thinker's achieving non-empirical knowledge of her own thoughts. (In the Cartesian demon scenario, the intuition is that, whatever other evils he is capable of, the demon *cannot* so arrange things as to ensure that I fail to achieve non-empirical knowledge of one of my own thoughts.) Yet it is precisely this key intuition that Brown's position surrenders.

These, then, are my reasons for preferring the traditional answer to the achievement problem over Brown's proposed alternative.

I want to conclude by noting an area where I agree in outline with the position Brown develops, yet where I think much more work needs to be done before we can conclude (as Brown does) that AI's implications in this domain are acceptable. The domain in question is that of reasoning. Brown defends the view, first presented by Boghossian, that AI undermines a subject's ability to grasp *a priori* the logical properties of her thoughts; only where Boghossian regards such a result as undermining AI, Brown argues that we should simply accept the implication that we lack such a grasp. Now, if the only relevant issues here were those pertaining to the *a priority* of our logical abilities and the norms of rationality, then I might be prepared to concede that Brown has made out a successful case for endorsing AI's implications regarding reasoning (rather than using these implications as a reason to conclude against AI). But these are not the only relevant issues here. Consider: a thinker often justifies her beliefs by producing deductive arguments for them, arguments whose premises are other beliefs she has (and which she takes to be justified). But if, as Brown concedes, AI undermines a subject's ability to tell *a priori* whether, e.g., a given argument is valid, then AI thereby undermines her ability to tell *a priori* whether her belief in the conclusion of a given deductive argument is a belief whose content *follows from* the premises. And if she can't tell that *a priori*, then she can't tell *a priori* whether she is justified in believing the conclusion if she is justified in believing the premises. Unfortunately, such a result appears to jeopardize the utility of deductive reasoning as a tool for the reflective extension of our corpus of justified belief! Since nothing in Brown's discussion speaks to *this* issue, I conclude that, from what Brown has to say on the matter here, it is premature to say that AI's implications regarding reasoning are ultimately acceptable.

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Real Natures and Familiar Objects. CRAWFORD ELDER. Cambridge, MA: The MIT Press, 2004. Pp. xii, 204.

Crawford Elder's *Real Natures and Familiar Objects* promises to give naturalistically inclined metaphysicians reason to accept an ontology that includes many

common sense objects, including persons, organisms, and at least many artifacts, behaviors, customs, and so on. This is a brave book, running against the current of trends towards austerity in ontology, tackling centuries old problems about how modal facts may be empirically discovered, and defending a common sense ontology from a strictly naturalistic approach rather than via traditional appeals to ordinary language or common sense.

The overall argument begins in Part I, where Elder defends the claim that objects are real only if they have 'real natures', where this is a matter of having essential properties whose status as essential is mind-independent.[1] Such 'real natures', he argues, must be purely empirically discoverable, and so he must face up to the classic empiricist challenge: how can modal facts be discovered merely through observation? In answer, he draws out an empirical test for possessing a real nature based on a so-called 'test of flanking uniformities': If we find that objects of kind K are uniformly characterized by properties in a certain cluster, say, f, g, and h; and discover that things otherwise 'generically akin' to Ks, but bearing a contrary property f′, also have contrary properties g′ and h′, then we have reason to say that Ks have f essentially. In short, it is not the presence or absence of a *given* property that shows it to be essential, but rather the ways in which properties cluster, so that changing one means changing several, that is the crucial test.

In Part III Elder applies the test of flanking uniformities in an attempt to show that members of 'copied kinds' (including many artifacts, customs, language, etc.) have real natures. Their natures are supposed to be comprised of a cluster of properties, centered on three shared features: 1) shape or qualitative makeup, 2) proper function (members are produced by a mechanism that copies them from previous similarly shaped members as a consequence of the previous members' performance of certain functions), and 3) historically proper placement. We can see that these form a core *essential* nature by seeing that they cluster together in such a way that whenever two of them are found together, the third is there as well, and whenever one departs, one (or both) of the other two depart (139-140). In most cases, many other properties cluster around this central core as well, making a richer, more interesting nature of the kind available for empirical discovery. Since they are thus shown to have real natures, he argues, we have reason to accept the existence of this broad range of common sense objects.

The intervening Part II is directed not to arguing *for* a common sense ontology, but rather to defending it against some prominent objections. Here there is an interesting and novel discussion of causal redundancy arguments, as well as a briefer treatment of the problems of vagueness and associated sorites

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[1] "Objects that have mind-independent existences—careers that begin and end at particular points, independently of how we think about those objects—must have essential properties whose status as essential is mind-independent" (21).

arguments. Given space constraints, however, I will not discuss these below, but will instead focus on assessing the main argument for a (qualified) common sense ontology.

