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CRITICAL NOTICE

Hylomorphism without forms? A critical notice of Simon Evnine's *Making Objects and Events*

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ABSTRACT

Simon Evnine's *Making Objects and Events: A Hylomorphic Theory of Artifacts* develops *amorphic hylomorphism*. I critically discuss three of its main themes. One theme is its attempt to do the work of form without forms. A second theme is the requirement that hylomorphs have 'metabolisms at work'. A third theme is the use of artifacts as the paradigms for hylomorphs. I will raise some criticisms of each of these themes. Although the themes might at first appear disconnected, I believe the third underwrites the first two. So the criticisms of the third theme also bear on the rest.

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1. Introduction

The primary aim of Simon Evnine's *Making Objects and Events: A Hylomorphic Theory of Artifacts, Actions, and Organisms* is to develop *amorphic hylomorphism* (Evnine 2016). This is a novel twist on hylomorphism. All brands of hylomorphism recognize hylomorphic entities. These entities, *hylomorphs*, have matter but are not just their matter. Traditional ('morphic') hylomorphism accounts for this by taking hylomorphs to be compounds of matter and form (Fine 1999; Koslicki 2008). But Evnine's non-traditional ('amorphic') hylomorphism accounts for this without forms. Artifacts provide the paradigm for how this is to be done. Artifacts are 'formed' by an 'impress of mind on matter'. This makes artifacts ideal (but still real). The approach is extended to other cases of mind impressed on matter, including artworks and actions. Organisms are not formed by an impress of mind on matter. But they are formed by evolutionary forces in an analogous way. Artifacts, actions, and organisms cover much of what we ordinarily take to exist. But not all of it. Were there to be any natural non-artifactual objects, such

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as mountains, they would have to be hylomorphs. But mountains and other natural non-artifactual objects are not formed by impresses of mind on matter or by evolutionary forces. So, according to Evnine, none of them exist.

Evnine's rich book is an excellent contribution to metaphysics. Anyone interested in the metaphysics of hylomorphism, artifacts, objects, organisms, and actions will benefit from reading it. There's far too much in it to discuss here in comprehensive detail. So I will restrict my attention in two ways.

The first restriction is to a limited range of the intended application of Evnine's theory. He intends the theory to apply to artifacts, organisms, and actions. The applications to organisms and actions are both novel and interesting. I will tend to focus on artifacts, largely leaving organisms and actions aside.[1]

The second restriction is to just three of the central themes of Evnine's approach. One theme is the attempt to do the work of form without forms (§§1–2). A second theme is the requirement that hylomorphs have 'metabolisms at work' (§3). A third theme is the use of artifacts as the paradigms for hylomorphs (§§4–6).

Each of these themes, taken on its own, is interesting and provocative. Together they combine into an admirably original and formidable hylomorphic approach. Nevertheless, I will raise criticisms of each theme. At first glance, the themes might appear somewhat disconnected. But my impression is that the third theme underwrites the first two. So the criticisms of the third theme might then indirectly bear on the rest as well.

2. Amorphic hylomorphism

One might have thought that any genuine brand of hylomorphism would involve *forms*. Not so, according to Evnine. Whereas *morphic* hylomorphism appeals to forms, Evnine's *amorphic* hylomorphism dispenses with them.

Although Evnine recognizes the oxymoronic appearance of 'amorphic hylomorphism', he maintains that it is not a genuine oxymoron. Evnine claims that amorphic hylomorphism counts as a genuine version of hylomorphism. This is because it still satisfies a condition sufficient for hylomorphism (3):[2]

> **HYL** Some things stand in the relation of *being the matter of* to other things and this relation (the matter relation) is irreflexive and asymmetric.

This condition is meant to capture the idea that hylomorphic entities have matter but are more than just their matter. Suppose some things stand in the irreflexive, asymmetric *being the matter of* relation to another. The former is the matter. The latter is the hylomorphic entity, or *hylomorph*. Then **HYL** says that there are hylomorphs.

Now, **HYL** entails that a hylomorph is distinct from its matter. But **HYL** itself is supposed to be neutral over how to account for their distinctness. Morphic hylomorphism accounts for their distinctness by taking the hylomorph to be a compound of matter plus form. Amorphic hylomorphism cannot give this

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account because it dispenses with forms. Instead, it says that hylomorphs are *sui generis* entities distinct from their matter. That is how **HYL** is supposed to be acceptable to (most if not all) morphic and amorphic hylomorphists alike, while still allowing for a substantive debate between them.

Evnine admits that **HYL** won't satisfy everyone. It won't count all self-proclaimed hylomorphists as hylomorphists. Nor will it count all self-proclaimed non-hylomorphists as non-hylomorphists. Maybe what counts as hylomorphism is, to some degree, a verbal matter. But to the extent that it is not, Evnine insists that **HYL** still captures much of the idea driving hylomorphic approaches.

Be that as it may, it seems that **HYL** does not even capture Evnine's own idea of hylomorphism. This is because **HYL** by itself cannot explain Evnine's opposition to taking certain things to be hylomorphs.

To illustrate, consider how **HYL** might apply to sets. We might wish to regard the members of a set as its matter.[3] For example, consider the set of quarks. Its members are the quarks. But we might also wish to regard the quarks as the set's matter. If so, then **HYL** predicts that the set of quarks is a hylomorph.

