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THE EPISTEMOLOGY OF ESSENCE

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Abstract: *The chapter discusses the issue of how we may achieve knowledge of essence. It offers a critical survey of the main theories of knowledge of essence that have been proposed within contemporary debates, particularly by Lowe, Hale, Oderberg, Elder, and Kment.*

How do we know what's essential to a given entity, say a particular individual or a natural kind? Is that something one can discover empirically, or by reasoning alone? Can we know *the* essence of a certain entity, or only some of its essential properties? Is investigating the essence of say, chemical elements or artifacts different from investigating the essence of numbers and moral qualities? These are some of the key questions that the *epistemology of essence* aims to address. This entry is a survey of the main answers that have been proposed within recent debates.

Essentialist notions are usually regarded as *modal* notions, even though many think that essence is not definable in terms of *de re* necessity—especially following Fine's (1994) influential paper (compare the entries on Modal Conceptions of Essence, Torza this volume; and Non-Modal Conceptions of Essence, Correia this volume). By means of counterexamples, Fine criticizes so-called *modalism*, which defines essence in terms of an object's necessary properties. A prominent version is *conditional* modalism: *x is essentially F iff (df) Necessarily, if x exists, then x is F*. Fine proposes that the analysis should go the other way around. Drawing from Aristotle's metaphysics, the Finean conception defines *de re* necessity in terms of an entity's essence or nature, which is thought to be captured by a *real definition*.ⁱ

While being a modalist excludes endorsing the Finean conception, the reverse doesn't hold. Indeed, anyone who accepts a notion of *de re* necessity may accept a modal view of essence. As Fine himself put it,ⁱⁱ the real question is whether *in addition to* the modal conception of essence there is another conception that further specifies what essence is. The question is whether modalism is sufficient for accounting for essence.ⁱⁱⁱ

There are important epistemological consequences depending on whether one chooses modalism or the Finean conception of essence. If you go for modalism, the epistemology of essence will coincide with knowledge of metaphysical necessity. That might be a significant advantage of the view since, if successful, an account of our knowledge of necessity will yield an account of knowledge of essence as a byproduct.

On the other hand, if you favor the Finean conception (according to which not all the necessary properties of an entity are part of its essence), you might need two separate explanations of our knowledge of essence and necessity. A widespread strategy starts by giving an account of our knowledge of essence; then it investigates how that yields in turn knowledge of metaphysical necessity. This strategy assumes a direction of *epistemic priority* that matches the Finean conception of essence. Particularly, the strategy assumes that our epistemic procedures match the following bridge-principle connecting essence to necessity: *If it is essential to x that it is F, then it is necessary that x is F*. The idea is that since metaphysical necessity depends on essence, our knowledge of modality should proceed from knowledge of essence. An account of the former thereby presupposes an account of the latter. Note, however, that the Finean conception need not entail the epistemic priority of essence over modality. There might be cases where one comes to know a metaphysically necessary truth “directly”, so to say, and learn only later about the essence facts that underlie it. Perhaps, one might not get to know certain essence facts at all.^{iv}

Some authors find it problematic that the process of coming to know metaphysical necessity via knowledge of essence involves, at least conceptually, an “extra step” compared to the modalist conception (Casullo 2020; Horvath 2014; Tahko 2017). This needs to be explained, no matter how obvious or “automatic” it might seem. The crucial question is how we can come to know the bridge-principle connecting essence to necessity, since a real definition (e.g., *gold is essentially the element with the atomic number 79*) doesn't make any explicit claim about metaphysical possibility or necessity (Horvath 2014). Following Kripke's original suggestion, some philosophers conjecture that we know that transition *a priori*—whether via intuition, or reflection on the concepts involved (Hale 2013, Mallozzi 2021, Casullo 2020, Kment 2021, Jago 2021). Vaidya & Wallner (2020) propose that the bridge-principle follows from *the essence of essence*, in virtue of the fact that essences themselves have modal bearing. Presumably, we thereby know it *a priori*. Tahko (2022) maintains that epistemic subjects need not know or otherwise grasp the principle in order to gain modal knowledge. Its proper role is “rather at the level of our theory of modal epistemology” (10). The idea seems to be that we may rather learn about the principle and its crucial role for modal knowledge from epistemologists working on the issue. But internalists might complain that, in general, an epistemology that relies on principles or mechanisms that might not be available to the knower does not provide an adequate explanation of that knowledge.^v

While (on a Finean conception of essence) accounting for knowledge of essence may be crucial for explaining knowledge of necessity, I will set aside the issue of how we may know the bridge-principle and the connection to the epistemology of modality. Instead, we shall focus on knowledge of essence itself, i.e., on how a subject can gain (non-testimonial) knowledge of essence, by looking at the main available accounts from recent literature.

Preliminaries

Given the central role that the notion of essence has traditionally had in metaphysics, it's surprising that only a few authors have explicitly addressed the question of how we know essence and essential properties and tried to give a systematic account of it. (I should signal, however, that recently the issue of knowledge of essence has been gaining prominence within the epistemology of modality due to a renewed interest in essentialist knowledge and its candidate role for knowledge of necessity. See Mallozzi Vaidya & Wallner 2021 for discussion). Several views within the epistemology of the *a priori* as well as the epistemology of metaphysics could be applicable to knowledge of essence, as well; perhaps some of them have that goal implicitly (examples include accounts of intuition and/or the understanding as an epistemic source, such as Bealer 1987, 1996; Bengson 2015; BonJour 1998; Chudnoff 2013; Sosa 2007). Still, in the present chapter we shall focus on those few recent theories that offer a dedicated, systematic account of knowledge of essence—an account that aims to explain specifically how one can come to know *essence facts* such as *water is essentially H₂O*, *Socrates is essentially human*, or *a triangle is essentially a plane figure with three sides and three angles*. We shall assess how each theory scores with respect to the goal of explaining, or offer an illuminating characterization of, our knowledge of paradigm essence facts.

