
Hylomorphism's Form Problem

What, then, is form—exactly?

Minimal Hylomorphism

- ✦ Let us say that minimal hylomorphism comprises four theses:
 - ✦ Objects are metaphysical complexes.
 - ✦ Ordinary objects have two irreducibly distinct components or aspects, namely matter and form.
 - ✦ Forms are identity-providing.
 - ✦ If one wants to know what a given object o is, one will need to appeal to o 's form.
 - ✦ Matter and form are correlative.
 - ✦ One traditional way of characterizing this relation is to suppose that matter and form are existentially interdependent, or, more strongly, that they are definitionally interdependent.
 - ✦ Privileged unities, hylomorphic compounds, are both temporally and modally ductile.
 - ✦ At a minimum, for any object o and its matter m , $o \neq m$.

Material Complexes

- ✦ The orthodox take: ordinary objects a metaphysically complex:
 - ✦ Every material object o comprises two components, of different kinds, namely matter and form.
 - ✦ Traditionally, matter and form are internal causes, while efficient and final are external causes.
 - ✦ Contrastively: no object o is identical with its matter; so, NMM (the view that an object o is nothing more than matter) is false.
 - ✦ What, though, is true? Some possibilities:
 - ✦ Matter and form are parts of an object o in keeping with the principles of CEM.
 - ✦ We thus invite questions regarding, e.g., Weak Supplementation: $\forall x \forall y (PPxy \rightarrow \exists z (Pzy \wedge \neg Ozx))$
 - ✦ After all, if the matter of an object o is a proper part of o , then something—something like form—is needed, given the truth of WS.
- ✦ Some non-orthodox views deny the claim that form is an internal cause at all; it is not a part in any sense, let alone any sense that respects CEM.

NMM

- ✦ To see the contrast more clearly:
 - ✦ Suppose we have a world with three simples: m_1 , m_2 , and m_3 .
 - ✦ Assuming NMM and the falsity of nihilism, we now know which objects exist in our world in addition to m_1 , m_2 , and m_3 .
 - ✦ We also have the compound objects $m_1 + m_2$, $m_1 + m_3$, $m_2 + m_3$, and $m_1 + m_2 + m_3$.
 - ✦ A hylomorphist might or might not accept the existence of objects co-located with those objects, but would insist, for instance, that the any object co-located with $m_1 + m_2$ must have another component, or feature, a form ϕ , without which one could not say which object $m_1 + m_2$ constituted, nor even whether $m_1 + m_2$ constituted an object at all.
 - ✦ Further in the presence of a different form, ψ , $m_1 + m_2$ would yield a different object altogether, such that $m_1 + m_2 + \phi$ and $m_1 + m_2 + \psi$ were necessarily distinct.

Forms are Identity-providing

- ♦ This observation issues in the second feature of minimal hylomorphism: according to the hylomorphist what makes the difference in identity between two objects made of the same material elements is the presence of a ϕ -form or a ψ -form.
- ♦ Two questions arise directly for the hylomorphist:
 - ♦ First, what is this form?
 - ♦ Second, how does this form bring about these results?
 - ♦ To say that the form 'makes' some matter this or that object already sounds suspiciously causal; to say instead that this matter constitutes the object it constitutes 'in virtue of' the form eschews this causal or quasi-causal language in favor of nothing more than a promissory note.
 - ♦ What, precisely, is this making relation in virtue of which form makes some matter this or that object?
 - ♦ Plato held that the presence of the Form of piety *makes (poiet)* all pious actions pious (*Euthyphro* 6 d-e), going on to say in the *Phaedo* that the safest thing one can say about a ϕ -object is that it is ϕ for no other reason than that it 'participates' in the Form ϕ -ness (*Phaedo* 100c-d).
 - ♦ Surely this is not what the hylomorphist intends.
 - ♦ But then what?

