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Knowing what it is

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Abstract
Essentialists understand modal properties in terms of the essences of things. Given this view, it is natural to think that our knowledge of modality ultimately derives from our knowledge of the essences of things. Is that view plausible? Do we genuinely have knowledge of the essences of things, in a form substantial enough to ground our modal knowledge? The more we pack into the notion of essence to allow it to underpin modal properties, the harder it is to claim genuine knowledge. I will argue that realists about essence of a certain kind can have the best of both worlds. They can co-opt a *conventionalist* explanation of our knowledge of essence, but against the background of a fully realist notion of essence.

Keywords Essence · Modality · Knowledge · Modal epistemology · Conventionalism · E.J. Lowe

1 Essence and epistemology

Lily likes making plasticine animals. This morning, she makes a bright pink horse which, she informs me, is called 'Barrel'. (Strange name, but it's best not to ask too many questions.) Although Lily wants to make more animals, she won't tolerate recycling the Barrel-plasticine. No. Barrel stays, under threat of tears. I think it's fair to say that, in Lily's mind, Barrel has become an object in its own right. Remoulding will trigger tears specifically because then Barrel will be no more. Lily knows that Barrel will not survive remoulding, although she knows full well that the Barrel-constituting plasticine can be reshaped into new animals. How does she know all this? How do I?

On the face of it, this may seem a rather niche issue in modal epistemology. Yet I believe it is central to our understanding of the ways things might have been. For our understanding of how a thing might have been rests ultimately on our understanding

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of what that thing is, or of what *makes* it the very thing it is. Lily's knowledge is grounded in her knowing that Barrel is a model horse, together with her understanding of what it is to be a model horse. The role of *model horse* here is to specify Barrel's *nature*, or *essence*. It tells us *what Barrel is*.

This notion of an entity's essence is roughly as we find it in Aristotle or Locke. On the *essentialist* analysis of modality, entities have modal properties in virtue of their essences (including the essences of other objects), which are not themselves understood in modal terms. Kit Fine has argued convincingly that modal analyses of essence are not adequate (Fine, 1994) and has shown how to formulate modal theories in terms of essence (Fine, 1995). Although such approaches are not without their problems, they are certainly gaining in influence. For present purposes, I will assume that some such theory is correct.

If essence grounds modal properties, then it is tempting to argue that knowledge of essence grounds our modal knowledge (although the former view does not entail the latter). Lowe (2012), Hale (2013), and Jago (2021b) defend a view like this. (Kment (2021) holds a related view: knowledge of necessity is based on our knowledge of the laws of metaphysics, which themselves involve essentialist facts.) It is not so clear, however, that we have knowledge of the essences of things, in the sense of 'essence' required to underpin modal properties. Roughly put, the more we pack into the notion of essence, the harder it is to claim knowledge of essences; but if we do not pack enough into the concept, it becomes harder to see how essences could ground modal properties. My overall aim will be to show that there is a plausible notion of essence which is both knowable and suitable for grounding modal properties. (Giving such an account is what Peacocke (1999) calls the *Integration Challenge*.)

The remainder will go as follows. I will set out and raise two issues for Lowe's account of essence and modal knowledge (Sect. 2), before discussing an alternative *conceptualist* account of our knowledge of essences (Sect. 3). Ultimately, I do not think the conceptualist account can work (Sect. 4). But a central part of its explanation of our knowledge of essence can be co-opted by realists of a certain kind (Sect. 5), to overcome the issues faced by Lowe's account (Sect. 6).

2 Lowe on essence and modal knowledge

E.J. Lowe, defending the view that we know the essences of things, writes:

> Knowing an entity's essence is simply knowing *what that entity is*. And at least in the case of *some* entities, we must be able to know *what they are*, because otherwise it would be hard to see how we could know anything at all about them. How, for example, could I know that a certain ellipse had a certain eccentricity, if I did not know what an ellipse *is*? In order to *think* comprehendingly about something, I surely need to know *what it is* that I am thinking about. (Lowe, 2012, 944)

I find this persuasive, given the intended understanding of 'what an entity is' (although of course not all agree: Sgaravatti (2016) discusses the issue). For

Lowe, merely listing a thing's properties does not answer the question, 'what is it?' Lily's Barrel had many properties: small, warmish, pink, made of plasticine. But none of these get to grips with Lowe's intended sense of *what it is*: it is a *plasticine model horse*. Lowe's intended sense aligns with Locke's, as 'the very being of any thing, whereby it is, what it is' (Locke, 1690/1997, bk.3, ch.3, Sect. 15)

Nevertheless, Lowe's presentation covers over some serious difficulties. One is whether *knowing a thing's essence* is comprehensible, even granting that the notion of essence is intelligible to begin with. To bring out the worry, consider Josie, a teacher. We want to say that she is essentially a person (in the minimal sense of 'person' used in 'personal identity') but inessentially a teacher. Yet what justification can we give? It seems any explanation will need to point to the fact that Josie could have been a gardener instead of a teacher, but could not have been anything but a person. In this case, we seem to rest this judgement about Josie's *essence* on a prior judgement about Josie's modal properties. Yet, according to Lowe, that modal knowledge itself should flow from our knowledge of Josie's essence. We seem to be caught in a nasty circle.