Here are a few highlights from the discussion to follow. Preliminarily, all the accounts we'll look at share robust *realist* and *non-skeptical* assumptions: essence facts exist objectively and mind-independently, and we are in a position to know them. Thus I won't discuss forms of skepticism and deflationism about essence and essentialist knowledge. (See the entries on Conventionalism,

Sidelle & Livingstone-Banks this volume; Conferralism, Vaidya and Wallner this volume; and Quinean Anti-Essentialism, Fine this volume).

Furthermore, all the accounts we discuss understand essence in terms of the *nature of an entity x* or the *real definition* of x, namely according to what above has been referred to as the “Finean conception of essence”. (Kripke, who is the first author we review, is often regarded as a *modalist*. The point is controversial; but defenders of the modalist interpretation might want to consider Kripke’s view as an exception to the list.)^{vi} The broad Finean characterization is often spelled out in different ways: as we will see, accounts differ as to what essence or real definition exactly is. Indeed, each theory we’ll examine comes as an integral part of a broader philosophical system that includes a *metaphysics* of essence. Providing an epistemology of essence that complements the corresponding metaphysics seems a highly desirable feature for a candidate theory. If correct, such a theory would thereby meet, within the study of essence, what Peacocke (1999) has called the “Integration Challenge”: i.e., the general challenge of providing an account of how we can know truths in a given area, which fits a corresponding metaphysical account of that area. Furthermore, the theories we discuss seem to grant the metaphysics of essence a certain priority over the associated epistemology. They proceed (implicitly or explicitly) based on the methodological tenet that accounting for knowledge of essence requires at least some preliminary account of what essence is. This is in effect a “metaphysics-first” approach to the epistemology of essence (Mallozzi 2021).

A further main issue is whether knowledge of essence is *a priori* or *a posteriori*. The answer may depend on one’s broader philosophical and methodological views, besides one’s conception of essence. Accounts that favor rationalist methods tend to treat knowledge of essence as *a priori*. According to those, we may gain essentialist knowledge via *understanding, conceptual*

competence, imaginative exercises, and/or intuition. Whereas, more naturalistically oriented accounts see knowledge of essence as distinctively *empirical*, often as a product of *scientific investigation*. Of course, it's not unusual that both *a priori* and empirical methods jointly contribute to knowledge of essence. Vice-versa, *a priori* and *a posteriori* knowledge of essence might require separate accounts (Hale 2013). Complications might arise if the *a priori-a posteriori* distinction doesn't actually capture a genuine epistemological difference, and so isn't philosophically useful after all (see e.g. Williamson 2013. For discussion: Boghossian and Williamson 2020).

Additionally, essentialism has traditionally emphasized the connection between essence and *explanation*. The broad idea is that the essence of a given entity is what explains that entity's certain other properties and behaviors. Aristotle is thought to have held that the essence of a kind is that feature that explains why kind-members have certain other (non-essential) features (Hauser 2019). Similarly, Locke held that the essence of a material substance consists in its internal constitution (its atomic or molecular structure) because this explains, causally, the observable, macroscopic features of the substance. Contemporary debates have witnessed a resurgence of this idea, starting with the work of Putnam (1975) and Kripke (1980). More recently, Gorman (2005), Kment (2014), and Godman Mallozzi & Papineau (2020) among others have offered accounts of essence that hinge on explanation, often pairing it with an empiricist epistemology.

There's a familiar worry that explanation is merely subjective and/or context-dependent and so it won't help identify genuinely essential properties on a realist view. However, the notion at play in those accounts is either *causal* explanation (especially in the Locke-Putnam-Kripke strand, as well as the contemporary accounts), or so called "metaphysical explanation". (The latter is

sometimes identified with *grounding*: see the entry on Essence, Grounding, and Explanation, Kovacs this volume.^{vii} Aristotle’s notion of *formal causation* is indeed a *sui generis* kind of causation, which may broadly fit the category of metaphysical explanation). Both sorts of explanations capture real relations obtaining “out there” in the world, namely the cause of a given fact, or the reason why it obtains respectively. These are fully objective and mind-independent. Thus they shouldn’t be treated as epistemic notions representing subjective, merely interest-dependent relations.^{viii}

Finally, although this entry focuses on contemporary contributions from analytic debates, I should mention Husserl’s (1973) account as an early prominent proposal from the phenomenological tradition (for discussion, see Mulligan this volume). Husserl held that we may gain knowledge of essence via an *imaginative* process called “eidetic variation”, whose outcome is justified by *intuition*. This is a process of abstraction where a subject voluntarily imagines different versions of a certain object, while having it retain some core similarities to the original. As the subject encounters cognitive resistance regarding specific variations, an invariant common structure is uncovered, i.e., the *eidōs* or essence of the object. The subject has in effect an intuition or insight into the essence of the entity. Key questions for Husserl’s eidetic method concern the arbitrariness of the process, its reliability, and a worry of vicious circularity—for the success of the method might require some prior grasp of essence (for discussion: Mohanty 1991; Kasmier 2010; Wallner 2023).

Kripke

Kripke revived the study of modal metaphysics and essentialist notions within analytic philosophy in the 1970s. Although he didn't lay out a systematic account of knowledge of essence, he might be thought of as "author zero" in these debates. His groundbreaking thesis that we can know certain necessities *a posteriori* (1980) has a crucial role for the investigation of our knowledge of essence.

Kripke's view is that we may come to know *a posteriori* necessities by inferring according to a model which involves a conditional whose antecedent is a non-modal proposition and whose consequent is a modal one. The conditional is *If P, then necessarily P*. According to Kripke, we may establish, via empirical means, that the antecedent of this conditional, *P*, is in fact true. Then, by applying *modus ponens* the consequent is inferred, so we can conclude *necessarily P*. The inference crucially relies on the conditional premise, *If P, then necessarily P*, which for Kripke we know "*a priori* via philosophical analysis". Still, the conclusion of the inference is *a posteriori*, since one of the premises (namely *P*), was established empirically.

