

The Double Lives of Objects: An Essay in the Metaphysics of the Ordinary World, by Thomas Sattig. Oxford: Oxford University Press, 2015, 288 pages, ISBN 9780199683017 (hbk).

In *The Double Lives of Objects* Thomas Sattig defends an original and highly interesting account of ordinary objects like mountains, oaks, statues and people: *perspectival hylomorphism*. The account has a metaphysical part, *(quasi)-hylomorphism*, and a semantic part, *perspectivalism*. The author situates the account somewhere in between the two prevailing theories, *classical mereology* and *Aristotelian hylomorphism*, and argues that it is better placed than its contenders to preserve our common-sense conception of ordinary objects, offering a unified and compatibilist solution to a range of problems that challenge this view.

The structure of the book is clear: first, the basics of the theory are developed (chapters 1 and 2), and then the theory is extended and refined through its application to a series of issues that threaten our common-sense view of ordinary objects (chapters 3-8). Each chapter in this second part can be read independently of the others.

Let me outline Sattig's theory and stress some points I believe deserve special attention and further discussion.

Sattig presents his account as a fundamentally classical-mereological account with an Aristotelian *twist*. Like classical mereology, it understands *complex material objects* as mereological sums of smaller material objects but, against this view, it affirms that ordinary objects are not just material objects. On the other hand, like Aristotelian hylomorphism, it distinguishes between an ordinary object's *matter* and *form*, but it understands forms very differently.

Sattig's *perspectival hylomorphism* views *ordinary objects* as *compounds* of *material objects* and *K-paths*. Let us see what this means.

Sattig understands *material objects* in accordance with classical mereology, of which he presents several versions (depending on whether *temporal parts* are accepted or not) and claims that his framework can be developed using any of them. However, he mainly uses the three-dimensionalist version in which material objects cannot change their parts over time (this will be important). Accordingly, I will restrict myself here to this version. He also emphasizes that material objects have non-derivative spatiotemporal locations and

physical properties.

Now, let us see what *K-paths* are. We need to introduce several notions.

First, each kind K has associated a certain qualitative content, Φ^K , shared by all its instances (for example, for the kind *table* it mainly comprises functional properties).

Second, Φ^K is instantiated by material objects. Suppose that a material object a instantiates Φ^K , and suppose that a 's being ψ_1 , a 's being ψ_2 , ... and a 's being ψ_n jointly ground a 's being Φ^K . Then we say that this plurality of properties $\psi_1, \psi_2, \dots, \psi_n$ completely realizes K .

Third, for any kind K there is a range of properties that can meaningfully be ascribed to K s. They constitute its *sphere of discourse*.

Now we can characterize a *K-state* of a material object. For any kind K , a *K-state* of a material object is a complex, conjunctive, fact about the material object that obtains at a particular time. More precisely, a *K-state* (for some kind K) of a material object a , at a time t , contains two types of qualitative profile:

- (1) The *K-meaningful intrinsic profile* of a at t . This contains:
The maximal conjunction of the facts that a exists at t , that a has α_1 at t , ..., that a has α_n at t , such that (i) each α_i is an intrinsic qualitative property of a , and (ii) each α_i falls in the sphere of discourse of K .
- (2) The *K-realization profile* of a at t . This is constituted by two types of fact.
 - (2.1) The maximal conjunction of the facts that a has ψ_1 at t , ..., that a has ψ_n at t , such that properties ψ_1, \dots, ψ_n together completely realize K (i.e., the maximal conjunction of the facts about a that jointly ground a 's being Φ^K).
 - (2.2) The maximal conjunction of the facts that ψ_1 partly realizes K , ..., that ψ_n partly realizes K .

(This last clause is crucial to the solution of the *grounding problem*.)

We can now introduce the notion of a *K-path*. Intuitively, whereas a *K-state* is the imprint (as Sattig says) of a kind K on a material object

at a particular time, a *K*-path is a series of imprints of *K* over time. Intuitively, a *K*-path is the life of a *K*.