One may think that the answer is that *being a teacher*, in contrast to *being a person*, is simply not the right kind of property to contribute to a person's essence. Lowe makes a distinction between *general* and *individual* essences:

> If X is something of kind K, then, X's general essence is what it is to be a K, while X's individual essence is what it is to be the individual of kind K that X is, as opposed to any other individual of that kind. So suppose, for example, that X is a particular cat. Then X's general essence is what it is to be a cat and X's individual essence is what it is to be this particular cat, X. (Lowe, 2013, 145)

So we may distinguish our general knowledge of what it is to be a cat, or a teacher, from our knowledge of what it is to be *this* cat or to be *that* teacher. Part of this general knowledge is that, to be a teacher, one must pass teaching qualifications, or otherwise be employed as a teacher; and that teachers *become* teachers and later retire. And perhaps, armed with this knowledge, we may infer that teachers are not essentially teachers.

This form of explanation cannot be right, however, for there are properties that are sometimes essential and sometimes inessential to their bearers. The identity of a sculptor is (let us suppose) essential to the statue she makes, but not to the lump of bronze which constitutes it. Moreover, we should not rule out of hand the possibility of things that *are* essentially teachers. For an AI agent created primarily for the purpose of teaching, *being a teacher* might be an essential characteristic. If so, then the question remains: how do we know, of ordinary teachers, that they have *being a person* but not *being a teacher* as part of their essence? How can we explain this knowledge, without sneaking in modal information?

(An alternative route to *essential teachers* is to allow, in addition to all the ordinary physical objects, that the world also contains modally extraordinary objects, which have as an essential property a property which ordinary material

objects have accidentally. Hirsch (1976) discusses *incars*: car-like objects which exist only when located in a garage. As the car pulls out of the garage, the colocated incar ceases to exist. I think it likely that a truly systematic realist metaphysics will be committed to at least some such entities. But I will delay the argument for that until Sect. 5.)

The second difficult question for Lowe is as follows. Even supposing his notion of essence is comprehensible in non-modal terms, it remains obscure how we can possibly know about the essences of things. According to Lowe, we must be able to know at least *something* of the essences of the things we think and talk about, else we could not think and talk about them in the first place. And clearly, we can think and talk about a wide variety of objects. That being so, we might think, we should be able to describe, in at least some detail, the essences of a wide variety of objects. Yet Lowe's writings suggest otherwise. His examples of essences, following Spinoza, are nearly always drawn from geometry: what it is to be a *circle* or an *ellipse*. But insofar as we are interesting in *modal* knowledge, of how things must be or might have been, such cases are relatively uninteresting. The points on a circle have to be a constant distance from its centre, else it wouldn't be a circle. We know that much simply from the definition of 'circle'. But what of the much harder case of material objects?

Lowe acknowledges the worry but dismisses it as 'unfounded':

> Consider instead, for instance, material objects of the following two kinds: a *bronze statue* and a *lump of bronze*. I would urge that it is a metaphysically necessary truth, obtaining in virtue of the essences of such objects-obtaining, that is to say, in virtue of *what a bronze statue is* and *what a lump of bronze is*-that at any time at which it exists a bronze statue *coincides* with a lump of bronze, which is numerically distinct from that statue. Likewise, it is a metaphysical possibility, again obtaining in virtue of the essences of such objects, that the same bronze statue should coincide with *different* lumps of bronze at different times. (Lowe, 2012, 940)

Again, I find this reasonable. But it does not address the question of *what those essences are* as a whole. According to James Miller, 'Lowe thought that specifying or providing the real definition of an entity is incredibly hard, even though we can know aspects of the essence of entities' (Miller, 2020, Sect. 4a). So perhaps asking for *the essence* of a given material object is to ask too much. We do not grasp the essence of a material object as a whole and so we do not know the full details of what that thing is. But nevertheless, we know enough of its essence to get hold of it in thought and to infer the ways it must, could, and could not be.