What kinds of propositions does *P* stand for in the Kripkean model? Kripke's examples include informative *identity-claims* featuring rigid designators, 'A is identical to B' (e.g. 'Hesperus=Phosphorus'). But also truths concerning *substance composition* (e.g. 'water is H₂O'); *fundamental kind membership* (e.g. 'cats are animals'); or *individual biological origins* (e.g. 'the Queen has actual parents X and Y'). Crucially, Kripke appears to suggest that these are all *essential truths*.^{ix} It's essential to water that it is composed of H₂O. Being an animal is part of the essence of cats. And it's essential to the Queen's being that very person that she's originated from that particular egg and sperm. Thus, the key idea for the epistemology of essence that we

draw from Kripke's work is that essential truths are often knowable *a posteriori*, in most cases via scientific investigation.

Lowe

Casullo has deemed Lowe's account "the most sustained attempt in the literature to develop an epistemology of essence" (2020: 593). Lowe holds that knowledge of essence (which for him wholly grounds knowledge of metaphysical modality) consists in *understanding* what a given entity *x* is or would be (Lowe 2012). This means understanding or grasping the *real definition* of *x*. The distinction between *nominal* definition vs. *real* definition historically goes back to Locke, who himself developed it from Aristotle. While nominal definition defines the word that picks out an entity in the world, real definition defines the thing (*res*) itself. Nominal definitions are what we find in a good English dictionary; real definitions capture the essence or true nature of things.

A real definition for Lowe is in many cases a *generative principle*, namely a principle stating what it is for something to come into existence. (Note that the entities in question are "in a suitable sense capable of generation"; so, not God, nor universals. 2012: 935-6). Lowe's examples often involve *abstracta* from geometry: e.g., "A *circle* is the locus of a point moving continuously in a plane at a fixed distance from a given point" (2012: 935). One may come to know the essence of a circle or what it takes for there to *come into being* a circle simply by understanding its real definition. More generally, Lowe stresses that knowledge of essence is "a product simply of understanding—not of empirical observation" (2008: 39).

However, as Lowe's account purports to be general and range over *any* entity, canonical Kripkean cases of the necessary *a posteriori*, e.g., 'Necessarily, water is H₂O', seem to pose an immediate challenge. For how are we to access the true nature of water simply via *understanding*?

In response: first, according to Lowe, establishing standard cases of *a posteriori* necessities requires knowing certain general criteria of identity (e.g., that *two material objects cannot exist in the same place at the same time*, 2008: 26). For him, those are *a priori* premises that we may only grasp via understanding. Thus, Lowe contends that coming to know standard cases of *a posteriori* necessities requires further *a priori* metaphysical knowledge, which supposedly undermines their *a posteriori* status (2008: 44). This is somewhat surprising, however. For even granting the need for such underlying knowledge, adding extra *a priori* premises to a piece of inferential reasoning that contains empirical premises doesn't make it any less empirical, let alone *a priori*.

Second, a closer look at Lowe's metaphysics of essence might help us better understand his epistemological claims. We saw that Lowe identifies essences with real definitions. Importantly, he also maintains that we shouldn't think of those as further entities or *reify* them (on pain of infinite regress: 2008: 39). The essence or real definition of something is just *what the entity is*. Thus, it would be a mistake for example to identify essence with molecular structure, or an individual's DNA. At the epistemological level, while the discovery of the latter is usually thought to require empirical (scientific) investigation, understanding what an entity is doesn't involve any such requirement. But then, one might wonder, *what is* the essence of water, say, if not its microstructure?

When directly addressing this question, Lowe distinguishes between different conceptions of essence, apparently based on *pragmatic* and *epistemic* factors. On the one hand, he concedes that “if we are using the term ‘water’ to talk about a certain chemical compound whose nature is understood by theoretical chemists, then indeed we should say that it is part of the essence of this compound that it consists of H₂O molecules” (2008: 33). On the other hand, “the existence of this compound is a relatively recent discovery” that wouldn’t have been possible without modern chemical knowledge (2008: 44). Hence, Lowe concludes that our everyday use of the term ‘water’, as well as our forebears’, doesn’t pick out “a chemical compound whose nature is now understood by theoretical chemists” and it’s wrong to “assume that it is part of its essence that it is composed of H₂O molecules” (2008: 44).

That’s also somewhat surprising. One might contend that it’s part of the commitment to essentialism that the way we use a term should in no way affect the properties of the thing picked out by the term. (Similarly for what we know about the thing). A better way to understand those divergences is by acknowledging that our linguistic competence and everyday use with a given term might be lacking in certain cases, and so it might not successfully capture the essence of the corresponding entity. How we think and talk about *x* vs. the nature of *x* are completely independent issues.

Additionally, following Locke, Lowe emphasizes that “we do, *and should*” classify kinds of substances based on their *macroscopic appearance and behavior*, rather than “their supposed ‘real essences’” (Lowe 2011: 17). But this general criterion also raises questions. How are we to tell which of those observable features are essential to an entity? How do we select the “right” set of properties? Perhaps Lowe would insist that this *just is* the process of understanding what an entity is: identifying somehow the right set of properties amounts to grasping the real

definition. Even so, the criterion seems to conflict with Lowe's rejection of the role of sensory perception for knowledge of essence. For how are we to learn about things' observable characteristics, if not via observation? (Similarly in cases involving alleged "ostensive" not linguistic real definitions, e.g. colors: 2012: 942).

