

THE ESSENCE OF ESSENCE

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Despite its appeal and popularity, the view that membership in a natural kind is essential to an individual is unsupported by the logic of essences and has no compelling reflective support. While the view has strong intuitive and empirical support this is insufficient to establish it. There are advantages to abandoning the view that kind membership is essential to individuals. One of these advantages is that it allows for a reconfiguring of the problem of material constitution in a way that removes much of the paradox.

I

Preliminaries: The Abstract Logic of Essences

Assuming there are kinds, sorts, and species and that there are distinct persisting individuals that are members of the kinds¹, then there must be something that makes an individual to be a member of the kinds to which it belongs. Likewise there must be something that makes an individual to be the individual that it is and not a different individual. This ‘something’ is essence. Traditionally there have been two kinds of essences recognized by philosophers—individual essences (an individual essence is sometimes called an haecceity or thisness) and general essences (a general essence is sometimes called a quiddity or whatness). An individual essence makes the individual to be the individual that it is—its thisness, that it is this thing and not another—whereas general essences make an individual to be a member of the kind or kinds of which it is a member—its whatness, what it is.²

Essences are properties or conjunctions of properties. Without taking any stand on anything about the properties that constitute an essence, or on difficult issues such as property identity and individual identity, we can sketch out the abstract logic of essences (ALE). The property or properties that constitute the individual essence of *i* are necessary and sufficient for being individual *i*. Since those properties are an individual

essence, only one thing can be i . The property or properties of the general essence of kind k are necessary and sufficient for being a member of kind k . In the ordinary case, many things, or at least more than one, can share the essence of k . These abstract features of the logic of essence can be generalized over possible worlds. H is the individual essence of i if and only if $\Box(x)(x = i \leftrightarrow Hi)$. Q is the essence of kind k if and only if $\Box(x)(x \in k \leftrightarrow Qx)$. (Here ' $x \in k$ ' means that x is a member of the kind k .) Although not strictly part of ALE, we expect that in the ordinary cases, H and Q will be multi-faceted conjunctions of properties. For example, it may be part of the essence of tigers that they be animals. In this fashion we can speak of being an animal as essential to tigers and that tigers are necessarily animals, and (same thing) that tigers are essentially animals. If being an animal is part of the essence of tigers, then being an animal is a necessary condition for being a tiger, but it is obviously not sufficient. Any necessary condition for being a member of the kind tiger could be considered to be part of the essence of the kind tiger except that infinitely many trivial conditions are necessary for being a tiger, e.g. being an animal or being a head of lettuce.

The use of the terms 'haecceity' and 'quiddity' to denote individual essence and general essence may be somewhat misleading or at least entail a controversial view of essence. In particular, it may suggest that a thing 'has' a haecceity and it 'has' a quiddity and both go to make up its 'essence' as an individual thing. However, a more useful way of looking at these issues is to consider the haecceity to be the essence of an individual, the essence that makes it the individual that it is and that is coextensive with that individual's existence. Quiddities can then be conceived to be the essences of kinds, not individuals. Looked at in this way an individual would participate in or satisfy a quiddity and thus be a member of the kind. Quiddities are not automatically (or perhaps even ever) part of the essence of an individual, as we will see.

When we want to say more about essences than ALE and these other sketchy comments, things become murky, naturally. Individual essences in particular are obscure and very few philosophers have taken firm stands on what sorts of properties they might be. Nevertheless some interesting ideas and claims have been proposed: Kripke (1980: 110-5) has persuasively proposed that its origins are essential to many individual things including people, and Plantinga (1974: 44-65) has claimed that world-indexed properties

are essential to individuals. David Wiggins (2001) claims that membership in various sortal kinds is essential to individuals (more about this below).

Extensive work has been done on the nature of general essences, much of it by empirical scientists. We think we have empirically discovered the essence or quiddity of the kind gold for example, being atomic number 79. Atomic number is what makes an element to be the element that it is. Water is some form of H₂O, and so on. Let us say then that T is the general essence of the kind tiger (assuming for the sake of exposition that tigers form a kind and thus share a general essence). Then $\Box(x)(x \varepsilon \text{tiger} \leftrightarrow Tx)$. What T is may not be and probably is not known, although parts of it are known, but only *a posteriori*. Thus if being an animal is included in T , 'Tigers are animals' is necessarily true but *a posteriori* and synthetic. This sort of claim was made and was made famous by Saul Kripke, Hilary Putnam, and others in the late twentieth century. We need not here review here all the arguments, details, and conceptions behind these views.³