I will argue that there are strong reasons for doubting that the book fulfills its promise to defend "with qualifications, the ontology of common sense" (1), as most of our familiar artifacts in fact don't pass the test of flanking uniformities, and so cannot be defended by that route. Nonetheless, I will argue, common sense ontologists need not despair, for we should also reject Elder's arguments that real objects must possess purely empirically detectable natures.

Elder acknowledges that his resulting ontology of members of copied kinds doesn't include merely decorative items for personal ornamentation (such as neckties and nose rings). For these don't have a characteristic shape the replication of which is due to something previous members could do in virtue of that shape (158), and so must be treated as 'mere projections'. Worse still is the situation for artifacts of quite 'general' kinds, such as tables and chairs. For, as Elder again acknowledges, "kinds as broad as chairs and tables can barely be said to have any one 'shape' or qualitative character in common at all" (149), and so shape cannot be part of a cluster of essential properties at the core of the kind's discoverable nature.

But the problem is not limited to members of decorative and highly general kinds. Practical artifacts like paperclips and corkscrews ought to present something like the best-case scenarios for treating artifacts as members of copied kinds, but even these lack a consistent shape.[2] Paperclips may be elongated ovals, triangles, rectangles, or of any of a great many other shapes, colors, and materials; and a corkscrew may be a wooden cylinder with a perpindicular metal spiral attached, a flexible two-pronged puller, an air pump, etc., all without any variation in historically proper placement or proper function. In cases like these, it is simply not the case that "the absence of that third property [shape] would require the absence of one or another of the first two properties" (140), and so these can't be treated as members of Elder's copied kinds. But if there are no tables or chairs, paperclips or corkscrews, one begins to wonder what *is* preserved, and just how much of a common sense ontology this is.

Elder's quick answer is to say that what is preserved is more narrowly construed artifactual kinds such as the 1957-design Eames desk chair, or presumably the gem paperclip, or the 'jumping jack' corkscrew (148-9). But the very presence of these widely varying design kinds for desk chairs, corkscrews, paperclips, and the like (which makes it implausible to defend the existence of very general artifactual kinds) seems to demonstrate that shape regularly fails to cluster in this way with function and historically proper placement. Even the

[2] See Henry Petroski *The Evolution of Useful Things* (New York: Vintage, 1992) for detailed arguments that form does not follow function in the evolution of our artifactual kinds. The paperclip example is his.

Eames desk chair will share proper function and placement with other desk chairs that vary widely in shape, showing that shape *may* vary independently from the latter two, and so undermining the claim that there is a copied kind here at all—even if we try to make it specific. To say that, where the shape does so vary, we don't have an *Eames (1957)* desk chair (since that very shape is an essential feature of that kind) is not a response available to Elder, since for him we must *discover* where clustering uniformities hold to discover what is essential, not (e.g.) infer that shape is essential from the fact that "Eames (1957) desk chair" is a design-specifying term.[3]

It seems then that neither general nor many specific artifactual kinds can be identified with copied kinds, and so their members cannot be shown to have real natures by the test of flanking uniformities. But then Elder must renounce all claims to offer even a *qualified* ontology of artifacts and other common sense objects; instead he seems to give us a replacement ontology of biological and pseudo-biological kinds.

But why think that, for tables and chairs to really exist, they must have an essence that's purely empirically discoverable via something like the test of flanking uniformities? Elder holds that realism about any object whatsoever requires accepting that it has essential properties whose status as essential is mind-independent (21). Moreover, he argues, real natures in this sense must be purely empirically discoverable: "we must learn from nature where there are real necessities" (xi). For he rejects the position (prominently defended by Alan Sidelle) that the most *general* modal principles, including the most basic identity and persistence conditions, are analytic. On such views basic modal truths (e.g., that whatever a human being's actual biological origin is, it necessarily has that origin) are discoverable by way of conceptual or linguistic analysis, although it may require empirical research to fill in the details (e.g., that Margaret Truman is Bess Truman's daughter) and yield knowledge of detailed modal claims (e.g., that Margaret is necessarily Bess's daughter).[4]

Elder follows Sidelle in calling this view 'modal conventionalism', but argues vigorously against it.[5] First, he takes it to lead inevitably to anti-realism

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[3] A further problem arises with treating the kind Eames (1957) desk chair as a copied kind: Clearly, according to ordinary use and application of the term, this is at least in part a historical kind. If something is to be an Eames (1957) desk chair, it must be modeled after the design by Charles Eames, created in his factory or its licensed heirs, etc. If I place an ad on Ebay to sell an Eames (1957) desk chair but am selling a chair of similar design unauthorizedly produced by a factory in China, I may be sued. So Elder's model of copied kinds also cannot account for the historical element in many artifactual and common sense concepts—indeed Elder explicitly denies that such historical factors as origin may play any role in membership in real kinds (155-6).

[4] See Sidelle, Alan, *Necessity, Essence and Individuation: A Defense of Conventionalism* Ithaca, NY: Cornell University Press, 1989: 75–76.

