

A Critical Note on Fine's Logic of Essence

(An Extended Synopsis)

1. Introduction

On the modal account of essence, an object o is essentially F iff it is a metaphysical necessity that o is F , or on its conditional formulation, iff it is a metaphysical necessity that o is F if o exists. Kit Fine (1994) has famously provided counter-examples to the modal account of essence. He has concluded that no modal account of essence seems to be possible and so it is wrong to think that essence reduces to metaphysical modality. Once the conclusion is granted, the problem arises of developing a logic of essence, not now as a fragment of a modal system, but as a system in its own right (Fine 1995c 241). Obviously, the logic should be constructed in such a way that Fine's counter-examples to the modal account are accommodated. His (1995c) and (2000) were intended to develop such a logic. In my paper, I aim to show that he has not been successful in doing so. I shall argue that his proposed logic of essence is subject to an important group of counter-examples. In this synopsis, I briefly present Fine's counter-examples (section 2), briefly review Fine's truth clause for essential statements (section 3), and argue that there is a group of counter-examples which is not accommodated by his proposed logic (section 3).

2. Fine's Counter-examples to the Modal Account of Essence

Fine's counter-examples can be sorted into the following four groups. The first three groups are counter-examples to both unconditional and conditional formulations, whereas the last one is a counter-example to the conditional formulation only.

(I) Cases in which an object is necessarily a member of a set but is not essentially so. For example, it is a metaphysical necessity that Socrates is a member of the singleton {Socrates} and, *ipso facto*, a metaphysical necessity that if Socrates exists, Socrates is a member of the singleton {Socrates}. So on both formulations of the standard modal account of essence, Socrates must be essentially a member of the singleton {Socrates}. But it is counter-intuitive to say that Socrates is essentially a member of the singleton {Socrates}.

(II) Cases in which an object is necessarily distinct from another object but is not essentially so. For example, it is a metaphysical necessity that Socrates is distinct from the Eiffel Tower and, *ipso facto*, a metaphysical necessity that if Socrates exists, Socrates is distinct from the Eiffel Tower. So on both formulations of the standard modal account of essence, Socrates must be essentially distinct from the Eiffel Tower. But it is counter-intuitive to say that Socrates is essentially distinct from the Eiffel Tower.

(III) Cases in which an object is necessarily such that P but not essentially so, P being a necessary proposition. For example, it is a metaphysical necessity that Socrates is such that $2+2=4$ and, *ipso facto*, a metaphysical necessity that if Socrates exists, Socrates is such that $2+2=4$. So on both formulations of the

standard modal account of essence, Socrates must be essentially such that $2+2=4$. But it is counter-intuitive to say that Socrates is essentially such that $2+2=4$.

(IV) Contingent objects' existence. For example, it is a metaphysical necessity that if Socrates exists, then Socrates exists. So on the conditional formulation of the standard modal account of essence, Socrates must essentially exist. But it is counter-intuitive to say that Socrates essentially exists.

3. Fine's Proposed Logic of Essence

Fine proposes to express the concept of essence by means of a sentential modifier. Thus to express the claim that Socrates is essentially a human being, we would first form the sentence "Socrates is a human being". We would then prefix the operator "It is true in virtue of the identity of Socrates that" to obtain the sentence "It is true in virtue of the identity of Socrates that Socrates is a human being". (Fine 1995b: 54) The symbol he proposes for the essentialist operator is a box indexed by a term which designates the subject of the essentialist claim. For example, the sentence "It is true in virtue of the identity of Socrates that Socrates is a human being" is formulated as " \Box_{Socrates} Socrates is a human being" (Fine 1995c: 241-242).

Fine's proposed semantics is a world-semantics with two special features. Firstly, it includes in addition to the usual elements (i.e. set of possible world W , domain function I , and valuation function ϕ) one special extra element, i.e. a dependence relation (\succcurlyeq), which is defined on the set of all possible individuals. As we shall see, the element plays a crucial role in determining the truth value of essential statements. Secondly, the worlds involved in the semantics are not

metaphysically possible world; rather they are possible *relative to the nature* of the individuals in question (Fine 2000: 543).