A connection between individual essences and natural kinds has been claimed or assumed by many philosophers—that membership in a natural kind is essential (in the sense of haecceity) to the individual members of that kind. According to this view, let us call it the essential membership view, if t is an individual tiger and tigers form a natural kind, then t is necessarily a tiger and could not at any point in its existence in any possible world not be a tiger. Thus being a tiger, according to the essential membership view, is part of the individual essence of t , and indeed of every tiger. Supporters of the essential membership view about, for example, tigers would go on to extend this claim to all natural kinds and all individuals. According to the most extreme and common version of the essential membership view every individual is a member of some natural kind, and its membership in that natural kind is essential to that individual. Included with this view is the somewhat distinct notion that if an individual is a member of a natural kind, then it must remain a member of that kind throughout its entire existence. If it ceased being a member of that kind, it would thereby cease to exist.

It is often *supposed* that kind-membership is a life-and-death matter for objects—that an object cannot depart from the natural kind to which it belongs, without ceasing to exist. (Elder 2004: 44)

Accordingly, we can characterize the essential membership view as including the following:

For any individual object i , there is some natural kind N such that (1) i is a member of N and (2) for any natural kind N , if i is a member of N , then i is necessarily a member of N and i cannot survive ceasing to be a member of N .

Although the essential membership view may be ‘often *supposed*’, and may well be correct, on careful reflection we should see that the essential membership view is far from obvious and, while perhaps something like essential membership holds for many individuals and kinds, it is not easily extendible to every natural kind and every individual.

There are several ways to deny the essential membership view. We can deny the first clause—that is we can deny that every i is a member of some natural kind—or we can deny the second clause—we can deny that membership in every natural kind or even any natural kind of which i is a member is a ‘life-and-death matter’. The essential membership view even about tigers needs to be argued for, not merely supposed. Precisely why this needs to be argued for is the topic of section II.

II

Essence and Ambiguity

The essential membership view rests too heavily on intuitions and ones that are in fact not decisive.

The case for essentialism [about individuals], I suspect, rests not on such general arguments [derived from Kripke and Putnam], but on case-by-case intuitions about which descriptions seem to capture genuine possibilities and which do not.

This is, however, a shaky basis since it is hard to separate the intuition that a proposed possible situation is too bizarre to be interesting from the intuition that it is too bizarre to be possible. And it is hard to separate intuitions about different kinds of possibility: epistemic, causal or temporal, metaphysical. (Stalnaker 1979: 351)

In addition to the difficulties mentioned by Stalnaker, there is an ambiguity in the claim that tigers are necessarily animals and necessarily have whatever are the properties that makes tigers tigers. This ambiguity raises a further question about the trustworthiness of our intuitions about essential membership. The intuitive support for the claim that, for example, tigers are necessarily animals (if they in fact are animals) can be unwittingly and unjustifiably transferred to the claim about what is necessarily true of individual tigers.

The claim that $\Box(x)(x \varepsilon \text{ tiger} \leftrightarrow Tx)$ would be stated informally as ‘Necessarily all tigers have T ’ or even ‘Necessarily all tigers are tigers’, ‘All tigers are necessarily tigers’ or ‘All tigers are essentially tigers’. However, the claim that all tigers are essentially tigers is three ways ambiguous. In one sense it is trivial, in another it follows from ALE, and in another it may be true but it is not derivable just from ALE. The sense in which it is trivial: For any property or conjunction of properties P , $\Box(x)(Px \leftrightarrow Px)$. The sense in which it follows from ALE: $\Box(x)(x \text{ is a tiger} \leftrightarrow Tx)$. The sense in which it may be true but is not obvious and is not derivable from ALE: $(x)(x \text{ is a tiger} \rightarrow \Box Tx)$. Nor is $(x)(x \text{ is a tiger} \rightarrow \Box Tx)$ derivable from $\Box(x)(x \text{ is a tiger} \leftrightarrow Tx)$ just on the basis of formal modal logic. As a matter of formal modal logic, $\Box(x)(x \text{ is a tiger} \leftrightarrow Tx)$ can be true and $(x)(x \text{ is a tiger} \rightarrow \Box Tx)$ false.