The problem has a sharper form, however, which is clearest in the context of coincident entities, like Lowe's bronze statue and lump of bronze, or Lily's model horse Barrel and the coincident lump of plasticine. For anyone who adopts a substantial account of essences, as Lowe does, there must be coincident yet numerically distinct entities, even if they coincide throughout their existence. Barrel and the lump of plasticine differ in their essences and, on substantial accounts of essence, this reflects a genuine difference in the ways they are. Indeed, for Lowe, it is a difference in *what* they are. So they are unavoidably distinct, on such views. Such views

are *pluralist*, allowing for distinct coincident entities, even in the case of permanent coincidence. (This contrasts with *insubstantial* or *Abelardian* accounts of essence, of the kind we find in Lewis (1971) and Noonan (1991). These allow us to say (in one context) that *a* is essentially *F* and (in another context) that *b* is not essentially *F*, even though *a* is numerically identical to *b*. Such views support *monism* about coincident entities.)

Nevertheless, coincident entities share all their microphysical properties at any time they are coincident (and hence permanently coincident entities share all their microphysical properties). So a metaphysical question arises: how can coincident entities differ at all, and how can they have different properties of any kind, if they do not differ microphysically? How might we explain this? This is the *grounding problem*, as raised in various ways by Burke (1992), Heller (1990) and Zimmerman (1995):

> there are two objects exactly alike in every empirically discriminable intrinsic respect, one of which has the stamina to withstand pressures and survive changes that the other cannot. Should not two physical objects constructed in precisely the same way out of qualitatively identical parts have the same capacities for survival under similar conditions? (Zimmerman, 1995, 87)

Much has been written on the metaphysical grounding problem, but my question here is epistemic. How, of two objects exactly alike in every empirically discriminable intrinsic respect, can we single out just one of them in thought? How can we know things specifically about the one but not the other? And in particular, how can we know *modal* truths about one but not the other, given that those modal truths cannot be rooted in any empirically discriminable aspect of the object?

In short, any adequate attempt to explain modal knowledge in terms of essence must answer two main questions:

(Q1) How do we know, of ordinary teachers (and without sneaking in modal information), that they have *being a person* but not *being a teacher* as part of their essence?

(Q2) How can we know about specific modal differences between specific coincident objects, given that those objects are exactly alike in all microphysical respects?

3 Conceptualism

An alternative tradition locates differences between coincident entities with *us*. Mark Johnston captures the idea nicely:

> The crucial distinction is a consequence of representing the world as a world of both objects and pieces of matter surviving material change, but surviving different kinds and degrees of material change. (Johnston, 1992, 104)

On this view, there is no 'a deep metaphysical difference secured by an extra ingredient' which justifies our practise of distinguishing an object from its constituting matter, for 'our practice and the distinction it embodies is acceptable as it stands'.

The fact of difference is *practice-dependent*, in that it cannot be specified 'independently of our practice of making judgements which exhibit certain patterns and demarcations (Johnston, 1992, 103).

There are many approaches along these lines, which cite our practises, or conventions, or concepts as the key factor in explaining the related phenomena of coincident entities and their differing modal profiles. I will call the general approach *conceptualism* and treat Johnston's particular approach as illustrative. Ultimately, I do not think we should adopt any view along these lines. But I will delay an evaluation until Sect. 4. My main interest in the view is what is says about our epistemic access to modal facts and our knowledge of the differing essences of coincident entities.

It is generally acknowledged that conceptual, conventional, or practise-based explanations of a phenomena thereby have an easier time explaining our epistemic access to that phenomena. It is nevertheless worth asking how, exactly, a conceptualist approach might explain our modal knowledge. In particular, how might a conceptualist address the two questions, (Q1) and (Q2), we previously posed for Lowe?

This is how Mark Johnston describes the practise pertinent to his practise-dependent conceptualist picture:

> in representing the world as made up of material objects of various sorts, persisting through all but substantial changes in respects crucial to their sort, we provide for ourselves certain explanatory strategies. We are able to explain sortal relative continuities in terms of the persistence of objects of the relevant sorts, and to explain change and discontinuity in terms of the natures and interactions of persisting objects of various sorts. (Johnston, 1992, 103)

That we use our 'scheme of persisting objects' is justified not in metaphysical terms, but by the kinds of beings we are and the practical needs we have in navigating the world. We could not easily work with a scheme of just 'constituent pieces or quantities of matter', nor with a scheme in which any change of property results in a new entity. So in answer to (Q1), the conceptualist may simply say, 'because that is the objectual scheme we in fact use'. Our conceptual scheme does not, as it were, carve the basic stuff of reality into objects based on *being a teacher*. Rather, it carves reality into objects based on *being a person* (amongst other properties). The result is entities with *being a person* but not *being a teacher* as central to their essence. Our *scheme of persisting objects* thus plays a dual role: it both *generates* those objects and provides us with epistemic access to their essences. Conceptualists can say all this without resort to modal talk and so can answer (Q1) without threat of circularity.