Still, Lowe's treatment of canonical cases of *a posteriori* knowledge of essence might not be as problematic as it seems. An important claim is that, even where a thing is clearly definable and its real definition is a generative principle, that doesn't entail that the thing actually exists. This is a point Lowe also conveys with a slogan, "*Essence precedes existence*" (Lowe 2008: 45). The priority of essence to existence is for him not only ontological but also epistemic: we need to know what the essence of an entity is before establishing whether it exists (2008: 40. For discussion: Tahko 2018, Casullo 2020). This means that empirical investigation would only be needed *after* we have grasped the essence of an entity, which is again achieved purely via understanding. Indeed, Lowe seems to be defending a transcendental thesis. We must know at least to some extent what an *x* is, that is, have at least partial knowledge of its essence, in order to think and talk about *x* at all (2012: 945. For discussion: Sgaravatti 2016; Tahko 2017, 2022; Vaidya & Wallner 2021). The point generalizes: knowledge of essence is for Lowe a *prerequisite* to have *any* knowledge, including empirical knowledge (2008: 33). Additionally, Lowe clarified more recently that "there is really no such thing as 'purely' a priori knowledge, nor any such thing as 'purely' a posteriori knowledge" (Lowe 2014: 268). The *a priori* is supposedly *cyclical* or "bootstrapping" with *a posteriori* knowledge; so perhaps he would ultimately allow that some empirical information plays a role for knowledge of essence. (For discussion: Tahko 2017).

However, one wonders *how* we obtain knowledge of essence via understanding, exactly. On the one hand, Lowe rejects the evidential role of *intuitions* as well as *conceivability* for knowing metaphysical claims in general (2014). On the other hand, he excludes that grasping the essence of an entity is a form of linguistic or conceptual mastery: “knowing the nature or essence of a (possible) kind of being or entity cannot be reduced to knowing the meanings of words or understanding concepts and knowing logical relations between them” (2008: 33; 2014). But then how is understanding supposed to operate? Ruling out linguistic/conceptual mastery seems especially problematic. In the epistemology of the *a priori* understanding is usually identified with some grasp of linguistic/conceptual items. Knowledge of analyticity in particular is knowledge one may gain *a priori* in virtue of understanding a certain sentence/proposition; where the relevant *a priori* beliefs/inferences are partly constitutive of understanding, or otherwise based on such an understanding (Boghossian 2020). Once conceptual mastery is off the table, it isn’t clear how understanding is supposed to operate, and so ultimately how one may arrive at knowledge of essence.

In his (2008) Lowe appealed to a “grasp of, or rational insight into, certain necessary relationships... [an] insight into their natures or essence” (33). That this may yield *a priori* knowledge of necessary truths is an idea that several authors have defended (Bealer 1992; Bonjour 1998; Chudnoff 2013). But elsewhere Lowe explicitly rejects intuition as a source of essence knowledge, as mentioned (2014: 256). The notion of understanding and its role for knowledge of essence should thus be clarified. (Similarly: Bengson Cuneo and Shafer-Landau 2022: §4. For further discussion: Casullo 2020; Mallozzi ms; Wallner 2023).

Hale

Hale (2013) gives two separate accounts of *a priori* vs. *a posteriori* knowledge of essence, where the underlying assumption is that to know the essence or nature of something is to know its real definition.^x For Hale, *a priori* knowledge of essence is grounded in *knowledge of meaning*. It shouldn't strike one as problematic that we may know nominal definitions *a priori*, especially if we think of that as the result of linguistic stipulation. But how is the definition of a word supposed to give us access to the nature of the thing picked out by that word?

Hale holds that cases where we may know real definitions *a priori* are cases where an entity's real definition and nominal definition *coincide*: "it often happens that...the correct definition of a thing and the correct definition of a word for the thing can be stated using the very same words" (254). Straightforward examples, for Hale, are those where we can give an *explicit* definition of a word, namely, one that states *analytically necessary and sufficient conditions* for its application. Take the case of *square*. The explicit definition of 'square' can be stated as *a plane figure that has four straight sides of equal length, meeting at right-angles*. But that's just *what being a square is*, namely its real definition. As he puts it, "precisely because such a definition gives necessary and sufficient conditions for the word 'square' to apply, there is no mystery how we can know that there is no more (and no less) to being square than satisfying those conditions" (255). More generally, Hale says that in such cases the essence is *transparent*, namely *a priori* accessible. Further examples include simple analytic truths such as *spinsters are unmarried women* or *cobs are male swans*.

Additionally, for Hale we can gain *a priori* knowledge of essence via knowledge of meaning when definitions are *implicit*. Take the *logical constants*. According to a popular view, we know implicitly what the logical constants mean *a priori*, by being disposed to assent to basic logical truths or inferences involving them. For example, in the case of ‘and’, one needs to be disposed to assent to statements of the form: *If A and B, then A*. But mastering ‘and’ in this way is just knowing what conjunction is, namely its essence. For Hale, the implicit nominal definition of ‘and’ coincides with its real definition, thus we can access the latter *a priori* simply by knowing the former. Similarly for the case of *numbers*. On the basis of definitions by abstraction, one can gain knowledge of the nature of cardinal numbers *a priori* (256-7. Also Hale 2021). Thus, in both implicit and explicit cases, knowledge of meaning allegedly suffices for *a priori* knowledge of essence.