This ambiguity also applies to a claims like ‘Necessarily all tigers are animals’. Suppose the claim that all tigers are animals is true, then it is necessarily true. Being an animal is part of the general essence of tigers. It follows from ALE that every member of the kind tiger is an animal, but it is not derivable from ALE that any individual member of the kind tiger is necessarily an animal. If being an animal is part of the essence of tigers, $\Box(x)(x \text{ is a tiger} \rightarrow Ax)$. But $\Box(x)(x \text{ is a tiger} \rightarrow Ax)$ does not logically imply $(x)(x \text{ is a tiger} \rightarrow \Box Ax)$ —that is unless $(x)(x \text{ is a tiger} \rightarrow \Box Ax)$ is also necessarily true, but that must be independently established.⁴

The essential membership view needs $(x)(x \text{ is a tiger} \rightarrow \Box Tx)$ and by extension $(x)(x \text{ is a tiger} \rightarrow \Box Ax)$. The essential membership view cannot simply argue from $\Box(x)(x \text{ is a tiger} \rightarrow Ax)$ to $(x)(x \text{ is a tiger} \rightarrow \Box Ax)$, nor can it transfer intuitive support from the former to the latter. It needs independent argument and intuitions for $(x)(x \text{ is a tiger} \rightarrow \Box Ax)$. And it needs a similar modal claim for every individual object and natural kind of which it is a member.

III

Lumps and Statues

The ambiguity of such claims as ‘All tigers are essentially tigers’ can lead to confusions in argument. For example, Michael Rea (2002: 174 -5) offers the following argument:

- (1) Consider the region occupied by our statue of David. Call the region ‘R’. R is occupied by a lump of bronze and R is occupied by a statue. (Premise)
- (2) For any kind K, wherever there is a K, there is something that has the essential properties of a K. (Premise)
- (3) Something that occupies R has the essential properties of a lump of bronze and something that occupies R has the essential properties of a statue. (From 1, 2)
- (4) Let the name ‘Alpha’ refer to something that occupies R and is essentially a lump of bronze and let the name ‘*David*’ refer to something that occupies R and is essentially a statue. (From 3, existential instantiation.)
- (5) There are different sets of essential properties associated with the kinds *statue* and *lump of bronze*. (Premise)
- (6) Therefore: *David* and Alpha have different essential properties.

(From 4, 5)

(7) Therefore: *David* and Alpha are distinct. (From 6, Leibniz's Law)

This argument is valid; thus, in order to maintain that *David* and Alpha are identical, one would have to reject a premise. I reject premise (2).

But (4) does not follow from (3); not by existential instantiation nor by ALE.⁵ To see that (4) does not follow from (3) replace 'lump of bronze' with 'bachelor'. From the fact that something occupies R and has the essential properties of a bachelor, it does not follow that something occupies R and is essentially a bachelor. Granted, bachelor is not a natural kind, but (4) does not follow from (3) by existential instantiation or ALE even if we replace 'bachelor' with the name of a natural kind—e.g. 'tiger'. From the fact that the occupier of R is a tiger, it does not follow (by existential instantiation or ALE) that the occupier of R is essentially or necessarily a tiger. What is needed to get (4) from (3) is a principle of the form $(x)(x \text{ is a tiger} \rightarrow \Box Tx)$; in particular, $(x)(x \text{ is a statue} \rightarrow \Box Sx)$ and likewise for lump of bronze. This principle does not follow from ALE, is not a principle of formal logic, and is indeed a deep and difficult metaphysical claim that needs independent argument, as was established in section II.

Since the argument quoted from Rea is not formally valid, we do not need to reject a premise in order to maintain that *David* and Alpha are identical.⁶ All we need to do is to reject the claim that $(x)(x \text{ is a statue} \rightarrow \Box Sx)$. Why is the following not conceivable? Alpha is a lump of bronze that becomes or is made into *David* and is still a lump of bronze as well. Furthermore Alpha need not become or be made into *David* in every possible world and the lump Alpha could persist even after it no longer has the form of *David* (if it is melted, for example). Rea's argument would only work if the essential properties of statues and lumps of bronze were incompatible and if every statue is necessarily a statue, which I have claimed is not obviously true on one understanding (the relevant one) of this claim. And thus we need not reject premise 2 which does indeed follow from ALE and does seem to be obviously true.

Rea is arguing against what he calls the ‘standard account’ which is basically that just sketched above, but because of the ambiguity with essences he mischaracterizes the view.

(KM) For any kind K , there is a set S of properties such that, necessarily, for any x , x is a K if and only if x constitutes something that has the members of S essentially.

(KM) is simple and precise; it is also cast in terms of kinds and essential properties And KM captures the core of the standard account... (Ibid: 172)

What is wrong with the standard account according to Rea?

If we endorse KM, however, i [(i) For any kind K , arranging objects K -wise is both necessary and sufficient for bringing an object of kind K into existence] commits us to the possibility of co-location. To see why, consider an object whose parts are arranged both lumpwise and statuewise. By l , O is a lump and O is a statue. But then it follows from KM that the parts of O compose something that has the essential properties of a lump *and* something that has the essential properties of a statue. But, of course, that is impossible unless we assume that the parts of O compose two distinct objects: a full-fledged lump and a full-fledged statue. (Ibid: 181-2).