Matter and Form are Correlative

- ♦ Matter and form are more than merely co-extensive.
- ♦ They are, evidently, in various ways interdependent.
 - ♦ Perhaps existentially: whenever any given form ϕ exists, there is some m without which ϕ could not exist (no bronze, no statue shapes); and whenever some matter exists, there is some form ϕ , without which that matter could not exist (no form of bronze, no matter which is bronze).
 - ♦ Perhaps essentially: in order to provide an essence-specifying account of some form ϕ , one will perforce make reference to some matter (no account of the form *being human* will be complete without reference of human bodies, or, to use an example favored by Aristotle, no account of the form being snub will be complete without mentioning noses); and, less obviously and more controversially, no account of any kind of matter m will be complete without mentioning its form (no account of bronze will be complete without mentioning the form *being bronze*).

Temporal and Modal Ductility

- ♦ Most proponents see as an immediate advantage of hylomorphism that it affords a kind of moderate middle way between mereological nihilism and universal mereological aggregationism.
 - ♦ Perhaps this should not be regarded as a defining feature, but it runs deep.
- ♦ This suggests that forms are more than shape-properties and are instead *ordering principles*.
- ♦ Further, it is natural to view form so construed as a ground for temporal and modal ductility.

Koslicki's Principle of Restriction

- ♦ Restricted Composition Principle:
- ♦ 'Some objects, m_1, \dots, m_n , compose an object, O , of kind, K , at a time t just in case m_1, \dots, m_n satisfy at t the constraints dictated by some formal components [...], f_1, \dots, f_n , associated with objects of kind, K .' —Koslicki (2018, 192).

A Categorical Concern from Bernard Williams

- ✦ Reflecting on a core claim in Aristotle's *De Anima*, that the soul is a substance (an *ousia*, a basic being), Williams observes:
 - ✦ 'This claim is, categorially, puzzling. For soul is said to be substance, and there are references (as here [in *De Anima* ii 1, 412a16-20]) to a soul, or the soul. Yet the claim itself does not seem to introduce any particular item for any particular soul to be. It seems to introduce something more in the nature of a fact, or, possibly, a property.'
- ✦ Fair question: what is form?
 - ✦ A further fair question: what is form such that it qualifies as a substance (an *ousia*, a basic being)?
 - ✦ If form is, possibly, a property of some matter, then it hardly appears to be a substance; in fact, it hardly appears to be anything with a claim to be basic.

Heaps, BBs, and Forms

- ✦ A kind of heuristic dilemma:
 - (1) If properties, forms are either (a) shape-properties or (b) privileging properties.
 - (2) If (1a), then we arrive at a kind of hylomorphic version of universal mereological aggregation (snowdiscalls and the like—and so we are all too catholic).
 - (3) If (1b), then forms have, mysteriously, the power to privilege.
 - (4) So, if forms are properties, then either we accept some hylomorphic version of universal mereological aggregation or we are saddled with a mystery (an unhappy, unwanted mystery—in effect, without further explication—a version of the brutishness we have decried).
 - (5) So, if forms are properties, either we are altogether too catholic or we are brutes.

Seven Proposals for Forms

- ✦ Johnston: Forms are complex quantified relations.
- ✦ Fine: Forms are principles of variable embodiment.
- ✦ Koslicki: Forms are structures.
- ✦ Rea: Forms are natures and natures are powers.
- ✦ Goswick: Forms are *s*-responses (+ +).
- ✦ Evnine: Forms are not.
- ✦ Shields: Forms are offices.

Johnston's Schema for Hylomorphism

- ✦ In general, every hylomorphic compound (HC) answers to this schema:
 - ✦ *What it is for...*(the item is specified here)...*to be is for...*(some parts are specified here)...*to have the property or stand in the relation...*(the principle of unity is specified here).
 - ✦ N.b. that as introduced, this schema rejects understanding hylomorphism in terms of CEM, because it eschews the suggestion that the principal of unity, which will be the form, can be a part.
 - ✦ It is, rather, a principle, and a principle is not a part.