By contrast, cases of *a posteriori* knowledge of essence have the key feature that the nominal definition is different from the real definition. For example, the nominal definition of ‘water’ is (roughly) *the drinkable liquid that is found in rivers and lakes on Earth*. Whereas, the real definition of water is H_2O . Thus we need empirical investigation to find out what a thing is or its real definition. (Incidentally, for Hale our knowledge of metaphysical possibility, which is itself grounded in knowledge of essence, is “always and only a posteriori”. 2013: 7). Hale maintains that *a posteriori* knowledge of essence respects the Kripkean model for knowledge of *a posteriori* necessities. Appropriate inferences proceed according to specific Kripke conditionals that instantiate general principles such as the *necessity of identity* or *the necessity of origins* (e.g., *If Hesperus is Phosphorus, then necessarily Hesperus is Phosphorus; If this table is not made of ice, it is necessarily not made of ice*). But how do we know such principles? As we saw, for Kripke that’s a matter of *a priori* philosophical analysis. An *a priori* proof can be offered for the

necessity of identity (1971), while the *necessity of origins* is “susceptible of something like a proof” (1980: 114 fn.56. Kripke’s argument is notoriously controversial. See e.g. Salmon 1979; Cameron 2005. Also, we might note that the availability of a proof doesn’t entail that a subject actually grasps it, which might undermine the justification of the resulting modal knowledge).

While Hale largely agrees with Kripke, he also interprets him as a *modalist*. Instead, for Hale, essence grounds necessity, which suggests in turn that knowledge of essence is prior to knowledge of necessity. Thus, Kripke’s account needs opportune modifications to explain *a posteriori* knowledge of essence, not (merely) knowledge of necessity. Hale’s key point is that the particular Kripke conditionals can be inferred from certain *general principles of essence*: “principles asserting, schematically, that such-and-such a property is essential to its instances” (269). Hale’s proposed principles concern *substance*, *kind membership* and *kind inclusion*, besides the *necessity of origins* and of *identity* themselves, as well as canonical *theoretical identifications*. For example, it is a general principle of essence that *any object is essentially an object of a certain general kind* (essentiality of *kind-membership*); or that *each living thing essentially has the particular origin it has* (essentiality of *origins*). Once applied to specific instances, these principles cover many standard cases of *a posteriori* knowledge of essence.

Of course, the crucial question is how we know those principles of essence. Hale offers extensive discussion of *kind-membership*. There’s a broad abductive argument for it, as the principle might be taken to underwrite a “simple and straightforward” answer to the question *What is it to be a given object?*, as well as to help draw the distinction between accidental vs. essential properties (276). But Hale’s main argument for *kind-membership* hinges on *pure sortals* and their connection to the identity of objects (270). While *sortal predicates* in general represent kinds, *pure sortals* in particular for Hale capture that restricted class of properties that are not *merely*

semantic restrictions of other kinds (e.g., *man working for the Home Office* is a merely semantic restriction of *man*; whereas *human being* isn't a merely semantic restriction of *mammal*). Also, pure sortals apply to objects throughout the whole of their existence. Thereby, Hale points out that kind-membership indirectly "asserts, in effect, that each object falls under some pure sortal concept" (274). Thus, one might provide support for kind-membership by showing that the identity conditions of kind-members are captured by pure sortals.

Hale's twofold epistemology of essence raises several questions. The account of *a priori* knowledge of essence seems to presuppose that treating *a priori* knowledge of essence in terms of knowledge of meaning simplifies one's explanatory task. This is a familiar move in the epistemology of the *a priori*: reducing the *a priori* to the analytic is alleged to make it less mysterious, especially compared to accounts that appeal instead to special mental faculties like rational intuition. However, this strategy is controversial. Bonjour (1998) has offered extensive criticism of the attempt of reducing the *a priori* to the analytic, for several different conceptions of analyticity. Main issues for those attempts include implicit reliance on one's antecedent grasp of the truths of logic, as well as tacit appeal to rational insight. Indeed, for Bonjour, appeal to rational insight is inevitable to explain how *a priori* knowledge and justification might result from understanding of meaning.

Moreover, even somebody like Boghossian, who has devised what's probably the most promising strategy for explaining cases of the *a priori* in terms of analyticity (more precisely, *epistemic analyticity*, 1996), is cautious in claiming that knowledge or understanding of meaning is sufficient for *a priori* justification. Even in cases where understanding of meaning seems constitutive of *a priori* justification, Boghossian stresses that a proper account will need to rely on the existence of true bridge-principles connecting understanding and justification in the

appropriate way. And “It’s a non-trivial question in the theory of the *a priori* whether there are such bridge principles” (2020: 188). Indeed, Boghossian has also recently conceded that “one cannot escape appealing to intuitions in the theory of the *a priori*” (2020: 186). Substantive *normative* principles are main examples, as they can’t be merely encoded in the ingredient canonical normative concepts like in the case of analytic truths. If we can know *a priori* the true nature or essence of *right* and *wrong* at all, that must be via intuition not knowledge of meaning (2021).

With this in mind, one wonders *how* exactly *a priori* knowledge of essence is supposed to result solely from knowledge of meaning, in Hale’s account. First, granted that in such cases nominal and real definition coincide, how do we tell which cases have this feature? One should somehow trust that *all there is* to being a certain entity is captured by the nominal definition; but that might require some independent grasp or access to the real definition. Second, is knowledge of meaning really sufficient for knowledge of essence? Some examples of analytic truths seem problematic, e.g., *all cobs are male swans*; or, *all vixens are female foxes*. These truths involve biological kinds, whose essence we may only discover empirically.^{xi} You haven’t clarified *what being a cob is* by simply defining it as a male swan. Hence those analytic truths appear at best to provide a *nominal* definition not a real definition. The case of *spinster*, or *bachelor*, may seem more promising as those are social kinds that are importantly partly a result of our stipulations. But one might argue, *à la* Bonjour, that our knowledge of such truths actually depends on our grasp of the underlying logical truth that *All FGHs are F*, so knowledge of meaning isn’t strictly sufficient for the resulting knowledge. Even most basic cases involving the logical constants don’t seem immune from these concerns. We saw that knowing what ‘and’ means requires being disposed to infer in appropriate ways. But one might contend that that involves more than mere

knowledge of meaning; for one needs to “see” that those inferences are correct, i.e., have some independent grasp of the logical law itself. In sum, knowledge of meaning might only give us a partial account of *a priori* knowledge of essence. Some appeal to intuition or rational insight into the nature of things might be what’s missing in Hale’s account (for further discussion: Mallozzi ms).