But Evnine opposes taking sets to be hylomorphs. His opposition cannot be explained by **HYL** alone. Instead, Evnine gives a brief explanation in a parenthetical passage in a footnote (pp.137–138, fn.30):

> Partly because there seems to be no metabolism at work in the case of sets, I do not think that sets are hylomorphically complex entities the members of which are their matter. If sets do exist, then the membership relation is *sui generis*. But this is a subject for a further treatment.

I don't wish to make heavy weather over brief, parenthetical remarks relegated to a footnote. Nevertheless, we can still extract a core feature of Evnine's approach by considering these remarks.

The first sentence gives a partial explanation for the opposition to taking sets to be hylomorphs.[4] It is that there seems to be no 'metabolism at work' in sets. Now, considering **HYL** alone does not make it clear why the absence of a metabolism at work is relevant to whether something is a hylomorph. But it would be relevant were hylomorphs required to involve metabolisms at work. This requirement would explain why, in general, a set's members are not its matter. They would be its matter only if they constituted a metabolism at work. But without the requirement, nothing prevents taking a set's members to be its matter. So it seems that Evnine's resistance to taking sets to be hylomorphs does not stem just from **HYL**. Instead, it stems from requiring hylomorphs to be 'metabolic'.

The *metabolic requirement* can be put like this: some things stand in the *being the matter of* relation to another thing only if there is a metabolism at work. This requirement is neither explicit nor implicit in **HYL**. Nevertheless, it is a core feature of Evnine's approach and I will return to it later (§4).

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3. Wither forms?

Evnine's sufficient condition for hylomorphism, **HYL**, is designed to accommodate his aversion to forms. But what is the source of his aversion?

Sometimes an aversion is inherited from something else. It is not evident what forms are. One might try to understand them by characterizing them in terms of some other ontological category. For example, perhaps an aversion to abstracta is to blame. The form of your chair is not a concrete part of the chair. Instead, the form seems abstract. But abstracta face notorious metaphysical and epistemological problems. If forms are abstracta, then they inherit these problems. Or, for another example, perhaps aversion to universals is to blame. Your chair and my chair might share a form. If so, this form is repeatable. It is a universal. But universals also face notorious metaphysical and epistemological problems. If forms are universals, then they inherit these problems.

As far as I can tell, however, Evnine is not averse to forms because of any general aversion to abstracta or universals. Nor is any general aversion to *sui generis* entities to blame (his view is, after all, that hylomorphs are *sui generis*). What then explains Evnine's aversion to forms?

The answer derives from the metabolic requirement. Evnine is influenced by the Aristotelian idea that the efficient, final, and formal causes of a hylomorph are often united. Their unity manifests as a metabolism at work. Evnine's complaint is that just asserting that something has a form does not by itself explain this unity. So forms do not illuminate how the metabolic requirement is to be met. This makes forms idle. In this way, the metabolic requirement helps explain Evnine's aversion to forms.

There is a fair point behind Evnine's complaint of idleness. It is that the bare appeal to forms is not a satisfactory stopping point. One might indeed feel as if forms were idle, if one felt no pull to supplement the bare appeal with an account of how forms do their work. The bare appeal eventually needs this supplementation. Evnine is right to emphasize the urgency of providing it.

But Evnine tries to leverage this fair point into an objection against the existence of forms. He often writes as if *morphic* hylomorphism is best understood as **HYL** with a bare appeal to forms tacked on. This might then encourage the sense that forms are idle, hence dispensable, and so unreal.

This attempt at leveraging, however, relies on a mischaracterization of morphic hylomorphism. It is not best understood just as **HYL** with a bare appeal to forms tacked on. It is better understood as a commitment to an explanatory approach on which forms make a vital contribution. This sort of explanatory approach will, of course, involve an appeal to forms. But the appeal is not just the bare assertion that forms exist. Instead, the appeal is an initial signal that forms will help account for why hylomorphs are what they are. The next step is to develop such an account.

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Such an account can be developed in various ways. On one development, form is used to help account for why a hylomorph has the matter it has.[5] For example, the table's form helps account for why the wood (but not, for example, the surrounding air) is the table's matter. Another development is somewhat closer to Evnine's line of thinking. It uses forms to help account for the unity of hylomorphs. For example, the table's form helps account for the unity of the table's parts in space and time.

Details aside, developments like these share a commitment to using forms to help account for why hylomorphs are what they are. Building the details into the appeal to forms would prejudge how the account should go. Morphic hylomorphism is best understood by separating the bare appeal to forms from an account of how forms do their work.

This separation makes it hard to see how Evnine's fair point can be leveraged against forms. Morphic hylomorphism is not just committed to forms but also to accounting for what they are and how they do their work. But it would be premature to reject forms just because we have not yet found an account that satisfies us.

Indeed, it is unclear how a hylomorphist of any sort could reject forms. Even amorphic hylomorphism will try to account for the work of form, just without the forms themselves. But then it seems any such account will require them to recognize forms after all.