The answer to (Q2) begins similarly. We know that there is a thing which will survive being squashed into a completely different shape, and also a thing which will not because, as part of our practise of treating the world as being that way, we believe there to be such objects. And since our practise is what *makes* the world that very way, the beliefs so formed are reliable, or safe, or whatever they need to be to count as knowledge. So far so good, but that was not quite the question we wanted answered. How do we know, of *this thing*, that it is a thing which will (or will not) survive squashing? The conceptualist answer will have to be that there is no access to such things aside from that offered through engaging in the convention itself. That

is, we may act *as if* we are dealing with an entity which will survive squashing (a mere lump of plasticine) and, in so doing, we make it the case that we are in fact dealing with such an entity.

Again, there are readings of this idea which don't seem very plausible to me. One is that, of a given entity *x*, our treating *x* in such-and-such ways makes *x* essentially *F*, whereas on other occasions, our treating (the very same) *x* in other ways makes *x* accidentally *F*. That is not the view I have in mind. Rather, our conventions make it the case that there are coincident entities, of which one is essentially *F* and one is accidentally *F* and, moreover, there is no determinate access to either except by engaging in the convention. When we act *as if* we are dealing with an entity which will survive squashing, we thereby single out (of the two or more coincident entities) the one which will in fact survive squashing. (If there are multiple coincident entities which will survive squashing, then perhaps we do not uniquely single out any one of them, but exclude those which will not survive squashing.)

It is thus a commitment of a reasonable form of conceptualism that there is no access to one of several coincident entities which is wholly independent of the conventions which generate such objects in the first place. That said, conventions are easily accessed and often do not need to be invoked explicitly in order to achieve determinate reference. In the context of an art gallery talk, 'that one' (pointing in the direction of a statue-shaped lump) will likely refer to the statue, rather than the coincident lump. Anyone familiar with the relevant conventions (which is nearly always an implicit matter) will know *which* entity is the referent and *what* it is.

4 Problems for conceptualism

Conceptualism is not an easy theory to defend, in part because the details are elusive. Let me try to sketch out what a plausible version of the theory might look like and, in so doing, identify where the main points of tension might lie.

As noted in Sect. 3, a sensible conceptualism does not say that we shape the world on the spot, one object at a time, as it were. It is not that, in encountering an object and conceptualising it in a certain way, an agent thereby makes the object be that way. Such views seem unable to explain any sense of a shared world. Rather, there are large-scale patterns to be observed: wherever there is such-and-such matter and such-and-such mental activity of the right sort, there is a model horse and a distinct but coincident lump of plasticine which materially constitutes it.

All pluralists—those who believe in distinct coincident entities—will accept conditionals along these lines, with suitable details added. The question is what *makes* such conditionals true. The conceptualist answer is the one Johnston gives: their truth is 'a consequence of representing the world as a world of both objects and pieces of matter surviving material change' (Johnston, 1992, 104).

Bennett (2004) worries that conceptualists will find it hard to specify any such conditionals. Their antecedents are given in terms of such-and-such microphysical (or, more generally, 'non-sortalish') properties. Yet to evaluate such antecedents, conceptualists cannot appeal to sortal-possessing entities as the possessors of those properties. That would be to assume the very kind of realist position which

conceptualists want to deny. So to make sense of such antecedents, conceptualists will have to say either that there are entities lacking any sortal properties, or else that, prior to our conceptual activity, microphysical (or other 'non-sortalish') properties may be present without being possessed by any entity whatsoever. Bennett (2004, 50) thinks that neither option is viable.

Unlike Bennett, I find the second option attractive, irrespective of the issue of conceptualism. Indeed, in Sect. 5 I will offer a *realist* ontology on which spatiotemporally located properties ontologically precede material objects. Something like this is what Dana Goswick has in mind in saying that, according to conceptualism, 'we are in the business of creating-given certain distributions of matter in space-time-objects whose essential natures match our concepts' (Goswick, 2010, 443). So this option strikes me as being precisely what a conceptualist should say.

A bigger issue for conceptualists is to give an adequate account of modality. I have been assuming a kind of conceptualism that deals all at once with questions of coincident entities, their essences, and their persistence conditions. We might reasonably assume such theories also adopt a conceptualist account of a thing's *de re* modal properties in general. We might take these to be grounded in a thing's (conceptually given) essence, or we might take them to be given directly by our concepts and conventions (subject to appropriate coherence constraints).

