential* essence (Fine 1994). The constitutive essence of an object comprises truths directly definitive of the object whereas the consequential essence of an object comprises the class of truths following logically from the directly definitive truths—subject only to the constraint that consequences do not concern anything upon which the given object or objects did not depend (Fine 1995; 2000). So, for example, we might take it to be constitutively essential to singleton Socrates that it be a set, and consequentially essential to singleton Socrates that it be a set or a set.

It is tempting when thinking through Fine's distinction to regard the constitutive essence as basic and understand consequential essence in terms of it. Following Correia, let's call this *the naïve view*. On the naïve view, we should regard "being directly definitive of *x*" as primitive and understand consequen-

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tial essence in terms of constitutive essence; a proposition p is consequentially essential to x just in case p is a logical consequence of q (in the constrained sense mentioned above) where q is a proposition constitutively essential to x (Correia 2012; 2020).

Surprisingly, Fine argues elsewhere that we should reject the naïve view. We should instead understand constitutive essence in terms of consequential essence. In “Guide to Ground” Fine states:

How are we to understand the relationship between constitutive and consequential essence? [The] view, to which I am inclined is that we understand the former in terms of the latter. One statement of essence may be partly grounded in others. The fact that it lies in the nature of a given set to be a set or a set, for example, is partly grounded in the fact that it lies in the nature of the set to be a set. The constitutive claims of essence can then be taken to be those consequentialist statements of essence that are not partly grounded in other such claims. (Fine 2012: 79)¹

To make this more precise, we will adopt the Finean convention of expressing essentialist claims by means of an indexed sentential operator. On this view, expressing claims about essence involves prefixing an indexed sentential operator “it is essential to x that” to a sentence. So, if we want to express the claim that Socrates is essentially human, we prefix an indexed operator “ \Box_{Socrates} ” to the sentence “Socrates is human” to yield “ \Box_{Socrates} Socrates is human.” Letting “ \blacksquare_x ” indicate constitutive essence, “ \Box_x ” indicate consequential essence, and “ \prec ” indicate partial ground, we can formulate Fine’s proposal thus: for any proposition P and any object x ,

Fine’s Reduction: $\blacksquare_x P =_{\text{def}} \Box_x P \ \& \ \neg \exists Q (\Box_x Q \ \& \ \Box_x Q \prec \blacksquare_x P)$

It’s important to point out that the partial grounding claim is stated as holding between facts expressed by sentences prefixed by the essentialist operator, rather than their contents. While Fine’s remarks in “Guide to Ground” are compatible with alternative ways of regimenting his proposal, Fine has recently insisted that we understand his proposal in the way regimented above. In the course of clari-

1. Gideon Rosen also proposes as ground-theoretic reduction of constitutive to consequential essence in Rosen (2015), although he characterizes it in terms of full rather than partial ground. Additionally, while Fine expresses ambitions to give an analysis here, more recently Fine suggests that what matters is not whether this account gives a correct analysis but whether it gives a correct equivalence. See Fine (2020: 470). Weakening the account’s ambitions won’t affect the argument in what follows. The cases that we lean on to criticize the reductive account equally suggest the failure of the corresponding Finean equivalence.

fying his view in the face of alternative regimentations (and the troubles they engender) Fine says, “my intent is that it should be the consequentialist statements of essence, taken as a whole, that are relatively ungrounded rather than the content of such claims” (Fine 2020: 470). So, it’s important to an accurate understanding of Fine’s proposal that we represent it as turning on grounding claims involving sentences articulated with essentialist operators rather than merely their content.