To illustrate, consider the case of a chair. What is it to be a chair? Here is an answer an amorphic hylomorphist, such as Evnine, might give. Roughly, to be a chair is to be created by the intentional work of a chairmaker on some chair-suitable matter and to have chair-like identity conditions over time and across worlds. We may then recognize a relation that holds among a chair's parts when they compose an object – a *chair* – created in this way and having these identity conditions. This relation might then be taken to be the chair's form.[6]

Evnine considers a similar manoeuvre (§3.3.2). His response is not to deny that there is such a form-like relation. Instead, he responds by appealing to considerations of theoretical economy (85):

> … it would be a short step to dropping reference to the rule or principle altogether and simply saying that an artifact is created by the intentional work of a maker on some matter, and that its identity conditions over time and across worlds depend on its kind, which in turn depends on the concepts that feature in the maker's intentions. This is a summary of my own position.

So Evnine's response is that even granting that the form-like relation exists, his amorphic hylomorphism needn't refer to it. This, Evnine claims, makes amorphic hylomorphism more economical than morphic hylomorphism with its reference to forms.

But the bookkeeping here is obscure. One issue is that it is unclear whether amorphic hylomorphism is more economical than morphic hylomorphism. This is because morphic hylomorphism can give explanations unavailable

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to amorphic hylomorphism. To illustrate, forms can be used to explain the non-identity of a thing and its matter. They differ because the thing has a form whereas its matter does not. This explanation seems to require the existence of forms. This requirement is no obstacle for morphic hylomorphism. But it prevents amorphic hylomorphism from giving the explanation. Nor would it seem able to give any other explanation. By taking hylomorphs to be *sui generis*, amorphic hylomorphism just seems to postulate rather than explain the non-identity of a thing and its matter.

Another issue is that it is unclear whether amorphic hylomorphism genuinely rejects forms. It seems that Evnine is willing to grant that the form-like relation exists. He allows his theory to appeal to its application conditions. And yet, he says, his theory benefits by not referring to this form-like relation. This is like granting that to be a bachelor just is to be an unmarried male, but insisting that one should talk of unmarried males instead of bachelors. Perhaps in some situations it is more beneficial to talk of unmarried males than bachelors. Even if so, that needn't support a ban on referring to bachelors. Indeed, it is unclear what could justify the ban, if to be a bachelor just is to be an unmarried male. And it is unclear how a theory banning reference to bachelors could be more economical than a theory without the ban, if both theories agree that bachelors just are unmarried males (and on which things, if any, are unmarried males). Analogous remarks apply to Evnine's aversion to form-like relations. What benefit can a theory banning reference to form-like relations have over another theory without the ban, if both theories agree about their application conditions and extensions?

It would seem 'amorphic hylomorphism' is a misnomer. It is unclear in what sense amorphic hylomorphism rejects forms. Indeed, it seems as if it is bound to accept forms implicitly even while declaring their nonexistence. At best, it may seem that there is little more to the dispute between amorphic and morphic hylomorphisms than the verbal matter of whether to accept the claim 'There are forms'. At worst, it may seem that 'amorphic hylomorphism' is an oxymoron and that amorphic hylomorphism is incoherent.

These considerations suggest that if amorphic hylomorphism is to be a distinctive, coherent brand of hylomorphism, then it won't be for its rejection of forms. It will have to be for some other reason instead. Presumably, what will make amorphic hylomorphism distinctive will be its distinctive take on what forms are and how they do their work.

4. Metabolism

What is perhaps most distinctive of Evnine's amorphic hylomorphism is its emphasis on 'metabolism'. But what is it for a 'metabolism [to be] at work'?

One criterion of metabolism concerns *identity*. Evnine writes: 'I have so far made much of the fact that hylomorphically complex objects have a

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"metabolism." This means that the identity of a complex object is independent of the identity of its matter' (76). This is enough to suit some of Evnine's purposes. For example, the identity criterion explains why sets are not hylomorphs. The identity of a set is not independent of the identity of its members.

But 'independence' is said in many ways. Evnine clarifies what he means as the preceding passage continues: 'Its independence is manifested in several ways. Most prominently, in the case of hylomorphically complex material objects, it is manifested in the fact that the complex object can persist as its matter changes' (76). Indeed, Evnine goes on to argue that 'a complex object is so far independent of its matter that it could have *originated* in entirely different matter from that from which it did in fact originate' (76).[7]

These remarks suggest a *modal* criterion for metabolism. This involves the whole's ability to change its matter. Evnine claims that metabolism is 'the ability of an object to change its matter over time' (13). It is also the ability of an object to change its matter across worlds. Metabolism thus involves the 'flexibility' of an object to change its matter (over time or across worlds). So something has a metabolism only if it can change its matter (over time or across worlds).[8]

But the modal criterion faces a difficulty. Were it correct, hylomorphism could not apply in some cases where it seems it could apply. For example, suppose with the Parmenidean that nothing changes. But if nothing changes, then nothing has a metabolism. Or, for another example, suppose with the fatalist that what happens necessarily happens. But if nothing could have been otherwise, then nothing can have a metabolism. The Parmenidean and the fatalist seem like they could also be hylomorphists. But the modal criterion makes their rejections of change incompatible with hylomorphism. This suggests the modal criterion is inadequate.

Evnine, however, does not seem to have only the modal criterion in mind. Elsewhere he gives another, *determinative* criterion for metabolism. This involves the whole's ability to determine its matter. Evnine writes: 'A metabolic conception, by contrast, takes the object itself to be something that determines which matter or parts it has at a given time' (32; see also 61). One might wonder how this notion of determination is to be understood.[9] However it is understood, it should be distinguished from the modal criterion. Indeed, the determinative criterion can be understood as neither implying nor being implied by the modal criterion. Perhaps a whole's matter can change without it determining its matter. And perhaps a whole can determine its matter even if its matter cannot change.