Concepts, conventions, and practises could have been otherwise. (I'll henceforth use 'conventions' to cover these options, but retain 'conceptualism' for the family of concept, practise, and convention-based views.) If conventions confer modal properties, then the modal properties too could have been otherwise. But this forces conceptualists to accept a very weak modal logic, on which a necessary F is not necessarily so. More generally, $\Box A$ will not imply $\Box\Box A$, and thus the appropriate modal system is weaker than S4 (Bennett, 2004). Moreover, there seems to be nothing stopping a possible society from adopting conventions on which, say, every property is held necessarily if at all (and more generally, every fact is a necessary fact). Call that possible necessitarian scenario N and let p be false in N but true in actuality. (p might be 'not all truths are necessary'.) Then by definition, $\Box\neg p$ and hence $\neg\Diamond p$ at N. But since N is possible, $\Diamond\Box p$ and hence $p \rightarrow \Diamond\Box p$ (the B axiom) is actually false. So we must also reject the B axiom (as well as the 4 and 5 axioms). Any route to such a Spinozian scenario must be a one-way ticket!

The real kicker, however, is that there could have been no relevant conventions at all. Had there been no humans (other suitable conscious social entities) around, there would have been no conventions and hence nothing to ground modal properties. Should conceptualists say that this is a situation in which there are no modal facts? There are various ways to take this, none of which are attractive. We should not countenance a scenario in which there are literally no modal truths at all, for surely, whatever is necessary is thereby the case, and whatever is the case is at least possible: $\Box A$ implies A, which in turn implies $\Diamond A$.

Instead, the view must be that there are no modal facts beyond those forced on us by minimal constraints such as these. The 'no conventions' scenario might be understood as one in which there are no facts of *mere possibility*: $\Diamond A$ only if A and hence that every truth is necessarily so: $\Box A$ iff A iff $\Diamond A$. This is logically coherent but deeply unattractive for surely it gets the facts of possibility wrong.

In particular, a world with no humans could not have evolved into a world with humans, even though our world in fact did.

Perhaps a better option for conceptualists is to understand the 'no conventions' scenario as one in which the only necessary truths are the logical truths. On this view, the advent of convention places restrictions on things, creating new facts of necessity. Either way, there seems to be an awkward interaction between modality and time, if we think of pre-convention times as thereby being pre-modal-facts times. For then, there will either be impossibilities which later become actual fact (on the former view), or else genuine possibilities which later become impossible (on the latter).

A better way to formulate conceptualism in terms of conventions, I think, is to evaluate modal statements always with respect to the actual conventions we now have. (Sidelle (2009) presents an approach along these lines.) So to evaluate, at a past time, statements about what might have been, we evaluate with respect to the conventions we now have. And to evaluate modal statements at a world with conventions other than our own, we evaluate with respect to the conventions we actually have. Then, there is no bar to accepting the B, 4, and 5 axioms. Conceptualists can still acknowledge that the conventions could have been otherwise, by denying that this would have resulted in different modal facts.

Sidelle (2009) takes this route, arguing that conventions fix the meanings of words, which in turn fix how we individuate objects and their properties:

> What is conventional is not 'just' what meanings or rules we assign to our terms. It is how, with these terms, we rope off portions of reality, where the boundaries are not, and cannot, be given, aside from our deciding that this term, or concept, applies under these conditions, but not those. (Sidelle, 2009, 235)

Bachelors could not have been female, on this view, even if the conventions did not restrict the application of 'bachelor' to males, because in such possible situations, we would no longer be talking about *bachelors*. But equally, there is no property of *being a bachelor*, independent of the conventions we in fact have.

What conceptualists of this kind will find harder to do is to articulate the way in which modal facts *depend* on convention. Typically, dependence is cashed out as a modal notion, but this will be hard to do on this conceptualist understanding of modality. Invoking supervenience of modal facts on the actual conventions will not help. The modal facts, on the current view, could not have been otherwise, and so trivially supervene on any facts whatsoever. The challenge is to articulate the way in which the modal facts depend *specifically* on conventions.

For Sidelle, it is that conventions fix the meanings of words (as just about everyone accepts), which in turn fix how objects and properties are delineated. There are no objective boundaries to things, other than through convention (Sidelle, 2009, 235). On this view, therefore, conventions are part of what makes objects and properties the very things they are. They help to constitute the identities of objects and properties. But then, the difficulty in articulating how objects and properties *depend* on convention resurfaces. For for it seems to me a conceptual truth that, if x plays a substantial role in constituting y then, were nothing of x's kind to exist, y would not

exist either. In particular, were there no conventions, there would be no objects and properties, and the modal facts (if any) would be entirely different.

This is precisely what Sidelle-style conceptualists want to deny. They must either flatly deny a conceptual truth about the identities of objects and properties, or else articulate some other sense in which modal facts depend on conventions. I suspect any explanation a conceptualist can give will involve climbing and then discarding a ladder. Some are content with that. I say it leaves you stuck without a ladder.