On Fine’s proposal, partial ground plays a *filtering* role. We start with the object’s consequential essence and then filter out from its consequential essence the propositions that are there on account of being partly grounded in the core. This, however, raises a pressing question. How are we to determine when one consequentially essential proposition grounds another? Fine does not give us a principle for systematically determining grounding relations among the propositions consequentially essential to some object. But perhaps one can be extracted from the example Fine gives of the proposal in action. When setting out how his reduction works, Fine says that if we have good reason to accept both

\Box_x x is a set or a set

and

\Box_x x is a set

then we should conclude

$[\Box_x \text{ x is a set}] < [\Box_x \text{ x is a set or a set}]$.²

Why should we think that $[\Box_x \text{ x is a set}] < [\Box_x \text{ x is a set or a set}]$? What could it be if not because

$[\text{x is a set}] < [\text{x is a set or a set}]$? A natural thought here is to see Fine as taking grounding relations holding between the contents of essentialist claims to project upward to the essentialist claims themselves.

Projection from Contents: given $\Box_x P$ and $\Box_x Q$, if $P < Q$ then $\Box_x P < \Box_x Q$

Fine never explicitly endorses projection from contents, but insofar as Fine (or an advocate of his reductive account) wants to reason about what sorts of truths are constitutively essential on the basis of grounding relations holding between consequentially essential claims, he will need some way to identify what those

2. See Fine (2012: 79)

grounding relations are. Projection from contents is an attractive principle for the Finean reductivist to accept. In fact, something like this seems needed by the Finean in order to for the proposal to work as it's supposed to in filtering down to the constitutive essence.

Some have worried that Fine's reduction cannot be right because it *under-filters*; it categorizes certain truths that are merely consequentially essential as constitutively essential. One under-filtration worry that has been raised questions whether Fine's reduction can exclude logical laws like generalized excluded middle— $[\forall x \forall P (Px \vee \sim Px)]$ —from the constitutive essence of Socrates.³ Logical laws like generalized excluded middle will be consequentially essential to Socrates. They are entailed by any proposition consequentially essential to Socrates and mention no individuals on which Socrates doesn't belong. Letting "s" abbreviate "Socrates," we can endorse:

$$(1) \Box_S \forall x \forall P (Px \vee \sim Px).$$

A natural response for the Finean reductivist will be to insist that (1) will be partly grounded in one of its instances being consequentially essential to Socrates. We should endorse:

$$(2) \Box_S \text{Human}(s) \vee \sim \text{Human}(s).$$

(2) in turn will be taken to be partly grounded in

$$(3) \Box_S \text{Human}(s).$$

Assuming that no further consequentially essential proposition partly grounds (3), the Finean reductivist will want to reject that (1) and (2) are constitutively essential, but accept that (3) is. That seems sensible in each case, but it trades on being able to makes use of standard principles from the logic of ground in an essentialist context. Projection from contents enables this. Since Fine's reduction seems to exhibit projection-from-contents style reasoning in setting out canonical examples of how the proposal works and needs to rely on (something like) it in order to respond to certain under-filtration worries, I help myself to it in arguing against Fine's reduction.

It is worth keeping in mind that this is a simplifying assumption. The Finean reductivist may desire to push back against the cases that I present, but it won't be enough merely to insist that projection from contents is false, especially since they'll insist on the truth of some instances of it. They'll be on the hook for giving

3. See, e.g., Nutting, Caplan, and Tillman (2018).

some account of how to determine which consequentially essential propositions ground others. Any plausible account that preserves standard reasoning about how logically complex facts are grounded (which it must if it to properly filter out the logical laws) will run into trouble with the sorts of cases I present.⁴

I will now argue against Fine's reduction. In doing so, I present cases that show that Fine's reduction over-filters; it excludes propositions from the constitutive essence that should be included. One particular class of cases shares this structure:

1. $\Box_x P \vee Q$,

2. $\Box_x P$,

Yet nevertheless,

3. $\blacksquare_x P \vee Q$.

Here are two such cases. Suppose I am writing a computer program involving a Boolean variable v where the possible values are $(0,1)$. Suppose that I declare v as Boolean, constant, and that the value of v is 1.⁵ In so doing, I give an explicit definition of v . In this explicit definition, I tell you exactly what kind of thing it is: it's a *Boolean variable*. The fact that it takes either the value 1 or not holds on account of how v has been explicitly defined; thus, we should accept:

4. $\blacksquare_v (v = 1) \vee (v = 0)$.