The determinative criterion, so understood, avoids the previous difficulty for the modal criterion. That difficulty arose because the modal criterion implied that something has a metabolism only if it can change its matter. But the determinative criterion does not imply this. Instead, it implies that an object itself helps determine how its matter or parts change, if they can change at all. Combining this with the Parmenidean or the fatalist rejections of change does not conflict with hylomorphism. So the difficulty does not arise.

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My impression is that Evnine's main interest is in the determinative criterion. Nevertheless, it faces difficulties of its own. One difficulty is to explain how an object determines its matter.

Evnine responds to this difficulty by invoking a mathematical analogy (§1.2.2, §2.3.6). He distinguishes two conceptions of a mathematical function. The *set-theoretic conception* of a function is that it is a set which *pairs* arguments with values. The *rule-based conception* of a function is that it is a rule which *yields* values from arguments. Rules 'select' values from arguments as if by following a recipe. Pairings list 'by brute force' which arguments go with which values.

We may distinguish two analogous conceptions of a hylomorph. The *extensional conception* is the analogue of the set-theoretic conception of a function. The *metabolic conception* is the analogue of the rule-based conception of a function. Rules, not pairings, provide the model for metabolism at work. As Evnine puts it (17), a 'metabolism' is 'something that does the determining of what is, will be, or might be the matter associated with' a hylomorph. It is as if a hylomorph's parts are selected by a rule 'from above', rather than being paired 'from below'.

These metaphors are suggestive. But how should they be understood? I will first consider a quasi-Fregean answer. It is the answer most straightforwardly extracted from mathematical thinking about functions. But the answer is at odds with Evnine's views. This reveals how Evnine is under pressure to reject an otherwise natural answer and, instead, to accept a more burdensome answer.

The quasi-Fregean approach regards the set-theoretic and rule-based conceptions as different 'modes of presentation' or 'senses' of one and the same 'referent'. To illustrate, consider the function $f(x) = x^2$. We may conceive of f as a pairing. For example, it could be the pairing given by the set S of ordered pairs associating each integer with its square ($S = \{\ldots\langle -2,4\rangle, \langle -1,1\rangle, \langle 0,0\rangle, \langle 1,1\rangle, \langle 2,4\rangle \ldots\}$.[10] Or we may conceive of f as a rule. For example, it could be the *square* rule yielding as value the square of its integer argument. Both conceptions seem available. In a quasi-Fregean spirit, they can be viewed as different modes of presenting one and the same function.

One might be tempted to adopt an analogous quasi-Fregean approach to the distinction between extensional and metabolic conceptions of hylomorphs. These conceptions would be different modes of presenting one and the same object. But doing so risks distorting Evnine's view in several ways.

One distortion is that the quasi-Fregean approach does not deliver the desired 'flexibility' of an object to change its matter. Suppose we identify function f with set S. We may conceive of this function as a pairing or as a rule. However the function is conceived, it is still just a set of ordered pairs. Variations in values of this function are 'built into it through their explicit specification in the relevant function' (60). Evnine does not think that 'building in' variations like this delivers the desired 'flexibility'.

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A second distortion is that the quasi-Fregean approach undervalues the metabolic conception. Consider functions first. Nothing about the quasi-Fregean approach requires that a function be conceived as a rule or as a pairing (when both conceptions are available). In general, it is optional which of these conceptions to adopt. Now consider the analogous points for hylomorphs. Nothing about the quasi-Fregean approach requires that a hylomorph be conceived metabolically or extensionally. In general, it is optional which conception to adopt. But this is contrary to what Evnine says. He claims that 'a hylomorphist ought to be committed to a metabolic conception of objects' (36). Nothing in the quasi-Fregean approach by itself establishes this commitment.

A third, and related, distortion is that the quasi-Fregean approach obscures the metaphysical relevance of the metabolic conception. Evnine's purpose for the mathematical analogy is to help clarify the metabolic conception. This is to be done by using rules as a model. The quasi-Fregean approach locates the contrast between rules and pairings at the level of 'sense', not 'reference'. This obscures its relevance to the 'referent'. To illustrate by analogy, that Jerry conceives of Superman as his favourite superhero needn't reflect anything intrinsic to Superman concerning Jerry. Now, consider again identifying function *f* with set *S*. We may conceive of *f* as a rule. But this needn't reflect anything intrinsic to set *S* concerning anything rule-like. In general, conceiving of a function as a rule needn't reflect anything rule-like in the underlying metaphysics of that function. But then, analogously, conceiving of a hylomorph metabolically as determining its matter needn't reflect any determination at work in the underlying metaphysics of that hylomorph.

Perhaps there is some way to tweak the quasi-Fregean approach to avoid these distortions. On the other hand, perhaps the path of least resistance for Evnine is to reject the quasi-Fregean approach and its allowance for both extensional and metabolic conceptions of a single hylomorph. Some alternative understanding of the analogy would then be needed.