[5] 'Conventionalism' is a rather unfortunate name, since it wrongly suggests that modal facts depend on the obtaining of conventions (see below).

about objects. For he takes it to entail that modal facts, including facts about what an object could and could not survive, obtain only in virtue of our adopting certain linguistic conventions. But then facts about when an object comes into or goes out of existence must also be mind-dependent, leaving us with the conclusion that objects "only have the shadow reality of a mental (or linguistic) projection" (11). Worse still, he claims that the view leads to paradox. For if the most basic criteria of individuation are based on our linguistic conventions, he argues, the fact that there are two objects rather than one in a given situation must also be mind-dependent. But then "the obtaining in the world of our conventions of individuation is [according to that view] logically prior to the existence of *us* as a plurality—and for that matter is logically prior to the conventions' being *conventions*, plural. Yet surely it must *also* be true that our *existing* in the world is logically prior to our having any particular conventions" (2004, 17).

This line of reasoning, however, seems to be based in a common misunderstanding about this view of modality.[6] If we hold that the most basic modal truths are analytic (and the rest derived from these plus empirical facts), then the most basic claims about identity and persistence conditions need no truthmakers at all, and so are not 'based on linguistic conventions' in the sense of requiring the existence of linguistic conventions as truthmakers. Derivative claims about, e.g., when a given individual ceases to exist may rely on the truth of the basic modal claim and various empirical facts, but neither of these requires for its truth that there exist conventions. So it is not the case that on this view facts about when an object comes into or goes out of existence can obtain only if there are minds or linguistic conventions, and we can avoid the objectual anti-realist conclusion.

The paradox is similarly avoidable. Claims that there are two people here (since Mary can't be identical to Jane in virtue of their having different origins) may rely on the truth of an analytic modal claim (about basic individuative criteria for people) and of empirical claims (about Mary's and Jane's particular origins), but neither of these requires the existence of conventions as truthmakers. So it is not the case that, on this view, there must be conventions for it to be a fact that there are two people here; our conventions are 'logically prior' to objects, including people, *only* in the sense that our conventions fix the meanings of our terms, thereby establishing what it would take for there to be objects of various sorts (including people), and what the most basic conditions of identity would be for the things (if any) they refer to. By contrast, people are 'logically prior' to conventions in the sense that

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[6] In Elder's defense, Sidelle (op. cit.) like Elder, takes his view to entail objectual anti-realism, as does another critic of the view, Michael Rea (in *World Without Design: The Ontological Consequences of Naturalism*. Oxford: Clarendon Press, 2002). I have argued at length elsewhere (*Ordinary Objects*. New York: Oxford University Press, 2007, Chapter 3) that it does not.

conventions cannot exist without people, and claims about the existence of conventions do require people among their truth-makers.

So I think Elder is mistaken to think that this view of modality leads to anti-realism about objects and to paradoxical conclusions. But in that case we have no reason to think that a real object must have an essence that's discoverable purely empirically, and so the fact that common sense objects mostly fail to pass the test of flanking uniformities is no knock against them. As a result, the common sense ontologist may rest easy even if the arguments of Part III fail, concluding that the best way to defend familiar objects may not be to claim that they have purely empirically discoverable natures, but rather to reject the validity of this criterion.

But whether or not its attempt to defend a roughly common sense ontology using a naturalistic approach to modality ultimately succeeds, there is much to admire in *Real Natures and Familiar Objects*. It is a concise, clearly written and original study that stakes out important new territory. It deserves careful attention by naturalists, who may find the empirical test for modality of particular interest; by austere ontologists with naturalistic sympathies, who may find themselves challenged to accepting a broader ontology; and by defenders of a common sense ontology, who may find aid and comfort in its response to causal redundancy arguments and arguments against austere ontologies. All readers will no doubt find much to reflect on about the role of our understanding of modality in debates about common sense ontology.

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On Disgust. AUREL KOLNOI Edited, and with an Introduction by BARRY SMITH and CAROLYN KORSMEYER. Chicago and LaSalle, MIT Press, Ill.: Open Court, 2004. Pp. viii, 120.

Contemporary analytic philosophers of emotion rarely refer to the work of early twentieth-century phenomenologists. But the phenomenological aspects of emotion are central to several of the most prominent issues in that literature, including the nature of emotion-dependent properties, and the appropriate role of emotions in moral and political life. Consequently, we might well profit from the insights of those who have honed their powers of phenomenological introspection and put them to the task of analyzing what it is like to have an emotional response. Reading Aurel Kolnai's essays on disgust would be an excellent place to start.

On Disgust contains two essays by Kolnai—"Disgust" and "The Standard Modes of Aversion: Fear, Disgust and Hatred"—as well as an excellent introduction to them written by its editors, Barry Smith and Carolyn Korsmeyer.