But the impossibility is not yet evident. For example, something could be both a cat and a pet; that is it could have at the same time the essential properties of a cat and the essential properties of a pet. Why could something not be both a statue and a lump of bronze? As long as the essential properties of a statue are not inconsistent with the essential properties of a lump of bronze there is no problem generated in the way Rea supposes. The ambiguity of a claim such as ‘A statue is essentially a statue’ plays a role here. If this means ‘ $(x)(x \text{ is a statue} \rightarrow \Box Sx)$ ’, then no lump of bronze could be a statue because of no lump of bronze is ‘ $\Box Sx$ ’ true. On the other hand if ‘A statue is essentially a statue’ just means ‘ $\Box(x)(x \text{ is a statue} \rightarrow Sx)$ ’ there is no problem. All this means is that

when the lump of bronze is arranged statuewise it has the essential properties of a statue and the essential properties of a lump of bronze. ‘A statue is essentially a statue’ means, in the version of the standard account entertained here, $\Box(x)(x \text{ is a statue} \rightarrow Sx)$. It rejects $(x)(x \text{ is a statue} \rightarrow \Box Sx)$.

IV

Necessity of Natures

Is there another way to salvage (4) of Rea’s argument, even though it does not follow from (3)? The claim or assumption $(x)(x \text{ is a tiger} \rightarrow \Box Tx)$, and *mutatis mutandis* for every natural kind, plays a prominent role in the argument of Crawford Elder’s *Real Natures and Familiar Objects*. Elder validates the traditional conception of essence that is in play here.

On the traditional conception, the properties essential to an individual are properties it is by nature incapable of losing; those essential to a kind or a stuff are properties that any member of that kind, any sample of that stuff, is by nature incapable of lacking. (Elder 2004: 18).

To repeat, that a property is essential to a kind or stuff does not entail by this traditional conception alone (i.e. by ALE) that it is essential to any individual member of that kind or sample of that stuff—‘...is by nature incapable of lacking’ suffers from the same sort of ambiguity that we exposed in section II. Is it ‘incapable’ as a member of the kind or as this individual?

Elder devotes a chapter of his short book to arguing that properties that are essential to a kind are essential to the members of the kind. That kind membership is essential implies, according to Elder, that an individual cannot change its kind.

...what happens when an object bearing *all* the properties in a particular cluster, certified as an “essential nature”..., ceases to have *any* of those properties?

Does the object simply cease to exist altogether? That is, what we must think if the properties lost are truly *essential* properties, in the traditional sense employed thus far in this book. The loss of any essential property must amount to the end of an existence. (Ibid: 44)

The emphatic tone of the claim ‘The loss of any essential property must amount to the end of an existence’ makes it seem that Elder holds that this follows from the traditional account of essence as outlined above. Clearly it does not. If the essential property is part of an individual essence then it does, but if the essential property is part of a general essence then it does not. All that follows is that the individual that loses the essential property is no longer a member of the kind for which the property is essential. So at least as far as the basic traditional conception of essence is concerned (i.e. ALE) an object can lose an essential property and still continue to exist. It cannot lose a property essential to it, but it can lose a property essential to some kind to which it belonged.

Obviously, an individual can change from being a freshman to being a sophomore, from being a pregnant woman to being a mother, from a bachelor to husband, and so on. Likewise we expect in the natural course of things for individuals to go through phase changes: a child becomes an adult, a colt becomes a mare, a fawn a buck, a tadpole a frog, and so on. Elder’s version of the essential membership view must not disregard these obvious facts. So he and other supporters of the essential membership view must hold that there are kinds of kinds that are more basic, fundamental, or essential in the sense that an individual member of these kinds cannot cease to be a member without ceasing to exist. But what kinds are these? As we have seen from the passage quoted above they are the natural kinds.

The gist of Elder’s argument is given by the following:

I argue in this chapter [Chapter 3] that on all ordinary criteria of scientific evaluation, the hypothesis that only some alteration has occurred, when from a

particular place the properties sufficient for membership in a particular natural kind have vanished is empirically bankrupt and worthless. (Ibid: 44)

The example that Elder uses to defend this claim is unsatisfactory, however. He imagines Max, a person, struck by lightning on the way to catch a bus. Max is killed instantly and partly vaporized. ‘Common sense supposes that exactly when and where Max is struck by lightning, an existence ends’ (Ibid: 47). The position that Elder argues against is given as follows: ‘But suppose someone were to claim...that nothing has actually been destroyed in the case described. All that really has happened is that something has undergone an alteration’ (Ibid: 48). Elder devotes the remainder of the chapter to demolishing this view.