5 Plenitudinous realism

The debate has reached a position familiar from parallel debates over numbers, properties, and material objects. The harder we push for a metaphysical realist view, the harder the epistemology becomes. Less realist views ease the epistemological burden but have a harder time explaining facts which, on the face of it, simply are not up to us. I want to investigate an approach which promises the best of both worlds. It is realist, in that the objects under consideration exist and have the properties they have independently of our thoughts, concepts, and conventions. But, I shall claim, it inherits the epistemic advantages of the conventionalist view (on the version I have set out here).

I will sketch one such metaphysics, *Essential Bundle Theory* (Barker & Jago, 2018, Jago, 2021a, b), although there are other, similar metaphysical views which might achieve the same ends. As a kind of bundle theory, Essential Bundle Theory takes properties to be prior to material objects. It also takes *spacetime* (or at least, some kind of space) to be fundamental (and so this is not a pure bundle theory). We might think of properties themselves as universals, along Platonic (transcendental) or Aristotelian (immanent) lines; or we may think in terms of *non-dependent tropes*: qualitative concrete entities whose existence does not depend on the material object which bear them. Each is a metaphysically live option and the decision won't affect the subsequent discussion.

I will use the metaphysically neutral term *property instances* for properties-in-spacetime. Here is a region of spacetime throughout which we find instances of the properties *being horse-shaped*, *being pink*, *being a mass of plasticine*, and *being squishy*, for example. All I require of this notion is that property instances are themselves entities (in the broadest sense of 'entity'), whose identity conditions are given both by the property and by the region of spacetime involved. An instance of *Fness* in spacetime region r is identical to an instance of *Gness* in spacetime region r' just in case $F = G$ and $r = r'$. (Property instances are thus individuated like non-dependent tropes, and not like Platonic or immanent universals.)

Properties (and their instances) bear dependence relations to one another. Where there is *being scarlet*, there is also *being red*, the latter because of the former. The existence of the former instance grounds the existence of the latter. Instances of mental and social properties may play a role in grounding further property instances, such as instances of *being a disabled parking space* or *being financially valuable*. But these are special cases: in general, mental and social properties need not enter the story. There is much more to be said on the exact relationship between

the identity of properties and the grounding relationships that hold between their instances, but that is a story for another day.

So far, material objects have not entered the story. We have something anti-realist conceptualists might agree with, a background of 'certain distributions of matter in space-time' from which we create 'objects whose essential natures match our concepts' (Goswick, 2010, 443). But that is *not* the final story being told here. Rather, we take the plenitudinous realist option: any plurality of properties located through a spacetime region forms a material object in that region, independently of any further facts about us. I take the material object to be the mereological fusion of those located properties, as in Paul (2002, 2006) does, so that the properties are literally parts of the object. But this is an optional feature of the view.

(We may want to add some restrictions on which fusions of colocated property instances count as a material object, depending on how we understand properties. We might impose a *grounding closure principle*, so that we count a fusion containing *being scarlet* as a material object only if it also contains *being red* and *being coloured*, for example. If we believe in negative properties, we will probably want to impose a consistency condition as well. The details, discussed in Barker and Jago 2018, are not essential here.)

Key to Essential Bundle Theory is the idea that the located properties which are parts of a material object are essential to it. That is, when an object has an instance of *pinkness* as a part, that object is essentially pink. If *pinkness* is located in an object's region but is not part of that object, then the object is pink but not essentially so. On this approach, *essential property possession* is different in kind to *accidental property possession*, each of which receives a unique analysis. They are not modes of one underlying phenomenon, *property possession*.

In this way, given any spatiotemporal region, we find a great plenitude of distinct but perfectly coincident material objects, alike in all microphysical aspects, and differing only in which properties are essential to them. (I will defend plenitudinous approaches shortly.) Property instances, on this view, quite literally make the material entity the very thing it is. They are each part of what it is to be that very entity. So, somewhat surprisingly, we obtain a broadly Lockean notion of essence, understood as the total of the properties whose instances form the object in question.

This approach furnishes an answer to the metaphysical question of what differentiates coincident entities (Jago, 2016). Barrel and the coincident lump of plasticine are non-identical because they are non-identical fusions of property instances. Or, to put it another way, they have different essences. But the explanation of *why* they have different essences is now straightforward: they have different essences because they are fusions of different property instances. They have different parts: an instance of *being horse-shaped* is a part of Barrel but not of the lump of plasticine. (Although the lump of plasticine has that property, is does not have it as part of its essence.) The differences in their persistence conditions and other modal properties all stem from this difference in their essence.