In declaring v , I also explicitly define it as a variable with a constant value of 1. So, we should also accept:

5. $\blacksquare_v (v = 1)$.

(5) gives us the truth of:

6. $\Box_v (v = 1)$.

4. Despite Fine's insistence that we understand his reductive proposal in terms of sentences prefixed by the essentialist operator, rather than their contents, one may demur and instead try to articulate a reductive proposal where it's the contents rather than the essentialist statements as a whole where the filtration occurs (see, e.g., Correia 2020 for an example of such a proposal). This sort of move will not help the reductivist against the case that I proceed to make. Since the cases that I present as worry cases are generating problems for Fine's account via some projection principle from the contents, the problematic features are already present among the mere contents.

5. This is an adaptation of Martin Glazier's case in Glazier (2017). The primary difference between the two is that in Glazier's case v is not declared constant.

And given our constrained conception of logical consequence, we can secure the following on the basis of (6) via disjunction introduction:

$$7. \Box_v (v = 1) \vee (v = 0).$$

Fine's reduction filters out consequentially essential disjunctions if one of its disjuncts is also consequentially essential. So, in the present case, Fine's reduction would take (6) as a partial ground for (7) and on that basis rule it out as constitutively essential. But this is wrong. That means rejecting (4), which we should not do.

Or consider another case. Suppose that a certain Christian theological tradition has things right and exactly one of two fates awaits humankind. They may go to heaven or hell. Suppose further that this eschatological view reflects a certain view of human teleology; that human beings are created for certain eschatological ends. On this view, Socrates via his humanity will be bound either for heaven or hell. Again, letting "s" abbreviate "Socrates," we should endorse:

$$8. \blacksquare_s \text{Heaven}(s) \vee \text{Hell}(s).$$

Again (8) holds on account of what Socrates is at his core, that is on account of his being defined in terms of his humanity. Let's suppose further that in creating Socrates, God elects Socrates to salvation (much to Socrates's satisfaction). We should endorse the following claim:

$$9. \blacksquare_s \text{Heaven}(s)$$

(9) entails

$$10. \Box_s \text{Heaven}(s).$$

And given our constrained conception of logical consequence, we can secure (11) by means of disjunction introduction:

$$11. \Box_s \text{Heaven}(s) \vee \text{Hell}(s).$$

Fine's reduction will again filter out (11) on the basis of (10) and fails to vindicate our judgments about the truth of (8).

It is important to underscore that in these cases what accounts for the fact that the object either meets or fails to meet the relevant condition is the *sort* to which the object belongs. In the first case it is in virtue of belonging to the sort *Boolean variable* and in the second case it is in virtue of belonging to the

sort *humanity*. Saying that Socrates is bound either for heaven or hell is saying something importantly different from saying that Socrates is either wearing a tunic or a toga. The first says something important about what he is—something about his nature—in a way the latter does not. This is because *being bound for either heaven or hell* emerges as a core essential feature of Socrates on account of unpacking the real definition of another of his core essential features—*being human*—whereas *wearing a tunic or a toga* does not.⁶

We do not want logical laws like generalized excluded middle— $\forall x \forall P (Px \vee \sim Px)$ —in the constitutive essence of almost any objects. Fine’s reduction filters these out by identifying instances of the law which are consequentially essential to those objects. Fine’s reduction succeeds marvelously in filtering out the logically complex propositions that appear in the consequential essence solely as a result of logical closure. However, not all propositions with logical complexity appear in an object’s consequential essence because of the closure condition. Some appear because they were *already* present in the constitutive essence, as (4) and (8) illustrate. Fine’s account cannot recognize the difference.⁷

There are other classes of cases beyond simple disjunctive ones. There seem to be both cases involving existentials and their witnesses as well as determinables and their determinates. On a certain natural way of thinking, to be human is to be of a certain biological kind; that is to say that our biological structure is essential to us. More specifically, humans are the sorts of things that are generated from fertilized eggs. Such a view would yield that it essential to being human that humans are generated from some egg. So, on account of Socrates being defined by his membership in the kind *human*, we should accept the following. Where “s” stands for Socrates and P stands for “is the fertilized egg giving rise to”

12. ■ $\exists x Pxs$.