Elder’s argument seems to be misdirected, however. Let us call the non-essential membership view the view that membership in a natural kind is not always essential to its members, i.e. $(\exists x)[(x \in N) \ \& \ \sim \Box(x \in N)]$. A more strenuous version of the non-essential membership view would hold that $\Box(x)[(x \in N) \rightarrow \sim \Box(x \in N)]$ for any N . Since Elder is defending the essential membership view about all natural kinds and individuals (i.e. $\Box(x)[(x \in N) \rightarrow \Box(x \in N)]$), he has to talk about more than Max. The non-essential membership view need not claim that ordinary objects are never destroyed, indeed the non-essential membership view can cheerfully agree with common sense that Max is destroyed by the lightning that strikes him. All that the non-essential membership view needs to make good its claim is that there are cases where an object changes its natural kind but is not destroyed. The non-essential membership view gets to choose its cases. Perhaps the examples of phase changes are enough to defeat the essential membership view, especially when supported by more dramatic phase changes such as that from a tadpole to a frog, or a caterpillar to a moth. Minerals also go through phase changes, water changes from ice, to liquid, to steam.

Let me tip my hand at this point and state that I find at least some version of the non-essential membership view to be plausible and congenial. I reject the essential membership view. To be at all plausible the non-essential membership view must not deny destruction to ordinary common sense objects such as trees and people. What the non-essential membership view must claim, and what is plausible in my view, is that

there are forms of transformation that ordinary objects undergo that involve change from one natural kind to another without destruction. The non-essential membership view need only find one such transformation. Since Elder embraces the essential membership view, he must argue that this can never happen; quite a challenge considering the phase changes just mentioned.

I suppose it is open to Elder and other essential-membership-view-ists to claim that tadpoles, frogs, and ice are not natural kinds (indeed Elder does claim this about ice explicitly as we shall shortly see). Certainly as far as we know tigers do not ever become other than tigers, water other than water, and so on. But likewise as far as we know television sets do not transform into refrigerators or anything else for that matter, irons can be used as door stops but they are still irons, playing cards can be used as weapons but they are still playing cards,⁷ etc. The challenge for the essential membership view even granted that tigers are essentially tigers is to demonstrate that there is some useful distinction between the kinds of which the essential membership view holds (assuming there are such) and kinds of which it does not that will support dignifying the one as natural kinds and not the other. On the face of it, this seems implausible. Caterpillars look like a natural kind, and television sets an artificial kind. Other than satisfying the essential membership view what do the tiger and television set kinds have that distinguish them from the caterpillar and tadpole kind? My answer: Nothing. Part of the problem with the essential membership view, and this is a problem that lurks continually in the background of this discussion, is that we do not have a clear enough conception of natural kinds. Is television set a natural kind? I would not think so. Are television sets all members of some natural kind? What kind is it? Television sets seem to be as fixed in their kindhood as tigers, so the essential membership view should hold of them as well as tigers. Difficulties about natural kinds and individual identities are troubling and unsolved with the possible exception of the elementary kinds and individuals of physics such as electron, photon, and boson, and there other problems emerge such as the possibility of co-location.⁸ Thus problems with both clauses 1 and 2 of the essential membership view are emerging.

Elder discusses the example of ice and water.

“Folk physics” evidently claims that when a cube of ice ceases to be a cube of ice, it ceases to be. Science teaches that when a cube of ice ceases to be a cube of ice, it does *not* cease to be: for a cube of ice is really just a sample of H₂O that happens to be in a low-energy state, in which the molecules are arranged in a lattice. (Ibid: 46)

Elder cites these facts as support for his claim that ‘...it is *sometimes* scientifically illuminating to judge that, where common sense supposes an object to have been destroyed, all that really has happened is that something else...has assumed a new form’ (Ibid: 45). But is ice not a natural kind? If so, then a bunch of water can be of the kind ice for awhile and then not ice and not thus be destroyed. So much for the essential membership view. If we deny that e.g. ‘ice’, ‘tadpole’, ‘human fetus’, or ‘fawn’ are natural kind terms and refer to natural kinds, then we are loading the essential membership view into the definition of ‘natural kind’ in a way that trivializes both.