The criterion of identity used here is that of classical extensional mereology. It is a general feature of mereology that wholes are defined in terms of their parts. So, given the identity of some whole y, one cannot give an informative answer to 'why is x a part of y?', other than by reiterating what y is: it's simply

the whole that has exactly such-and-such as its parts. The fact that *y* has *x* as a part is grounded in *y*'s identity, given as the whole with such-and-such parts. And as a consequence, the fact that material object *o* is essentially *F* is grounded in *o*'s identity. The explanation of why a material object has the essential properties it does, and consequently why Barrel and the lump of plasticine differ in their essential properties, reaches bedrock at an appropriate point.

Before turning to consider how this metaphysical approach helps with modal epistemology, I owe you a defence of the resulting plenitude of objects, which vastly outstrips the objects represented within a typical person's conceptual scheme. Why think reality is at all like that? Well, why think it is not? Only because such objects are not represented in a typical conceptual scheme. But we have the conceptual scheme we have largely as a result of biological and cultural chance: what good luck! As John Hawthorne argues,

> we should posit ever so many more objects than we habitually talk about, in order not to credit ourselves with too much luck or sophistication in successfully hitting ontological targets most of the time. (Hawthorne, 2006, 109)

I share Hawthorne's intuition but, as it stands, it is unconvincing. If I guess the coin will land heads, and it does, must I posit some ontology to explain away my good luck? (Korman (2011) offers detailed criticism of Hawthorne's argument.) Nevertheless, there is something bizarre about the claim that reality just happens to align with our conceptual scheme. Fairchild and Hawthorne (2018) consider *Tablers*, who believe in the existence of tables but not of chairs (which are simply particles-arranged-chairwise):

> 'It just strikes us that way', they say. 'Our perceptual systems make it seem that when particles are arranged tablewise, they compose an object, but when particles are arranged chairwise, they don't.' (Fairchild and Hawthorne, 58)

In reply, we want to say that *any* genuine reason for believing in tables should transmit to belief in chairs, notwithstanding the fact that Tabler phenomenology represents things as being otherwise. It would simply be arbitrary to insist that one but not the other exists. In this way, a systematic Tabler metaphysician may rationally come to believe that chairs exist, just as tables do.

We can use similar *arbitrariness arguments* to make the case for ontological plenitude and, in particular, for modally extraordinary objects. Consider again an *incar* (Sect. 2), shrinking to nothing as the coincident car pulls out of the garage. Bizarre! Yet we are happy to believe in an island, which shrinks to nothing as the sea level rises (Hawthorne, 2006, vii). It is arbitrary to believe in islands but not incars; and since there are islands, there are incars. And not just incars, which, after all, were theorised by taking an arbitrary contingent feature of regular cars to be essential. The lesson, it seems, is that a systematic, non-arbitrary metaphysics must accept a vast plenitude of bizarre objects, each coincident with others differing only in their essential properties.

6 Knowledge of essence

Convention, on this view, does not play a role in bringing people or cats or tables into existence, or in giving them their identity, essence, or modal properties. Convention can *sometimes* play that role, in the case of *socially constructed* entities like a pound coin or a disabled parking space. In describing Essential Bundle Theory as a *realist* theory, I do not mean to rule out the socially constructed nature of such entities (which I take to be perfectly compatible with the kind of realism I am articulating here). Conventionalism says that conventions play a role like this for *any* kind of material entity. In rejecting conventionalism, I am allowing that convention plays a role the case of socially constructed entities, but *only* for such entities.

The role of convention, on the view I am suggesting, is *selective*, not *generative*. Of the many entities that exist in some spatiotemporal location, differing only in their essences (and consequently in their modal properties), convention raises some—often just one—to salience and associates these with our words and concepts. Recalling Johnston's conceptualist explanation, we have a *scheme of persisting objects* and an accompanying *scheme of their constituent pieces or quantities of matter*. According to conceptualists, these schemes carve reality into entities with *being a person* but not *being a teacher* as central to their essence, and participating in this scheme thereby provides us with epistemic access to the essences of those entities.

My suggestion is that a plenitudinous realist can avail herself of the second of these functions. Reality is pre-carved into both person-based essences and teacher-based essences. But given the scheme of persisting objects we in fact have, we attend only to the first sort of entity. We ignore those strange objects which include *being a teacher* as an essential property. As a result, any concept involving *being a person* will pick out the entity which persists by way of *being a person*. The (ordinary) concept *being a teacher* is the concept *being a person who teaches*. That is the sense in which it is a concept involving personhood, so that 'the teacher' picks out the entity which is essentially a person, not the (temporally coincident) entity which is essentially a teacher. We know this, implicitly, through engaging in the practise associated with that conceptual scheme. That is the plenitudinous realist answer I offer to (Q1). Since it is stated without resort to modal talk, it avoids the threat of circularity.