A 'constructivist' alternative would be that the different conceptions constitute different kinds of objects. This is like how the mathematical constructivist takes different mathematical objects to be constructed by different mental acts. A hylomorph is, in some sense, constituted by its being metabolically conceived. It is accordingly a conceptual truth that hylomorphs metabolically determine their matter.

The constructivist approach avoids the quasi-Fregean's distortions. The first distortion is avoided because it is part of our conception of hylomorphs that they determine their matter. The second distortion is avoided because the metabolic conception cannot be optional if it is a conceptual truth that hylomorphs metabolically determine their matter. And the third distortion is avoided because it is conceptually guaranteed that the underlying metaphysics of the hylmorph is metabolic.

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It is not altogether clear whether Evnine would accept that it is a conceptual truth that hylomorphs metabolically determine their matter. But accepting it would seem to have several synergies with his project.

One synergy is that it fits Evnine's idealism about most hylomorphs (organisms are the only exception). This idealism entails that (non-organic) hylomorphs result from 'impresses of mind on matter'. Perhaps these 'impresses' involve conceiving of hylomorphs metabolically. If so, conceiving of a hylomorph metabolically *does* reflect determination in the underlying *idealist* metaphysics of that hylomorph. But it is unclear how to extend this point to the case of organic hylomorphs, which do not result from the impress of mind on matter. And an explanation of why organic hylomorphs deserve separate treatment is needed, if this point is not to be extended to them.

Another synergy is that it fits Evnine's principle of *the metabolic priority of a complex object to its matter* (§1.2.3). This is the demand for a 'metabolic explanation' for why a whole has its parts. Why a whole has its parts is to be explained in terms of its being a metabolic complex of them. This flows from Evnine's emphasis on metabolism. He also says it is a 'distinctive characteristic' of his approach. At first, I took that to mean that it was something like a guiding idea. But maybe it is more. It could be a consequence of the conceptual truth that hylomorphs metabolically determine their matter. Were that a conceptual truth, it would require explaining why a whole has its parts in terms of the whole.

But these synergies also come with burdens. The main burden stems from the assumption that it is a conceptual truth that hylomorphs metabolically determine their matter. There are familiar, general difficulties identifying uncontroversial conceptual truths. This has led many philosophers to doubt whether there are any. In particular, it is not evident that it is a conceptual truth that hylomorphs metabolically determine their matter. It is not evident whether it is a conceptual truth, if it is true. Nor is it even evident that it is true. A defence of this alleged conceptual truth is needed.

5. The artifactual paradigm

So far, I have discussed two themes of Evnine's approach: the attempt to do the work of form without forms, and the requirement that hylomorphs have 'metabolisms at work'. A third distinctive theme of Evnine's approach is *the artifactual paradigm*. It is plausible that artifacts are *ideal* objects, at least in the sense that they are made in part by an 'impress of mind on matter'. Evnine takes artifacts, understood in this idealist way, as providing the paradigm cases of hylomorphs (§1.2.4).

It is not immediately apparent whether these themes are connected. But upon reflection, I suspect they are connected. My impression is that the artifactual paradigm does much to support the other themes.

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Consider the second theme: the requirement that hylomorphs have 'metabolisms at work'. Artifacts can survive the gain or loss of parts across time and worlds. This is best accounted for 'from above'. The parts of an artifact are 'selected' over time and across worlds as if by a 'rule'. This 'rule' may be understood as something like a principle or form. It provides the sense in which artifacts have 'metabolisms at work'.

Consider the first theme: the attempt to do the work of form without forms. Artifacts are our creations. We make them. But we don't just make them. We also make them what they *are*. Artifacts have the forms they have because we made them to have them. In this sense, the forms of artifacts are not 'detached' from the world but are rather 'embedded' in it. The forms are 'embedded' in the intentional making activities of crafters. Or, better yet, these activities *enform* artifacts. This does the work of form without forms.

But now consider the third theme: the artifactual paradigm. Artifacts are paradigmatic hylomorphs. This supports generalizing from artifacts to hylomorphs. Given that artifacts have 'metabolisms at work', so too will hylomorphs in general. And given that artifacts are enformed without having forms, so too with hylomorphs in general. It therefore seems that the artifactual paradigm does much to support Evnine's amorphic hylomorphism, along with its distinctive focus on 'metabolisms at work' and its attempt to do the work of form without forms.

6. Natural, non-organic objects

Evnine's emphasis on artifacts is intriguing and often well-placed. The artifactual paradigm is, of course, the correct paradigm for artifactual hylomorphs. But is it the correct paradigm for hylomorphs in general?

It would appear not. There are reasons against extending the artifactual paradigm to hylomorphs in general. In particular, artifacts seem poor guides for natural, non-organic objects (NNOs) ripe for hylomorphic treatment.

Consider mountains. These are large landforms made of various rock-like matter, and formed by certain geological processes. Mountains differ from other collections of similar rock-like matter by their origination and shape. Moreover, mountains seem to have metabolic unity. They can change their parts. Mountains originate and persist 'organically' in the sense of the term concerned with organization, if not in the senses from biology or chemistry. It would seem, then, that mountains have many of the traditional hallmarks of hylomorphs. What goes for mountains seems to go for many other natural, non-organic objects.

One might then expect that mountains, if not all natural non-organic objects, would be hylomorphs. So it is surprising that Evnine denies this. His view is that natural, non-organic objects, including mountains, are not hylomorphs. But why?