More precisely, a *K*-path is a maximal series of *K*-states unified by *K*-continuity, *K*-connectedness and lawful causal dependence.

An important characteristic of *K*-paths is that they may have distinct material objects as subjects (remember that material objects do not change their parts over time). On the other hand, a material object may be a subject of distinct *K*-paths, even of distinct kinds.

Finally, Sattig states that an *ordinary object* is a transcategorial mereological sum of a material object and a *K*-path that has the material object as one subject (remember that a *K*-path can have more than one subject). Sattig calls them 'compounds'. Analogously to sums, the identity conditions of compounds just depend on the compounds' parts, irrespective of what these are and of how they are arranged.

Let me highlight a couple of consequences. First, this account yields a plenitudinous ontology. Just one example: consider a particular *Table*-path, *i*, and suppose that *i* has distinct material objects a_1 , a_2 , a_3 as subjects. Then, we have three different tables: the compound of a_1 and *i*, the compound of a_2 and *i*, and the compound of a_3 and *i*. Second, and this is a crucial aspect of Sattig's proposal, the qualitative profile of an ordinary object's material object (its *matter*) and the qualitative profile of the same object's *K*-path (its *form*) may diverge.

After presenting the metaphysical part of his account, Sattig compares it with its rivals. He views the discrepancy with regard to classical-mereological accounts as not being metaphysically substantive, just a metaphysical disagreement about the nature of some derivative objects. However, the discrepancy with Aristotelian accounts is, Sattig affirms, metaphysically substantive. For example, Aristotelian forms play an object-structuring and an object-generating role. This is not the case for *K*-paths.

Now, let me summarize Sattig's criticism of Aristotelian hylomorphism. He claims that the nature of its primitive *structuring composition operations* and their associated forms is mysterious: how can they be sensitive to particular, high-level kinds of objects and arrangements? For example, what explains the relevance to the application of a composition operation that five objects are such that

four of them are legs and the other a top and that they are arranged tablewise? In Sattig's opinion:

Generating a new object is a metaphysically robust job. When a mechanism with this job is tuned to specific, high-level properties and relations, we expect an explanation of the mechanism in more basic terms [...] For how can something this fundamental be sensitive to something this derivative? (10)

I have some doubts about this criticism. Before explaining them, let me say that, for reasons of space, I can only present them briefly. A fuller development remains a task for another occasion.

My concern about Sattig's criticism is that his account seems to appeal to (in this case) a relation relevantly similar to Aristotelian composition operations: the relation of *subjecthood* between material objects and *K*-paths.

Suppose that the qualitative content of the sortal *table* states (I am simplifying) that tables have four legs and a top arranged tablewise.

Broadly speaking, according to the Aristotelian structuring composition operation associated with the sortal *table*, in order for a table to exist there have to be four legs and a top arranged tablewise.

Now, this seems to be relevantly similar to what happens in Sattig's framework. Broadly speaking, in order for a material object to be the subject of a *Table*-path it has to have proper material parts which are the subjects of four *Leg*-paths and one *Top*-path and it has to instantiate the tablewise arrangement (further conditions are required, but they are not directly relevant here).

It is true that in the case of Aristotelian accounts the successful application of the relevant structuring composition operation implies the existence of a table, and in the case of Sattig's account we still need to sum the material object and the *Table*-path to obtain a table. However, that the material object and the *Table*-path stand in the relation of subjecthood is a pre-requisite for this sum to result in the compound that is the table. Is this difference so decisive as to see Aristotelian composition operations as suspicious and mysterious, but not the relation of subjecthood? It would be interesting to know more about this relation in general and how it compares to Aristotelian composition operations.

After presenting q-hylomorphism Sattig introduces *perspectivalism*, a metaphysical semantics of the statements expressing our com-

mon-sense conception of objects. Sattig elaborates it in the form of a truth-theory stated in terms of q-hylomorphism.