6. Any account of constitutive essence or real definition should license definitional unpacking or expansion: Following Rosen, we can characterize this principle as follows. Where Def (F, Φ) represents the claim that F is really defined in terms of Φ :

Definitional Expansion: Def (F, Φ), and Def (G, ψ) then Def (F, $\Phi \psi/G$) where $\Phi \psi/G$ is the result of substituting ψ for G in Φ . (Rosen 2015: 201)

See Rosen (2015) and Fine (2015) for discussion as to why we should accept substitution principles like this in essentialist or real definitional contexts.

7. While I said earlier that I assume projection from contents in the course of arguing against Fine’s proposal, it’s worth mentioning that here I strictly speaking do not need it. These disjunctive cases share a similar structure to Fine’s canonical example involving sets. So, these results can be established simply by parity of reasoning rather than by an explicit appeal to a projection principle.

Now consider matters not at the level of the kind human but at Socrates's individual level. If one takes the essentiality of origins seriously, then one would be very tempted to accept that the particular fertilized egg giving rise of Socrates is essential to him as well. This will entail:

$$13. \Box_s P(e,s),$$

where "e" designates the particular fertilized egg from whence Socrates comes. The trouble for Fine's reduction is that propositions like (12) will be excluded. Since witnesses ground the existentials for whose truth they witness, Fine's proposal will filter out propositions like

$$\Box_s \exists x Pxs$$

on the basis of propositions like (13) and will not be seen as expressing a core truth about Socrates arising directly from his humanity.

One last class of cases. Consider a particular stop sign L . L is a macroscopic extended material object. Quite plausibly then, it is essential to L that it have a color. So, we should endorse:

$$14. \blacksquare_L L \text{ is colored.}$$

Moreover, L is a stop sign. In order to play its conventionally specified role and be authoritative in the social contexts in which it functions, it must be red.⁸ Quite plausibly, then it is essential to L that it is red. So, we should endorse:

$$15. \blacksquare_L L \text{ is red.}$$

Again, this gives us

$$16. \Box_L L \text{ is red.}$$

The standard ground-theoretic treatment of the relationship between determinates and determinables has it that the determinates ground the determinables. Thus, that x is red grounds that x is colored.⁹ Fine's reductive account will the

8. Plausibility might require some qualifications or slight weakenings. For instance, here we are prescinding from the possibility that an initially red stop sign might fade in the sun. Of course, if we modify the case to take the relevant object to be a kind of *qua* object of the sort discussed by Fine (1999) and Fairchild (2017; 2019) then the case is particularly clear.

9. See, e.g., Rosen (2010), Fine (2012), and Schaffer (2016).

fail to predict that (14) is true since the corresponding consequential essential proposition will be taken to be grounded in (16).

What do these classes of cases mean more generally for ambitions to take consequential essence to be conceptually prior to constitutive essence? There are methodological worries about taking constitutive essence to be the basic notion. It seems to leave us with little grasp of *where* and *how* to draw the line between constitutive and consequential essence.¹⁰ The great appeal of beginning with consequential essence and filtering out the results of closure is that it promises to break the problem of delimiting the boundaries of constitutive essence into two relatively manageable parts; one concerning the consequentialist essence, and the other concerning its ground (Fine 2020: 470). The considerations above show that this methodological division of labor is less manageable than it first appears: extracting the boundaries of constitutive essence from the ground-theoretic relations holding between facts about consequential essence is likely to be a fraught as simply trying to get a direct grasp on constitutive essence itself.

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10. See, e.g., Fine (2012; 2020), Livingstone-Banks (2017), and Correia (2020).

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