Regarding Hale’s account of *a posteriori* knowledge of essence, a crucial question concerns the justification of the general principles of essence. To be fair, Hale is well aware of this (2013: 269). In the case of kind-membership, we saw that the principle largely relies on pure sortals. Wallner (2023) argues that the capacity of identifying and applying pure sortals requires itself essentialist information, so that knowledge of essence seems tacitly presupposed by the principle, rather than being achieved through it. A more general issue we might raise is whether one can identify some common ground for the principles, which may help us establish them and systematically guide us to knowledge of essence. An obvious candidate for a Neo-Aristotelian conception is *explanation* (more below), so it is somewhat surprising that Hale doesn’t explore this route.

Wallner (2023) has argued that both Lowe’s and Hale’s epistemologies of essence are *structurally incomplete*, namely incomplete with respect to the account of epistemic justification they propose. For Wallner, it might prove fruitful to turn to Husserl’s account of knowledge of essence by incorporating his method of eidetic variation as well as his commitment to intuitive awareness of universals. Incidentally, within the philosophy of science, Brown (1994) has also defended the use of intuition and thought-experiments for knowledge of universals, which for him include truths about the physical world. Postulating essential properties is itself an *a priori* assumption for Brown, though confirmed by the success of scientific theories. Within moral

epistemology, Bengson, Cuneo, and Shafer-Landau (2022) have stressed the importance of intuition-based approaches to knowledge of essence for the normative domains, as detailed in particular by eighteenth century moral philosopher Richard Price, and possibly for other domains, as well.

Finally, Jago (2021) shares important aspects with Hale's theory in that he holds a crucial connection between kind-concepts (compare Hale's *pure sortals*) and knowledge of essence. Though Jago argues for a "tendency" linking our knowledge that something is essentially *F* with our capacity for conceptualizing things under a kind *F*. For him, that's just part of how we refer to objects in thought and language more generally. Jago's externalist framework allegedly ensures that the tendency is reliable and safe from error.

Oderberg

Oderberg's (2007; 2011) account draws extensively from Aristotle's. Oderberg distinguishes essences from essential properties (or necessary accidents) as well as, of course, mere accidents. Essential properties *flow from* the essence, namely are *caused by* or *originate* in the essence. (The notion of causation at stake is Aristotelian *formal* causation, a unique notion which Oderberg stresses is "different from any other kind of causation" 2011:102). For example, *having a capacity for humor* is an essential property of humans, whereas *being a rational animal* is the essence of being human. The capacity for humor (along with many other essential features) is caused by or originates in the essence of being human; whereas being a rational animal constitutes being human or is the real definition of being human (which Oderberg understands in terms of *genus* and *differentia*).

But *what are* essences, exactly? For Oderberg, essence “consists of the parts or elements that constitute the thing as the kind of thing it is” (2011: 98). Those parts or elements are often improperly called “properties”; but, like Lowe, Oderberg contends that essence itself is not a bundle of properties: “What constitutes the essence are not properties at all” (Ibid.). An essence is instead a *principle of unity* or formal cause, which “keeps together” and unifies all the essential properties of a given entity. As Oderberg says with a slogan, “*essence explains unity*” (2007: 47). Without essences *qua* unifiers, we wouldn’t be able to answer the “unity problem” of how to account for the “unified repertoire of behaviors, operations, and functions indicative of a single, integral entity”, especially as it persists through change (45). Importantly, for Oderberg, essence cannot be a bundle of “privileged” properties, like it is suggested in the Locke-Kripke-Putnam tradition, for we would still have to address the unity problem of what holds those bundles together. Nor could essence be distinct from form, otherwise it would be totally extrinsic to the thing and dangerously similar to a *bare substratum*—namely, something that we don’t know what is but somehow plays the role of unifying or standing behind a thing’s qualities. (Compare Witt’s chapter on Unity, this volume).

Thus, given this metaphysical conception of essence, the relevant question for us becomes *how do we know the form or principle of unity an entity, as well as its essential properties?* Oderberg follows Locke and the subsequent tradition in criticizing apriorism about knowledge of essence, at least for actual essences and essences that themselves aren’t the object of *a priori* investigation (e.g. mathematics). Consider *essential properties* first. For Oderberg, we know them based on empirical observation. For example, in the case of natural kinds, although we must distinguish between essential properties *vs.* properties universally possessed by kind-members, the latter are “nearly always essential” (2007: 50). Thus, it’s methodologically fair to assume they are

essential based on empirical observation “in the absence of further argument or demonstration to the contrary” (Ibid.).

Still, empirical investigation alone won’t suffice for knowledge of essence. Against Elder, Oderberg denies that there is an “empirical test for essence” (52 ff. More below). Instead, Oderberg appeals to what seem to be “armchair” methods. Certain “intellectual judgments that are metaphysical in nature” are needed to establish the essence of a thing as well as the essential properties that flow from it. We use “reason and common experience” to determine when a given quality is part of the essence (51). This is a familiar procedure: one supposes counterfactually in imagination that the entity in question lacks a given quality and asks whether it would be coherent to conclude that the entity would continue to display its characteristic properties and behavior. If that’s the case, then the quality in question is not part of the essence. But if removing the quality would cause “a general disturbance or radical change” in the functions of the thing (Ibid.), then it is part of the essence (or flows from it). Also importantly, like Lowe, Oderberg stresses that we may not know the *complete* essence of a thing; or even not know it at all, while still being justified in ascribing it to the thing. (See Tahko 2018 for a comparison between Oderberg and Lowe’s accounts).