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The answer stems from *the methodological priority of matter to complex object* (§1.2.2). This is the demand to explain why, given some things, there is a whole composed of them (when there is). Here the demand is to explain in virtue of what, given some rock arranged as of a mountain, there is a mountain composed of that rock. A good explanation would have to account for the metabolic unity of the mountain. But Evnine believes that such an account must involve an 'impress of mind on matter' (or evolutionary forces). This follows from Evnine's idealism according to which the paradigm way for something to have form is for it to result from an impress of mind on matter.[11] For Evnine, 'impressing' is a mental act. The paradigm of this 'impress' is a crafter making an artifact. Evnine (pp. 69–70) writes:

> Artifacts are ideal, or mind-dependent, in a much deeper sense. They form a distinct *sui generis* category of objects for which what it is to be an object of that kind is to be the impress of a mind on matter. And minds impress themselves on matter not by combining something abstract with that matter, as principle-based hylomorphism would have it, but through the process of working on the matter with certain intentions.

Let's assemble the pieces. Artifacts are the paradigms for hylomorphs. Artifacts are ideal in the deep sense that they are the 'impress of a mind on matter'. So the paradigms for hylomorphs are impresses of minds on matter. But natural, non-organic objects are not impresses of minds on matter. (Nor are they organisms shaped by evolutionary forces.) So they are not hylomorphs. They would have to be hylomorphs were they to exist. So they do not exist. And, in particular, there are no mountains. Thus, Evnine's reliance on the artifactual paradigm prevents him from regarding natural, non-organic objects as hylomorphs.

Evnine recognizes that his rejection of mountains clashes with common sense. But he attempts to mitigate the clash by suggesting that it is no worse than other revisionist ontologies which also clash with common sense. To illustrate, consider these revisionist ontologies: nihilism, conceptualism, universalism, and Fine's theory of embodiment.[12]

Nihilism says that there are no complex objects. Nihilism, like Evnine's view, denies that mountains exist. So both views clash with common sense. But nihilism also denies that all other complex objects exist. It would seem that this extreme 'ontological deflation' clashes with common sense more than Evnine's own view.

Conceptualism says that mountains exist because we have imposed the concept *mountain* to various things. Evnine's objection to conceptualism is that it vindicates the existence of mountains only 'at the cost of making them so different from how we ordinarily suppose them to be' (199). But we also ordinarily suppose that mountains exist. So Evnine's view vindicates how we ordinarily suppose mountains to be only at the cost of making them unreal. It is not clear to me that this cost of Evnine's view is better than conceptualism's cost.

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Universalism says that some objects always compose a complex object. Some of these complex objects will have rocky parts and be mountainlike. Perhaps some of these are mountains. If so, universalism, unlike Evnine's view, may accept that mountains exist. In that sense, it does not clash with common sense in the way that Evnine's view does. But universalism also accepts all sorts of exotic objects (such as Hirsch's incars or Lewis's trout-turkey) which we do not take to exist.[13] This 'ontological inflation' clashes with common sense.

A final example is another hylomorphic theory: Kit Fine's *theory of embodiment* (Fine 1999). A *rigid embodiment* $\mathbf{r} = a, b, c, \ldots/R$ is an object which may be thought of as the objects $a, b, c, \ldots$ being in the relation R. A *variable embodiment* $\mathbf{v} = /V/$ is a function V from times to things (e.g. rigid embodiments). As (Fine 1999, 73) puts it:

> We are familiar with the prodigious ontology of the mereologists, according to which any occupied region of space-time, no matter how scattered or gerrymandered, will determine a material object. But this is nothing compared to the ontology of the present view. For to each such object of the mereologist, there will correspond a multitude of rigid embodiments, differing in their choice of components or relational principle, and a multitude of variable embodiments, differing in their actual or possible manifestations.

This extreme 'ontological inflation' also clashes with common sense.[14]

Evnine thinks that the clashes these revisionary ontologies have with common sense are, at least, no better than that of his own view. He writes of the problem of 'ontological inflation' (15):

> But an affront to common sense equally egregious to van Inwagen's denial of tables and chairs comes from adopting an ontology that forces us to admit the existence of many things we *didn't* previously suspect.

And when considering universalism, Evnine further writes (196):

> If part of the motivation for resisting my rejection of NNOs is that that rejection is at odds with our common opinion that things like mountains and lakes exist (as I agree it is), it is no less egregious an assault on that common opinion to say that NNOs do exist, but that so do infinitely many other weird entities, and that mountains, rivers, and beaches are, in their nature, no different from these monsters.

These points would also seem to extend to other inflationary ontologies, such as Fine's theory of embodiment.

Evnine's attempt to mitigate the clash between rejecting mountains and common sense relies on the symmetry of deflation and inflation. The deflationist wishes to subtract from what we take to exist. The inflationist wishes to add to it. Evnine seems to think subtraction and addition are symmetrically egregious in their assault on common sense. He concludes that rejecting mountains assaults common sense, but not in any exceptionally egregious way.