First, he defends that we might adopt three different, unconnected, perspectives on ordinary objects: two common-sense perspectives, and the *absolute perspective* of fundamental metaphysics (which is not accessible from common sense). One of the perspectives of common sense is the *sortal-sensitive perspective* from which we represent ordinary objects in manners that are sensitive to the kinds to which they appertain. The other is the *sortal-abstract perspective* from which we represent ordinary objects in primarily spatiotemporal terms, irrespective of the kind to which they belong. From this perspective, for example, it is a platitude that (a) an object has a continuous spatiotemporal path, or that (b) there cannot be different objects at the same place at the same time, or that (c) an object cannot cease to exist in virtue of merely extrinsic causes. Sattig adds that this perspective is *fragmented and amorphous*, providing at most a partial principle of individuation. One of the examples Sattig uses to show this is the following: imagine a brick wall abstracting from all features making it a brick wall. Suppose one more brick is added. Does it merely receive an external attachment or does it increase its size? Sattig claims that spatiotemporal continuity is compatible with both options: *the object to which a merely external thing is added*, but also *the object which increases its size*, have a spatiotemporally continuous path.

Sattig offers the following reason for differentiating between the two common-sense perspectives. Psychological research indicates that infants represent objects in a primarily spatiotemporal way. However, adults seem to represent objects (also) as appertaining to sortals. Now, the most plausible explanation of this evolution is that, in fact, infants' object representation principles continue to be active in adults, and are the basis of common-sense platitudes like (a)-(c). After this, Sattig adds: given that these underlying principles are sortal-abstract (here he equates *sortal-abstract* with *spatiotemporal*, but this is the issue in question, as we will see), (a)-(c) should be seen as sortal-abstract, as well. This is a good reason, Sattig affirms, for differentiating between the two common-sense perspectives.

I have some doubts about Sattig's reasoning (as I said in the above case, I can only present them briefly here, and a fuller development remains a task for another occasion). The data from psychological

research he provides in the book (i.e., that infants mainly use spatiotemporal principles to individuate objects) also seem compatible with the thesis that there is just one human perspective on ordinary objects which is built up over the years: infants' spatiotemporal principles can be seen as the first step in the construction of a far more complex, but unique, sortal-sensitive, perspective. These principles would then also be part of the sortal perspective of adult human beings.

Why should we prefer Sattig's proposal to one that accepts a unique perspective which develops step by step over the years?

Sattig emphasizes at several places that these principles seem to apply to all ordinary objects independently of the specific properties that make them chests of drawers, roses, mountains or dogs. They would be, then, general sortal-abstract principles. But this does not seem to me to be as clear as he claims. Intuitively, a tree, a person or a table is a tree, a person or a table because (apart from other requirements) it obeys principles of the sort of (a)-(c). Intuitively, I would say that a table is a table, in part, because, for example, it cannot jump between distant places from one moment to the next and it cannot cease to exist for purely extrinsic causes. Moreover, that these principles apply to all ordinary objects might just mean that they are common to all sorts.

Now, Sattig's next step is to defend that to a type of perspective there corresponds a *mode of predication*. By adopting the sortal-sensitive perspective, we employ the *formal* mode of predication. By adopting the sortal-abstract perspective, we employ the *material* mode of predication. By adopting the absolute perspective, metaphysicians employ the *absolute* mode of predication. Formal descriptions track properties contained in an ordinary object's *K*-path, whereas material descriptions track properties instantiated by an ordinary object's material object. For example, when considering a table's formal persistence (from the sortal-sensitive perspective) we track the temporal trajectory included in its *Table*-path; however, when we consider the material persistence (from the sortal-abstract perspective) of the same table we track the temporal trajectory of its material object.