Furthermore, is not the phase change from liquid water to ice very similar to what is happening in the *Alpha/David* case? A lump of bronze is congealed or brought by an artist into the form of *David* much as a bunch of water is congealed in a cube of ice. We could give the cube of ice a name—‘Frosty’, for example—and then puzzle ourselves about how the bunch of water and Frosty can be distinct or identical. But really this is no more puzzling than water freezing. Water freezing may be empirically marvelous, but it should not be philosophically problematical—unless, that is, one is working with dubious notions of essence and natural kind.

V

The Metaphysics of Kind Change

Elder’s claim that there are kinds of kinds that are more basic, fundamental, or essential in the sense that an individual member of these kinds cannot cease to be a member without ceasing to exist, even though these kinds do not line up with what we would call ‘natural kinds’, is plausible and has strong intuitive support. Adherents of the essential membership view can plausibly claim that for each individual there is some kind

of which the individual is a member and essentially so, in that the individual could not cease to be a member of that kind and is a member of that kind in every possible world in which it exists. Thus both the tadpole and the frog are members of the kind *rana pipiens* (the northern leopard frog) and are necessarily members of that kind and are members of that kind throughout their existence. Much can be offered in support of this view.

Perhaps most importantly for each object, other than perhaps amorphous lumps and globs, in our familiar world there is a kind that objects of that kind in fact never change out of. Call these kinds 'basic kinds'. *Rana pipiens* would be an example, as would zebra, water, and gold. Basic kinds need not be restricted to natural kinds, however. As we noted above we do not ever see television sets turning into e.g. refrigerators, and even if in a rage we use our TV for target practice, it is still a TV. Also we have seen that not all natural kinds are basic kinds in the present sense. 'Tadpole', 'human infant', 'fawn', and 'ice' are natural kind terms and refer to natural kinds, or at least the notion of 'natural kind' is malleable enough to include these kinds.

Once freed from its questionable use of natural kinds something like the essential membership view is much more appealing because every object seems to be a member of at least one basic kind (and all the kinds that include that kind essentially; e.g. zebras, since they never cease being zebras, never cease being mammals, animals, etc.). Here we have a strong empirical and common sense reason for accepting some version of the essential membership view. Certainly in ordinary experience no examples of such kind change ever occur.⁹ Furthermore, besides common experience, there are well-known reflective considerations to support this version of the essential membership view, such as those offered by Wiggins (2001) and his followers about identity and persistence conditions.

Despite these considerations we can still ask if basic kind change is possible even though it does not actually occur. The essential membership view needs to establish that basic kind change is impossible, not merely that it never in fact occurs.¹⁰ I believe the question whether basic kind change is possible is still open for several reasons. We know that much that does not occur empirically is nevertheless possible in some sense. So if basic kind change is ruled out, it must be ruled out by more than the fact that it does not occur. We have seen that intuitive support for Wiggins-type views is unreliable for

reasons cited in section II. Reflective considerations are not decisive either. Penelope Mackie (2006) argues energetically and in detail that Wiggins-type arguments based on identity and persistence conditions do not offer conclusive support for essential membership.

Mackie carefully distinguishes between essential sortals and substance sortals. An essential sortal is a kind to which the individual belongs in every possible world in which it exists. A substance sortal is a kind to which the individual belongs throughout its existence if it ever belongs to it. That a sortal is a substance sortal does not immediately entail that it is an essential sortal.¹¹ Mackie's arguments are directed at Wiggins's arguments in favor of essential sortals. Mackie does not address the issue of substance sortals and seems to allow that most ordinary natural kinds are substance sortals. Nevertheless since Wiggins's arguments in favor of substance sortals are also based on identity and persistence conditions, Mackie's arguments against these are also applicable to Wiggins's claims about substance sortals. It turns out, not surprisingly, that views and arguments about essential sortals and substance sortals go hand in hand. Rejecting essential sortals but readily accepting substance sortals as Mackie does is an unstable theory. Thus reasons for rejecting the claim that zebra is an essential sortal are reasons for rejecting the claim that it is a substance sortal.¹²

Are the standard examples of substance sortals (human being, zebra, statue) in fact substance sortals? Suppose, for the sake of argument, we say that it is possible for a human being, Max, to turn into an alligator. Then by ALE Max would have to 'change' his quiddity. He would, in the transformation, cease to have the properties that made him a human being and take on the properties that make him an alligator. Of course, something would have to remain the same throughout the change or else one object would just be replacing another. What remains the same is Max's individual essence, his haecceity. According to this conception of kind change Max's haecceity would not contain or entail that he is a human being nor that he is an alligator. Membership in his basic kind or any kind to which he in fact belongs (other than cooked up or very general uninteresting kinds) would be an accidental, as opposed to essential, feature of Max.