It is, however, doubtful that deflation and inflation are symmetric in the way required by Evnine's mitigation strategy. Their alleged symmetry relies on confusing two kinds of inflation. A *strongly inflationary* ontology posits things that we suspect do not exist. A *weakly inflationary* ontology posits things that we do

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not suspect to exist. The differences between these and deflationary ontologies can be brought out by some general considerations about inquiry.[15]

We come to inquiry wishing to account for how things appear. For example, it appears that there are mountains. We wish to account for these appearances. The account might involve a *match* or a *divergence* between appearance and reality. Matching accounts say that what accounts for the appearances is that things are as they appear. Perhaps what accounts for the appearance of mountains is that there are mountains. Divergence accounts say that what accounts for the appearances is that things are not as they appear. What accounts for the appearance that Earth is flat is not that Earth is flat but rather that Earth is round.[16] Or perhaps what accounts for the appearance of mountains won't involve mountains.

We seem to have some initial inclination to resist divergence accounts. The resistance can be overcome (as in the case of Earth's shape). But it is not always easily overcome (as in the case of nihilism). This perhaps goes some way toward explaining why divergence accounts seem to offend common sense more than matching accounts. Deflation seems to require a divergence account. If the deflationist says there are no mountains, then they must give a divergence account of the appearance that there are mountains. In this way, deflation inherits its offense of common sense from the divergence account it invites.

There does not seem to be a parallel explanation for why inflationary ontologies offend common sense. The reason is that these are usually only *weakly inflationary*. To illustrate, there is no appearance of incars. That is, we lack any appearance that there are incars. So there is no project to account for the appearance that there are some. But it is not clear that there is any appearance that there are no incars. This is not because of any general ban on appearances *against* things. (It appears that no one else is in my office, when I am alone in my office.) The case of incars seems different. Most folks haven't considered whether it appears that there are some or none. If they did, and even if it appeared that there are all the parts of an incar, it needn't thereby appear that there is, or is not, an incar. So it may seem that there are no appearances of or against incars to account for. If so, a theory that predicts that incars exist won't have to overcome any conflict with the appearance that there are none. This is not to deny that the infinite 'monsters' inflationary ontologies recognize are weird. It is rather that their weirdness does not consist in their clashing with the appearance that they do not exist.

These considerations suggest that inflation and deflation are not symmetrically egregious in their assaults on common sense. Deflation is egregious because it diverges from the appearance that there are so-and-so's. Strong inflation would be similarly egregious. But inflationary ontologies are typically *weakly* inflationary. They are not as egregious, at least not in this way, because there is no appearance that there are no so-and-so's from which they diverge.

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Evnine's rejection of mountains diverges from the appearance that there are mountains. This is a deflationary assault on common sense. It assaults common sense in a way that typical inflationary ontologies – that is, weakly inflationary ontologies – do not. So it would seem Evnine cannot defend his view's clash with common sense by saying it is no worse than others'.

Evnine says the 'more important reason' against inflationary ontologies is that they violate the metabolic priority. This was the demand to explain why a whole has parts in terms of the whole being a metabolic unity of them. Mountains do not have the requisite metabolic unity. That's why they don't exist.

But it is not at all evident that mountains lack metabolic unity. In fact, they do have metabolic unity according to at least one of the criteria Evnine provides. Recall that the modal criterion is that a whole can change its matter (over time and across worlds). As we saw above, mountains can indeed change their matter. So they satisfy the modal criterion.

Now, I argued above that the modal criterion was inadequate. The determinative criterion seems better at capturing Evnine's idea of metabolic unity. It is that a whole determines its matter. Do mountains determine their matter?

They do not, if this determination requires an impress of mind on matter (or the influence of evolutionary forces). Evnine's adherence to the artifactual paradigm leads him to this requirement. It also leads him to say there are no mountains.

We have seen that this deflationary assault on common sense is not symmetric with typical (weakly) inflationary assaults. So we may take Evnine's deflationary assault as a reason to reject the principle generating it. This is his principle that determination requires an impress of mind on matter.

Rejecting this principle does not require abandoning the artifactual paradigm entirely. One might still grant that it is the right approach for some cases of hylomorphs. But mountains and other natural, non-organic objects are hard cases that resist such an approach. Why should these objects have a hostile approach foisted upon them, especially when it leads to denying their existence? One gets the impression that Evnine is overzealous in his ambition to apply the artifactual paradigm.

7. Global ambition

Indeed, Evnine's ambition seems to be to provide a *global* hylomorphic theory which applies to (almost) *all* objects ripe for hylomorphic treatment. Does amorphic hylomorphism achieve this global ambition?

It is not clear that it does. The main obstacle is the artifactual paradigm. It seems to stand in the way of extending amorphic hylomorphism to cover some objects ripe for hylomorphic treatment. In particular, it struggles to cover mountains and sets. This makes it hard to see how amorphic hylomorphism might live up to its global ambition.

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Perhaps the global ambition should be weakened. The ambition would no longer be global. Instead, the ambition is more localized. It is to develop a hylomorphic theory of objects which, in fact, fits the artifactual paradigm. Any remaining objects (mountains, sets) would then be beyond the scope of the theory. Other localized theories for them would be needed. These localized theories might also be hylomorphic. But they would be exempt from the artifactual paradigm.

This approach is pluralistic in the sense that it allows for many different localized theories. It compartmentalizes hylomorphs in accordance with the paradigms best-suited for them. The artifactual paradigm would apply to artifacts. Other paradigms would apply to mountains and to sets. This pluralism has the advantage of matching each locale with an appropriate paradigm.