The solution I offer to (Q2) is similar. The problem is to explain how, of two objects exactly alike in every empirically discriminable intrinsic respect, we can know the ways in which they differ modally. We focused on coincident objects which fall within the conceptual schemes we in fact use: the model horse and the lump of plasticine. On the plenitudinous metaphysics I have sketched, these objects are distinct bundles of property instances (understood as giving the essences of those objects). So we may distinguish between them in thought *descriptively*: say, between *the object for which* creative intention *is part of its identity* and *the object whose identity is given by its material parts*.

We *could* distinguish them in those descriptive ways, but that is not how we in fact distinguish them. We distinguish them as *model horse* and *lump of plasticine*.

The link between these concepts and their descriptive counterparts is given by the role these concepts play in our conceptual schemes. Our concept *model horse* is governed by our *scheme of persisting objects*. Within that scheme, it is associated with concepts like *creative intention*. Thus a model horse is something that essentially involves creative intentions. Our concept *lump of plasticine*, by contrast, is governed by our *scheme of pieces or quantities of matter which constitute persisting objects*, and so picks out objects whose identity is given by their material parts.

One may worry that, because this approach is metaphysically demanding, it is implausible to claim that ordinary people have this kind of knowledge. So it is important to emphasise that one need not know anything of the metaphysical details in order to have the kind of knowledge of essence and modality I am claiming here. All one must do, in order to have that knowledge, is to engage in the kind of conceptual schemes I have described here. One must form beliefs about what those entities are, in and of themselves, and how they could or could not have been, on that basis. The role of the metaphysics is then to ensure that those beliefs are safe, or reliable, or whatever the need to be in order to count as genuine knowledge.

To emphasise this point, let me return to Lily and her belief that Barrel would not survive remoulding. That belief must be formed on the basis that it is a belief specifically about *Barrel*, the horse, rather than about a mere lump of plasticine. I will not pretend to understand the mind of an over-sugared three-year-old, but it seems clear that Lily has formed beliefs specifically about her model horse. She is proud of what she has made; she gave it a name; and my threats to reshape it are emotional triggers for her. Later, when she has moved on from Barrel and we pack away, she is completely indifferent to the blob of pink plasticine that formerly constituted her horse. It feels very natural to say that the object of her intense but fleeting emotional investment was Barrel, not the plasticine blob.

To be a model horse requires being horse-shaped. (Or at least, it requires being acknowledged as representing a horse in virtue of its appearance by those who matter. I can't honestly say that Barrel was recognisably equine. Practically and metaphysically, it's the thought that counts.) In treating *that thing* as a model horse, Lily thereby conceptualised it in terms which tell her of the ways it could not be. She thereby believed it to be incapable of surviving being squashed into a ball. She does not believe the same of lumps of plasticine. My claim has been that, given the plenitudinous metaphysics, her beliefs formed in this way are reliable and thus that she knows.

7 Conclusion

If I am right, then the epistemic benefits of conceptualism are not tied to the *generative* role of conceptual activity. Ultimately, conceptualism gains its epistemic advantage by conforming the world to our conceptual schemes. Wherever we aim, we find a target by *making* it so. Realism is thought to suffer, on epistemic grounds, in denying that the world so conforms. The realist's pre-established targets are all too easy to miss. But this assumes a sparsity of targets. On the plenitudinous picture, there

are targets everywhere. Wherever there is a property *F*, there is something that is essentially *F*. So, given the ability to detect *Fness*, we can detect those things that are essentially *F*.

We are of course not infallible in our knowledge of essence and modality. Far from it. Some declare confidently that a person's identity is essentially tied to that of their parents, or of the zygote from which they originated (Forbes, 1985, 1986). I am not so sure. The arguments for those conclusions seem to me reasonable but not particularly decisive. Nor do I feel a careful appeal to my concept of a person will settle the matter. I would class *origin essentialism* alongside other philosophical views on which I remain undecided. Whilst I can be sure that *some* entity colocated with a person has its origins essentially, I can't be sure whether that entity is itself a person, and so I can't be sure whether people, in general, have their origins essentially.

Does this admission of ignorance undermine my attempt to co-opt the conceptualist's machinery? I don't think so. On such views, we should expect our modal knowledge to be bounded by the imprecision of our concepts, at least where it concerns material objects. The ontology might be one of precisely-delineated essences, but our concepts are not so sharp. Our concept *person* might be indeterminate between two sharply-delineated essences, one containing and one lacking information about the person's specific origins. Similarly for judging tricky cases of persistence through malfunctioning teletransporters. It might be that we are unable to make sharp judgements about survival precisely because the reference of our concept *person* is not determinate.

Declarations

Conflict of interest There are no conflicts of interest.

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