What about knowledge of essence itself *qua* form or principle of unity? Although “essence explains unity”, an abductive route seems out of the question for Oderberg. He remarks that this explanatory role is only *derivative* and the appeal to explanation must be made with caution (2007: 47). Instead, he invokes *a priori* metaphysical reasoning for identifying and classifying entities (based on *genera* and *species*), namely a fundamental grasp of ontological categories. “It is a metaphysical judgment that certain properties indicate that an object has a certain essence, i.e., that it has a substantial form that puts it into one category rather than another” (2007: 162).

At bottom, for Oderberg, that there *must be* a metaphysical principle of unity is something that “we can only deduce by a priori metaphysical reasoning” (2011: 97). In sum, a combination of *a priori* and empirical methods is needed to gain essentialist knowledge.

Oderberg’s account raises several questions. Lowe (2010) expressed concerns regarding, *inter alia*, his notion of real definition in terms of *genus* and *differentia*. Besides, we might expect naturalistically oriented metaphysicians to look with suspicion at the notion of essence *qua* substantial *form* or principle of unity, as well as at the notion of *formal causation* (admittedly, those are issues that Oderberg inherits from Aristotle). Focusing on the epistemology, a main issue seems to be how to tell the difference between parts or elements of the essence *vs.* essential properties that flow from it. Furthermore, Oderberg should address traditional concerns regarding the epistemic powers of imagination. How and to what extent is imagination and counterfactual reasoning a reliable guide to knowledge of essence and modal knowledge more broadly? (For an overview: Mallozzi Vaidya & Wallner 2021). Finally note that, following Mumford, Oderberg claims that in counterfactual reasoning we focus on a given object “as it is in *this* world” and on “how it would behave in *this* world were such and such a feature removed from it.” (51) But one wonders how that should yield knowledge of essence and necessary accidents, which by definition belong to an entity at all possible worlds.

Elder

Elder (2004) defends what he calls a “commonsense” ontology against those “austere” views according to which only the most fundamental entities posited by microphysics really exist. For Elder, ordinary objects like trees, tables, and human beings all exist “in ontological strictness”

(ix). Furthermore, they have essential properties by nature, which we can learn about empirically.

Essences for Elder come in *clusters* of properties. Some properties of an entity are ensured or required by the presence of other properties; vice-versa, if a certain property that is part of an essential nature is taken away, other properties will have to be absent, as well. Elder maintains that there is an *empirical test* for essences, the “test of flanking uniformities”, which we regularly use “without quite realizing it” (23). In the case of natural kinds, we can gain evidence that a given property *f* is essential to a kind *K* by looking at kinds that display some contrary properties, while being otherwise similar to *K*. One should “see whether, among the members of (what seem to be) natural kinds roughly similar to *Ks*, differing from *Ks* by possessing some one property or another contrary to *f*, there are uniformly found other properties contrasting with other properties uniformly possessed by *Ks*” (37). For example, we are “warranted to judge” that atomic number 79 is an essential property of gold because other physical elements, which have atomic numbers contrary to 79, also display other contrary properties such as melting point, specific gravity, etc. (Ibid). Importantly, the test is strictly empirical, as it “doesn’t require that we know—via a priori insight, or via armchair expression of our conventions of individuation—“template” truths about the kinds of kinds (physical elements, mineral formations, chemical compounds, etc.) into which nature’s specific kinds fall” (38).

Like Oderberg, Elder is also cautious regarding the connection between essence and explanation. Against a certain line of thought that traces back to Kripke, Elder doubts that “explanatory richness” is either a necessary or a sufficient condition for essentiality (4-5). In particular, Elder

rejects that causal explanation might cast light on essence. While he maintains that something must “hold together” the clusters of essential properties, he excludes that they have a single underlying cause (26). Rather, for Elder, what plays this unifying role are the *laws of nature* (26-27).

Here are some issues for Elder’s proposal. Oderberg (2007) wonders what exactly is meant by “rough similarity” among kinds, and whether that might lead to obvious errors in performing the test. Besides, he finds it problematic that the test requires that one observe “not merely that certain contrasting properties are absent when others are, but that they *must* be” (53). Rea (2002) argues that the test might single out properties that are only *necessary* conditions for membership in a particular natural kind, not truly essential properties. Elder considers Rea’s worry but replies that it rests on the mistaken assumption that “the objects that populate the world can lose membership in a given natural kind without ceasing to exist” (75-76). Kind-membership is instead “a life-and-death issue”, thus the test successfully identifies essential properties. But one might insist that the test might overachieve. For example, even though silver has a melting point that’s contrary to gold’s melting point, arguably silver might have had a different melting point while still being silver, say under very different environmental conditions. Perhaps melting point isn’t an essential feature of chemical elements, but the result of a combination of factors. Finally, one might wonder whether the test might even erroneously detect merely *accidental* properties for kind-membership. After all, nothing seems to preclude that those clusters of properties co-occur uniformly in kind-members merely due to random coincidence, not because they’re genuinely essential. Based on Elder’s test, it isn’t clear that we have a criterion to exclude such errors.

Note that the idea—dismissed by Elder—that the essence of an entity is what is responsible for many other features of the entity has been recently developed by Godman Mallozzi & Papineau (2020). For them, essences are special core properties that have distinctive explanatory powers in accounting for how things are—essences are *superexplanatory*. More precisely, the essence of an entity is what causes and explains many of that entity’s other (non-essential) properties. In the case of natural kinds, the atomic constitution of a chemical element, say silver, explains why all samples of silver consistently share a whole host of properties and behaviors, such as density, electrical and thermal conductivity, disposition to combine chemically, and so on. Atomic number is thus the essence or “nature” of silver because of its unique role in explaining all those features that all samples of silver exhibit. Mallozzi (2021) further argues that in such cases knowledge of essence relies on scientific investigation aimed at identifying what plays such a superexplanatory role for a kind.