This advantage of pluralism, it seems, is bought at the price of systematicity. At first glance, it is not clear how a plurality of localized theories might be unified systematically. This might be leveraged as an objection to pluralism.

But pluralism's apparent lack of systematicity does not withstand scrutiny. There are ways to make pluralism systematic. One way is to embed the pluralistic approach within a framework abstract enough to accommodate artifacts as well as mountains and sets.

One such framework is Kit Fine's theory of embodiment (Fine 1999). Recall that the rigid embodiment $\mathbf{r} = a, b, c, \ldots/R$ is the objects $a, b, c, \ldots$ in the relation R, whereas the variable embodiment $\mathbf{v} = /V/$ is a function V from times to things. There are almost no restrictions on what relation R might be or what function V might be or what objects might bear them. This is one way the theory of embodiment is highly abstract. Its abstractness allows it to be neutral over whether additional, localized restrictions are imposed. For example, one might emulate amorphic hylomorphism within the Finean framework by restricting R's and V's only to those which capture the appropriate intentional making activities of crafters. Or one might impose no such restriction but instead regard Evnine as focusing his attention only on those R's and V's which, as a matter of fact, do capture the appropriate intentional making activities by crafters. This would leave all sorts of R's and V's for other embodiments, including mountains and sets. Thus, the pluralistic approach needn't sacrifice systematicity if embedded within the Finean framework. (I suspect something like this sort of embedding can also be carried out within other frameworks, e.g. (Koslicki 2008).)

I don't wish to suggest that Evnine hasn't considered the sort of embedding I've sketched. On the contrary, he discusses Fine's (as well as Koslicki's) views at length. Indeed, Evnine is admirably unpretentious in admitting that a qualified version of Fine's view 'ends up sounding very much like my own amorphic hylomorphism' (65).

Nevertheless, one might wonder whether Evnine has underestimated the threat embedding poses to the ambitions of amorphic hylomorphism. Embedding seems to force an uncomfortable choice: regard amorphic hylomorphism either as a strained attempt at a global hylomorphic theory or else as a localized application of hylomorphic theorizing to artifacts.

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Notes

1. Baker focuses on organisms in her review of Evnine's book (Baker 2016).
2. All references are to Evnine's book (Evnine 2016), except where otherwise noted.
3. Matter needn't be physical stuff. I reserve 'physical' for physical stuff and 'matter' for whatever it is – physical or not – that is 'formed' in a hylomorph. I avoid 'material' altogether because it is often ambiguous between physical stuff and matter (in the previous sense).
4. Beginning the first sentence with 'Partly because' suggests that there is more to the explanation. But Evnine does not make explicit what more it is.
5. Kit Fine proposed this as hylomorphism's characteristic thesis (Fine 2017).
6. This is, in effect, the notion of 'form' on Fine's theory of embodiment (Fine 1999).
7. Here Evnine denies that an artifact's original matter is essential to it (Kripke 1972). Instead, Evnine argues that the creative act from which an artifact originates is essential to it (§3.4).
8. I am not assuming, in general, that an object is able to do something just in case it can. But I am assuming that an object is able to change its matter only if it can.
9. One might understand it in terms of the notion of *ground* (Raven 2015). One suggestion would be this: that some fact about an object's 'metabolism at work' grounds its having this matter or parts at a given time. But I don't know whether Evnine would accept this particular suggestion. Nor do I know whether he would accept the appeal to ground (although he says nothing explicitly for or against it).
10. One can give other pairings for the same purpose. This possibility raises Benacerraf-style worries (Benacerraf 1965). But they are irrelevant here.
11. Organisms are exceptions. They are formed by evolutionary forces. But Evnine understands these evolutionary forces as behaving analogously to an impress of mind on matter. Baker criticizes Evnine's application of amorphic hylomorphism to organisms (Baker 2016).
12. Evnine does not explicitly consider nihilism in this context. But he does consider *ontological minimalism*, a kind of 'easy ontology' (Thomasson 2014). I will, however, set that view aside here.
13. An *incar* is a car entirely inside a garage (Hirsch 1982). A *trout-turkey* is a fusion of the (still-attached) front half of a trout and the (still-attached) back half of a turkey (Lewis 1991).
14. Evnine discusses this clash in §2.3.3 (see also Koslicki 2007).
15. These considerations are inspired by Moore's defense of common sense and his conception of analysis (Moore 1925).
16. 'Earth is flat' has become a stock example of an appearance, often favored by critics of the Moorean approach. I use it here for this reason. But, in fact, it is a bad example of the sort of appearance the Moorean respects. Before astronauts, almost no person saw more than a miniscule part of Earth's surface (let alone the rest of it). Most of these parts do not look flat. A few do. They are, however, an absurdly inadequate basis on which to induce generalizations about the shape of a planet. Nor did any ancient seafarers fall off the ocean's edge. All this strains the credibility of any appearance that Earth is flat, despite some folks reporting that it does so appear. Sometimes critics of the Moorean approach write as if it must take any report of an appearance to be an appearance, without regard to its veracity. But that is a straw man. Any sensible Moorean approach will permit scrutiny of reports of appearances in order to determine whether they report genuine appearances. It is instructive to recall why Moore did not include 'Earth is flat' among the appearances (Moore 1925).

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