Some Aspects of This Schema

- ◊ It is expressly conceived as being essentialist-friendly.
- ◊ Forms, as principles of unity, might be static or dynamic.
- ◊ Further, since an HC involves a principle of unity unifying various parts, it follows (on the evidently undeniable assumption) that different principles of unity can simultaneously unify the same parts, that two entities can be in the same place at the same time.
 - ◊ Still, some version of the Wiggins Principle (= there could not be two material items falling under the very same substance sortal in the same place at the same time) may be salvageable, depending, though, on some further reflection about kind individuation.
 - ◊ 'Absent a difference in origin, there cannot be two items with the very same parts and the very same principle of unity.' —Johnson (2006, 679)

Some Observations on Johnston's Schema

- ◊ The basic schema may seem promising, but it is schematic and, at best, in need of development.
- ◊ The notion of *kind membership* remains crucially underdeveloped.
- ◊ The metaphysics of form, as a principle of unity, remains crucially underdeveloped.
 - ◊ When—and how—does a relational property suffice to unify?
 - ◊ How is it that form is dynamic?
- ◊ The schema is thus markedly underdeveloped in almost every way; perhaps it could be enhanced by being expressed within the framework of an articulated category theory.
 - ◊ Again, it is *not* therefore wrong; but at the very least it needs serious development.

A Suggestive, Peculiar Contention

- ◊ 'We may think of [a container with water in it] as a single object that has different water as a part at different times. Let us now make two modifications to our conception of the container. First, we suppose that it not merely a passive recipient of the water but somehow determines which water is to be in it at any one time. It plays an active role, as it were, in determining what its content is to be over time. Second, we suppose that the container is not another physical object but something of a more abstract or conceptual nature. Thus the varying contents of the container will be determined by conceptual rather than by physical means.'—Fine (1999, 69).

Another Heuristic Dilemma

- (1) Form is either concrete or abstract.
- (2) If it is concrete, form is but another element, and not an organizing principle.
- (3) If form is abstract, then form is casually inert and thus not an organizing principle.
- (4) So, form is not an organizing principle.
 - ◊ Yet if form is not an organizing principle, then hylomorphism and its various touted benefits is untenable. Pointless, really.
 - ◊ Oh dear.

Fine: Variable Embodiments

- ◊ Existence: The rigid embodiment a/F exists iff a and F exist and a has F at some time.
- ◊ Temporality: The rigid embodiment m/F exists at time t iff m/F exists, m exists at t and m has F at t .
- ◊ Location: The rigid embodiment m/F is located at position p at time t iff m/F exists at t and m is located at position p at t .
- ◊ Parthood: The object x is a part of m/F iff $x = m$ or $x = F$ or x is a part of m or x is a part of F .
 - ◊ These may be read as claiming: that a matter-form compound exists when and only when the matter and form exist and the matter has the form (from (i) and (ii)); that the matter-form compound exists where its matter exists (from (iii)); and that some object o qualifies as a part of a hylomorphic compound just in case o is either that compound's matter or its form, or is a part of its matter or a part of its form; that, as Fine suggests (2008, 113), parthood is 'mediated' by its matter and form (from (iv)).
 - ◊ This can then be extended to variable embodiment, by allowing flows of matter.

Koslicki: Forms as Structures

- ◊ The basic idea: '[A]t the heart of the notion of structure is ultimately a distinction. . . between what is taken as variable in a given domain and what is taken as invariable, relative to a set of admissible transformations.'
 - ◊ Consider, e.g., her example of a structure for guests at a dinner party
- ◊ Structure as objects: 'The case of syntax and mathematics, then, suggests that structures at least in some contexts behave as objects, rather than as properties and relations. . . '— Koslicki (2008, 254).

Rea: Natures. . .

- ◊ Natures:
 - ◊ (T1) Natures are powers; the natures of substances are fundamental powers.
 - ◊ (T2) The natures of composite objects unite other powers (in particular, the powers that are the natures of their parts).
 - ◊ (T3) Natures can enter into compounds with individuators, and play the role of form.

. . . into Powers

- ◊ 'A power p_0 of an object x unites distinct powers $p_1-p_n =_{df}$ (i) p_0 is intrinsic to x , (ii) each of p_1-p_n is a nature of at least one of x 's parts, (iii) p_0 is grounded in or identical to a certain sort of cooperative manifestation (CM) of p_1-p_n , (iv) every power intrinsic to x that is at least partly grounded in CM is identical with, reducible to, or at least partly grounded in p_0 , and (v) there is no power intrinsic to x that is distinct from both p_0 and CM and that grounds p_0 .'