Two important notions in Fine's semantics are those of *closure* of a set of individuals and *objectual content* of a sentence. As he defines, the closure $c(J)$ of a set of individuals J is $\{b : a \succcurlyeq b \text{ for some } a \text{ in } J\}$. He defines the important concept of *objectual content* (of a sentence) as follows:

Let M be a model and E a sentence or closed predicate whose constants are a_1, \dots, a_m and whose r -predicate [i.e. rigid predicate] symbols are P_1, \dots, P_n . Then the *objectual content* $[E]^M$ of E (in M) is taken to be $\{\phi(a_1), \dots, \phi(a_m)\} \cup \phi(P_1) \cup \dots \cup \phi(P_n)$. (Fine 2000: 548)

Fine defines truth for an essential statement $\Box_F A$ at a world w as follows:

$w \models \Box_F A$ iff (a) $[A]^M \subseteq c(F_w)$ and (b) $v \models A$ whenever $F_w \subseteq I_v$.¹

It says that an essential statement $\Box_F A$ is true at a possible world w if and only if

Condition (1): the set of the objects involved in the objectual content of A is a subset of the set of all objects on which all or some of the F 's depend, and

Condition (2): A is true at every world w' in which the F 's exist.

So, one basic idea behind the semantics is that a statement of the form $\Box_F A$ is only taken to be true when the F 's depend upon each of the objects mentioned in A . Thus it is not taken to be true in virtue of the identity of Socrates that Socrates is a member of the singleton $\{\text{Socrates}\}$. For there is an object, i.e. the singleton

¹ Fine has not defined the symbol " F_w " used in the above-mentioned definition. But his intention is clear. By " F_w ", he means to refer to the set $\phi(F, w)$ of individuals which are F in w .

{Socrates}, mentioned in “Socrates is a member of the singleton {Socrates}”, upon which Socrates does not depend.

4. Counter-examples to Fine’s Logic of Essence

There is a subgroup of Fine’s third group of counter-examples, which is not accommodated by his own proposed logic of essence. As mentioned before, the third group consists in cases in which a necessary property is abstracted from an irrelevant metaphysically necessary proposition and is predicated of an individual. Being abstracted from irrelevant propositions, such properties are non-essential, though necessary, to the individual. The subgroup I have in mind involves *logically* necessary propositions whose objectual content is either empty or only consists of the individual in question. Thus from the logical necessity that everything is either red or not red one can abstract the property of being such that everything is either red or not red ($\lambda x \forall y R_y \vee \sim R_y$). This property is necessary to Socrates. But it is counter-intuitive to say that the property is essential to him. In fact, we do not want to say that the property is essential to anything except the relevant logical entities, i.e. the concepts of disjunction and negation. However, the property turns out, in Fine’s logic of essence, to be essential to Socrates.

Let’s see how such properties turn out, in Fine’s logic of essence, to be essential to every object. The essential claim that Socrates is essentially such that everything is red or not red is formulated, in Fine’s logic, as “ \Box_{Socrates} for any x , x is red or x is not red”. According to Fine’s semantics, the claim is true if and only if it satisfies two conditions:

Condition (1): the set of the objects involved in the objectual content of “for any x , x is red or not red” is a subset of the set of all objects on which Socrates depends, and

Condition (2): The sentence “for any x , x is red or not red” is true at every world in which Socrates exists.

The objectual content of the sentence “for any x , x is red or not red” is null. So, condition (1) is trivially satisfied. Furthermore, the sentence is true at any world in which Socrates exists (notice that the worlds countenanced in Fine’s logic are logically possible). So, condition (2) is also satisfied. Consequently, Fine’s logic makes the sentence “ \Box_{Socrates} for any x , x is red or not red” true.

(In the unbridged version of my paper, I study Fine's logic of essence (both its system and its semantics) more closely, and I raise several objections to my claim that properties abstracted from logical truths are not essential to Socrates and provide replies to them.)

References

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

Fine, K. (1995b). Senses of Essence. In Sinnott-Armstrong, W., editor, *Modality, Morality, and Belief*, pages 53–73. Cambridge University Press, Cambridge.

Fine, K. (1995c). The Logic of Essence. *Journal of Philosophical Logic*, **24**:241–73.

Fine, K. (2000). Semantics for the Logic of Essence. *Journal of Philosophical Logic*, **29**:543–84.