Kment

Kment’s account of knowledge of essence (2021) also hinges on explanation. The account is an integral part of his theory of modal knowledge and is based on his own modal metaphysics (2014). For Kment, modal facts are partially grounded in what he calls “metaphysical laws”, which include essential truths. These truths state conditions for being a certain entity or for instantiating a certain property or relation and play a distinctive explanatory role. For example, it is an essential truth for Kment that all gold atoms have atomic number 79. This truth explains

why all and only atoms with atomic number 79 are gold atoms, as well as why a particular atom having atomic number 79 is an atom of gold.

Accordingly, for Kment (2021), we may acquire knowledge of these essential truths thanks to the distinctive role they play in both metaphysical and causal explanation. How do we do so? There are mainly two methods. First, *abductively*, via inference to the best explanation. Second, *a priori*, via conceptual or linguistic competence.

As to the first method, we may gain knowledge of essence via abductive inferences from facts that we know perceptually or *a priori*. Kment holds that identifying what causes or grounds some non-fundamental fact is an abductive process that crucially involves making assumptions about metaphysical laws, particularly essential truths. That's because such truths or real definitions serve as covering laws in particular cases. For example, according to our best explanation, the fact that my cup of coffee is hotter than your glass of iced tea is grounded in the fact that the mean molecular kinetic energy of the former is higher than that of the latter. The covering law that is assumed to hold here is the real definition of *being-hotter-than*: *one object is hotter than another iff the mean molecular kinetic energy of the former exceeds that of the latter*. Thus, we may establish essential truths via inference to the best explanation, given the supporting role they play for grounding and causal explanation.

However, one might worry that abductive inference is a shaky basis for knowledge of essence. It is often remarked that abduction is an *ampliative* type of reasoning, and the best explanation might not necessarily be a mark of truth. Abduction only warrants an inference to the *probable*, or *approximate* truth. Additionally, several hypotheses might exemplify comparable theoretical

virtues, which may prevent one from selecting one as the best explanation. Within Kment's account, that results in turn in being undecided between as many candidate essential truths.

As for the method of conceptual competence, Kment holds that competence with a term often requires at least implicit knowledge of (part or all) the real definition of the thing picked out by the term. For example, being competent with "vixen" requires knowing that all and only vixens instantiate the property of being female foxes, which is the real definition of vixen. Or in the case of modality, being competent with the notions of metaphysical necessity and possibility requires that one knows, at least tacitly, that their real definitions themselves essentially involve the metaphysical laws (similarly, Peacocke 1999). Thus for Kment competent speakers are "in a position to know" essential truths just in virtue of such competence. Conceptual knowledge is a further, *a priori* source of knowledge of essence. However, similar issues to those raised for Hale's account affect Kment's proposal, as well. For it is not clear how speakers may extract the relevant knowledge that's encoded in the ingredient terms.^{xii}

BIOGRAPHICAL NOTE

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RELATED TOPICS

- Modal Conceptions of Essence
- Non-Modal Conceptions of Essence
- Natural Kind Essentialism
- Essences of Individuals
- Quinean Anti-Essentialism
- Conventionalism
- Conferralism
- Contemporary (Analytic)
- Contemporary (Phenomenological)
- Laws and Explanation

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ENDNOTES

ⁱ Many of the questions raised in this chapter are discussed in Aristotle’s *Posterior Analytics*. Versions of the Aristotelian conception developed by Fine are also widespread throughout antiquity, the medieval period, and the early modern era. See the corresponding entries by Malink, Frost, and Schechtman in this volume.

ⁱⁱ In conversation.

ⁱⁱⁱ Several philosophers have objected to Fine’s views. Some arguments target Fine’s counterexamples. Others question the notion of *real definition*. Why are the features listed in a real definition *necessary* features of the object? Mackie (2020) remarks that “it looks as if the account of essence in terms of real definition is intended to deliver a modal rabbit out of a non-modal hat. And I don’t see how this can be done”. Also, how can we identify real definitions? For Gorman (2005), Fine’s account presupposes that we already know what the real definitions of things are. (See the chapter on Modal Conceptions of Essence, Torza this volume).

^{iv} More precisely, we can distinguish between a truth that simply registers the essence of some entity without mentioning that that’s the essence of the entity—call it an “essential truth” (e.g., ‘water is H₂O’) *vs.* a truth that explicitly reports an *essence fact*—call it an “essence truth” (e.g., ‘water is essentially H₂O’). I’m following Bengson et al. 2023’s terminology here. Raven 2020 has coined a similar “status/report” distinction.

^v Thanks to John Bengson for raising this issue.

^{vi} Obviously we can’t enter the Kripkean exegesis here, but note that many disagree with the modalist interpretation, including Fine himself (in conversation) and, for what is worth, myself. See also Fine (2022) and Robertson Ishii’s chapter, this volume.

^{vii} See also Glazier 2017 for an alternative proposal.

^{viii} For epistemic readings of metaphysical explanation see e.g. Thompson (2016) and Maurin (2019).

^{ix} Note that for the modalist the consequent of the conditional is an essential truth (that registers the essence of the thing without explicitly saying so); but not so for the non-modalist. However, the antecedent may be regarded as an essential truth on both views.

^x The dichotomy between *a priori vs. a posteriori* knowledge of essence might depend to an extent on the types of entities at stake. Do different kinds of objects have different types of essence? Compare e.g., the essence of water, or zebras, *vs.* the essence of a circle. If so, that might ground corresponding differences in epistemic methods involved with discovering such essences. See Roca-Royes 2017, 2018 for two different epistemologies for *abstracta vs. concreta*.

^{xi} An alternative account of essence truths involving sortal classifications is given in Fine (2005).

^{xii} I'm grateful to John Bengson, Kathrin Koslicki, Mike Raven, and Michael Wallner for helpful comments on an earlier version of this chapter.