Goswick: Going Mental

- ❖ Ordinary Object Composition (RD): An n -entity n which is s -apt sums with the sort property *being s* to compose an ordinary object of sort s iff a subject has the s -response to n .

Evnine: a Farewell to Forms

- ❖ Amorphic Hylomorphism
 - ❖ Disaggregate two impulses in hylomorphism which normally travel together:
 - ❖ (i) a commitment to an analysis of ordinary objects as comprising both matter and form;
 - ❖ (ii) a careful attention to the origins, essences, and functions of objects (so, in an older idiom, to their efficient, formal, and final causes)

Shields: a Return to Form—Sort of

- ❖ C is a hylomorphic compound =_{df} (i) there is some matter m and some office ϕ ; and (ii) m occupies ϕ

Offices I

- ❖ What is an office?
 - ❖ Consider two ways something might be or be called the Prime Minister:
 - ❖ We say: 'The Prime Minister is only the second woman to lead the United Kingdom.'
 - ❖ We say: 'The Prime Minister sits in the cabinet solely in virtue of being the First Lord of the Treasury.'
 - ❖ The first way of speaking says something true only if 'PM' refers to Theresa May.
 - ❖ The second way by contrast permits but does not require 'PM' to refer to Theresa May or any other person.
 - ❖ The way in which it does not and cannot refer to any person occurs exactly when it refers to the office of PM.

Offices II

- ◊ An office is a kind of specified role—a role which can be *occupied*, most often, but not exclusively, by an individual occupant.
- ◊ Offices come replete with *requirements* and *requisites*.
 - ◊ The *requirements* of an office are those features one must discharge if one is its occupant.
 - ◊ The *requisites* of an office are those features something must satisfy in order to be an occupant.
- ◊ Further, one can, if so inclined, easily define a property specified by the office, such that the occupant of the office bears the property so defined.
 - ◊ So, for a given office *o*, there will be the property *being-o*, borne by the occupant of *o* as long as the occupant occupies *o*.
 - ◊ So, in our illustration, the Prime Minister has the property being-the-Prime-Minister just as long as the Prime Minister is the Prime Minister, that is, just so long as the person who is the Prime Minister occupies the office of Prime Minister.

Offices III

- ◊ Generalizing, then, we may say that an office is an abstract entity capable of being occupied, setting requisites on all potential occupants, and instantiating properties which its occupants cannot.
- ◊ The nub of the distinction between offices and occupants is thus the distinction between role and role-player.
- ◊ Crucially, the relation between an occupant and an office is *occupying*.
 - ◊ The relation *...occupies...* is
 - ◊ Non-symmetric
 - ◊ Non-reflexive
 - ◊ Intransitive
 - ◊ We know, then, that this relation is not the identity relation.

Artefactual Offices

- ◊ C is an artefactual material hylomorphic compound =_{df}
 - (i) there is some matter *m* and some office *o*; and (ii) *m* occupies *o*, where that office is such that (a) its essence is ϕ ;
 - (b) there exists some ψ which partially constitutes ϕ , where ψ partly constitutes ϕ only if an essence-specifying account of ϕ makes ineliminable reference to ψ ; and (c) ψ is an affective/intentional/responsive property (an AIR property).

Natural Offices

- ◊ C is a natural material hylomorphic compound =_{df}
 - (i) there is some matter *m* and some office *o*; and
 - (ii) *m* occupies *o*, where that office is such that (a) its essence is ϕ , and (b) ϕ is a mind- and language-independent property, which is to say that it is not even partly constituted by any AIR property.

Offices as Formal Causes

- ❖ The occupants of offices do things in virtue of occupying the offices they occupy; but they do not occupy the offices they occupy by dint of some manner of efficient causation on the part of the offices themselves.
 - ❖ The offices do not cause their occupants to occupy them, except, again, in the meek and mild way of formal causation.
 - ❖ Even so, however meek and mild, formal causation remains explanatorily salient when it comes to specifying the kinds of activities an office's occupant is able to perform.
 - ❖ The form is that in virtue of which some matter is actually some determinate kind of thing.
 - ❖ Updating slightly, we may say that the occupant of an office is what is in actuality only because it is an occupant of the very office which confers its kind membership upon it.