I readily admit that I find the idea of the possibility of basic kind change to be odd and unsettling, mainly because empirically it never occurs. That it does not ever occur

does not seem to be purely accidental, but on the other hand I have no explanation for why it never occurs, and I cannot see that conceptual arguments such as those of Wiggins give an adequate explanation for why basic kind change never actually occurs. Nor do I think that we can reject the metaphysical possibility of such basic kind change on the basis of pure intuition and common experience. Until we have an explanation for why basic kind change never in fact occurs, denying the metaphysical possibility of such a kind change is pure speculation or decision.¹³ Until we have a compelling explanation for why zebras never cease to be zebras and TV's never cease to be TV's, we will not have a compelling reason to accept the view that for each individual there is some familiar kind, either a natural kind or artifact kind, of which it is a member in every possible world, and throughout its existence. Furthermore even if we can be convinced that there are substance sortals, we would need specific arguments that interesting sortals are indeed substance sortals. Other than our intuitions, which we have seen are easily distorted about these matters, what evidence do we have, in particular, that statue is a substance sortal?

Can anything be salvaged of the essential membership view? If Kripke is correct that its origins are essential, in the sense of haecceity, to individual things including human beings,¹⁴ then Max must be a human being for at least part (the initial part) of his existence in every possible world in which he exists. Indeed every individual would be essentially a member of the basic kind it starts out as. So Max would have to be a human being for at least part of his existence in every world in which he exists. The following then is a correct principle of metaphysics:

For each individual i for which its origins are essential, there is some basic kind BK such that i is a member of BK when i comes into existence and i is a member of BK for at least part of i 's existence (the initial part) in every possible world in which i exists.

Call this the thesis of the essentialness of original basic kind.

I do not think that we can get any more at this point for the essential membership view than this principle. In particular we cannot get a stronger claim of the following

form: *'For each individual i and BK of which i is a member in some possible world for some part of i 's existence, i is a member of BK in every possible world for at least part of i 's existence'. Suppose for example it is possible for Max the human to turn into an alligator. Then there is a possible world in which Max is an alligator for at least part of his existence, but unless Max must necessarily turn into an alligator, there is a possible world in which Max is an alligator but he is not an alligator for any part of his existence in some other possible worlds. Thus if t , a tadpole, turns into a frog in the actual world, there is another possible world in which poor t meets her demise before turning into a frog. So t is frog for part of her existence in the actual world but not in all possible worlds in which she exists. From this it follows that if there are kinds into which an object can change, no such kinds cannot be essential (unless the change is necessary).

The thesis of the essentialness of original basic kind means that Michael Rea's Alpha must be a lump of bronze (assuming Alpha started out as a lump of bronze and that its origins are essential to it) for at least part of its existence in every possible world in which Alpha exists. Alpha need not be made into *David* in every world in which Alpha exists, since there are possible worlds in which Alpha languishes without the attentions of statue makers. Thus being or being made into *David* is not essential to Alpha just as being or turning into a frog is not essential to the tadpole, nor is being or turning into Max the alligator essential for Max the human.

If we deny $(x)(x \text{ is a statue} \rightarrow \Box Sx)$, then we may also deny that *David* is necessarily a statue. Following this line of thinking we would have to claim that *David* actually is Alpha only in a particular phase or form. We can think of being a statue as an office or role that Alpha occupies contingently. *David*, then, would not have a specific origin as an entity separate from Alpha, but would simply be a way that Alpha is in some possible worlds for some periods of time. This way of looking at things does a certain amount of violence to our ordinary ways of thinking and talking about statues, because we think of the statue *David* as being made or created by the sculptor. If so *David* cannot have the same origin as Alpha and thus cannot be identical to Alpha. However, we see that something has to give somewhere. Since there is no independent argument for $(x)(x \text{ is a statue} \rightarrow \Box Sx)$ despite its intuitive appeal, it seems to me that our ordinary common sense concept of statue can stand some reshaping in that we can treat 'statue' as

a sortal term that behaves somewhat like ‘ice’ or perhaps, better, like ‘husband’ or ‘prime minister’. Furthermore, there is some support in common sense and ordinary language for the claim that *David* is a phase or form of Alpha. We can say that the sculptor shapes or forms Alpha into *David*, and so on. To claim that the lump of bronze is destroyed or ceases to exist when the sculptor works on it, as we must if we follow Rea, is a striking violation of common sense. Thus common sense and ordinary language are themselves conflicted about *David* and Alpha. So we have some common sense and a certain amount of philosophical reflection on our side when we embrace the non-essential membership view and nothing decisive against it, and we have the payoff of reconfiguring one central aspect of the problem of material constitution in a way that removes its mystery.