Sattig emphasizes that the key feature of perspectival hylomorphism is that it allows *perspectival divergence* based on *hylomorphic di-*

vergence (ordinary objects live double lives!): an ordinary object may have different profiles from different perspectives because the profile of its material object and the profile of its *K*-path may take different directions. For example: suppose that material object a_1 exists at t_1 but not at t_2 and that material object a_2 exists at t_2 . Moreover, suppose that a *Table*-path i includes the fact that a_1 exists at t_1 and that a_2 exists at t_2 . Then, among others, there is table o , the compound of a_1 and i . Now, when we say, from the sortal-sensitive perspective, using the formal mode of predication, that ' o exists at t_2 ' we are saying something true, and when we say, from the sortal-abstract perspective, using the material mode of predication, that ' o does not exist at t_2 ' we are also saying something true.

I have some doubts related to the two following theses that Sattig proposes: the thesis that the sortal-abstract perspective is, in Sattig's words, fragmented and amorphous and the thesis that the mode of predication associated with this sortal-abstract perspective, the material mode of predication, tracks the properties of ordinary objects' material components, i.e., of material objects. As in the above cases I can only present my doubts in outline here: it is not clear to me how much of this sortal-abstract perspective of common sense Sattig wants to vindicate. From what he says in the book the answer seems to be "as much as possible". However, given the two theses mentioned, this does not seem an easy task. Let me just present one reason: on the one hand, our material predications (made from the sortal-abstract perspective) about the persistence of an object through time will show that our sortal-abstract perspective is fragmented and does not include any determinate, precise, persistence conditions of objects. On the other hand, the persistence conditions of material objects, in terms of which these sentences will be evaluated as true or false, are determinate, as they are the persistence conditions of mereological sums. In fact, this tension can be exemplified using the cases Sattig presents to illustrate the indeterminacy of the sortal-abstract perspective. I will use the one I have reproduced above: the example of the brick wall to which one further brick is attached. From the sortal-abstract perspective we would describe the case as one in which it is indeterminate whether the brick wall has something externally attached to it or is increasing in size. However, the sentences we would use in the description would be evaluated

in terms of what happens to the material object that is the material component of the brick wall. As material objects cannot change their parts, this will determine that the brick wall does not change in size.

In the remaining chapters Sattig defends his theory, arguing that perspectival hylomorphism offers the best solution to a series of problems that threaten our conception of ordinary objects. I do not have space here to discuss his specific solutions to every specific problem. However, I would like at least to point out one recurring worry I have with Sattig's characterization throughout the chapters of the sortal-sensitive perspective of common sense. I doubt that some of the theses that he claims to be in accordance with such a perspective are really so: for example, the claim that two objects of the same sort can coincide.

In chapters 3 and 4 Sattig discusses *paradoxes of coincidence*, *cases of fission* and *cases of intermittent existence*. He argues that the theses seemingly leading to paradoxical results express, in fact, different perspectives (some the sortal-sensitive perspective, some the sortal-abstract perspective) and therefore, contrary to first appearances, they are compatible.

In chapter 5 the framework is refined and applied to modal issues. In a nutshell, material objects exist in different possible worlds whereas *K*-paths are worldbound, having *counterparts* in other possible worlds. *Ordinary objects* are compounds of transworld material objects and worldbound *K*-paths. Moreover, formal *de re* modal attributions are understood in terms of counterparts of the objects' *K*-paths, and material *de re* modal attributions in terms of the objects' material components.

In chapter 6 Sattig states that friends of coincidence have to accept that the actual world is *indeterministic* on *a priori*, mundane grounds; and this is absurd. Sattig's solution: questions of determinism concern just qualitative properties of material objects.

Chapter 7 offers an account of certain *indeterminate* properties of objects. Sattig introduces *multiple superimposed individual forms* and analyses indeterminacy as formal indeterminacy.

In the last chapter Sattig gives an account of certain puzzling relativistic properties of ordinary objects appealing to different, compatible, perspectives we may take on these objects.

Let me finish by saying that I believe Sattig does an excellent job

in the search for a much wanted theory that combines the virtues of opposing theories. I cannot recommend this book highly enough.

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