VI

Conclusion

As we have seen, essences have been used and confused in setting up the problem of Alpha and *David*. Whether or not the non-essential membership view points to a solution, we can at least conclude that the problem of Alpha and *David* should not be generated using claims about essences. Since the essential membership view is optional and not supported by decisive reflective arguments, we can abandon it, despite its intuitive appeal; but as we have seen this does not mean that we must abandon the traditional notion of essences. Thus one can embrace essences as traditionally conceived and as explicated here and not be forced into the problem of material constitution.¹⁵

Naturally there are still many outstanding questions. Perhaps the most important and interesting is why, if it is metaphysically possible, basic kind change never actually occurs.

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ENDNOTES

¹ For detailed and insightful arguments that this assumption is correct see Elder 2004. I would like to thank Crawford Elder, Michael McKenna, Penelope Mackie, and two anonymous referees for this journal for helpful comments and suggestions on earlier versions of this essay. I am solely responsible for any errors, arguments, and claims made herein.

²This distinction is usually attributed to Duns Scotus.

³ Michael Rea (2002) raises difficult issues about the empirical availability of essences. He also sketches an account of essence that is similar in some ways to the one outlined here, although he fails to draw some of the metaphysical consequences for his own views about material constitution that are developed below. Rea also examines in detail Elder's views about essence and essentiality, but again Rea's (2002) interest is in the empirical discoverability of essences. The account here is more abstract and metaphysical. For example, many, including Elder and Rea, have questioned whether e.g. tigers form a kind since there are apparently no biological features that are necessary and sufficient for being a tiger. On the other hand, see Devitt (forthcoming) for a detailed, and in my opinion convincing, argument for the claim that if tigers form a species they do have an essential trait. I agree with Devitt that we should not be so ready to toss out all sorts of evident natural kinds merely on the basis of shaky current biological ideas.

⁴ Robert Stalnaker (1979: 351) makes this point clearly and neatly in passing. 'Actual kangaroos thus play a necessary part in fixing the nature of their kind. This is not, however, by itself a sufficient reason for concluding that being a kangaroo, with all that entails, is essential to the individuals that are in fact kangaroos'.

⁵ I am interpreting (4) as it is clearly intended: (4)Something (Alpha) occupies R and is essentially a lump of bronze and something (*David*) occupies R and is essentially a statue.

⁶ This is not, of course, to deny that the problem of the identity of *David* and Alpha could not arise in other ways, and be resolved in other ways. See Heil (2005) for an argument that Alpha and *David* can without too many philosophical headaches be considered to be identical. His conclusion is similar to the one I reach here but arrived at very differently. Note also that Rea cannot simply delete step (4). He needs (4) in order to get (6). Also (5) does not state that the different sets are incompatible, which is what Rea needs to get his conclusion.

⁷ As was made famous by the magician Ricky Jay.

⁸ I would like to thank an anonymous referee for this journal for pointing this out.

⁹ Although they are prominent in myth and fiction.

¹⁰ I suppose there is always *some* kind that the individual belongs to essentially—e.g. it is an object, an entity, or perhaps even physical object, or physical object for part of its existence, essentially. For the essential membership view to avoid triviality essential kinds would have to be more restricted, structured, and interesting, such as zebra, refrigerator, or bit of carbon.

¹¹ A substance sortal F may not be essential because an individual that is F in the actual world may never be F in some other possible world. I am using ‘substance sortal’ in the sense of ‘substance sortal property’, similarly for ‘essential sortal’.

¹² On this see Lowe 2007. Lowe carefully dissects these issues in a brief space. Lowe supports the view that all substance sortals are essential sortals. If we also follow Elder in holding that all essential sortals are substance sortals, we have that a sortal is essential if and only if it is a substance sortal. I believe that it would be quite a struggle to pry apart substance from essential sortals, although I suggest below that there is something like a basic kind that is essential but is not a substance sortal.

¹³ Besides Mackie, minimalist essentialists or bare particular anti-essentialists are not too hard to find. For example, Pavel Tichy (2004) and his numerous followers have developed an entire philosophical ‘school’ with a complex technical apparatus based on this. Also Timothy Williamson’s (2002) views about necessary existents seem to be incompatible with the essential membership view.

¹⁴ The argument for the essentialness of origins are strong in my opinion. Briefly: No qualitative properties or conjunction of qualitative properties could be essential, in the sense of haecceity, to an individual because those qualitative properties could be instantiated elsewhere by something else. An individual’s origins could not be shared by anything else.

¹⁵ This is not to say that the problem cannot be generated in other ways without using essences. No doubt it can.