The Arbitrariness of Mereological Immoderation
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1. Abstract

Folk mereology (the theory of parts and wholes most people implicitly accept) has come on hard
times. This “theory”, as a piece of metaphysics, looks at best intolerably arbitrary — at worst,
outrageously false. More radical mereologies are motivated by the folk failure, apparently avoiding the
charge of arbitrariness at the expense of “common sense”. But there is a curious irony in the usual
arguments against the folk and for the radicals. The supposed problem with folk mereology lies in its
moderation and in moderation’s apparently ineluctable arbitrariness. Moderate theories of
composition have trouble drawing precise, non-arbitrary boundaries. But moderation’s doom yet
leaves two immoderate alternatives: Nihilism and Universalism. What is to choose between them? A
pessimistic answer is ‘nothing’. If that’s so, the arguments for immoderation are self-defeating. I
outline this cause for concern without asserting the pessimistic answer, instead offering some
suggestions for directions in metaphysical methodology.

2. Introduction

Let me avoid making very controversial claims about or on the part of “folk-mereology” (the
unphilosophically-popular theory of parts and wholes) — perhaps there is no such theory. There are,
it seems to me, certain pre-philosophical intuitions about the existence and character of a wide range
of composite objects. Ordinarily, you and I talk as if some things compose further things — some
bricks compose the Washington Monument, some atoms compose me — whereas other things
compose no further thing. There is nothing which I and the Washington Monument together
compose. If I am a part of anything, it is only in a figurative sense. We might generalize from this
example (and a large class of similar examples) the claim that composition is ‘moderate’. Let us say
that a theory of composition ‘moderate’ if it posits the existence of some composite objects but not as
many as it might. If there were any such theory of folk-mereology, moderation would doubtless be a
feature.
And what a plausible feature! It is ironic, then, that moderation is at the root of much of the trouble for mereologies comporting with common sense. The trouble comes in spelling out moderation’s specifics. Take, for example, Peter van Inwagen’s (1990) ‘Special Composition Question’ (SCQ): *When is it the case that some xs compose a y?* Because moderation posits objective compositional distinctions — there being cases where some xs do and cases where other xs don’t compose any further thing — the moderate seems obligated to supply factual answers to the SCQ. But answers are hard to come by. Refusing to answer embarrassing puzzle questions (while insisting on there being objective mereological facts) only constitutes further embarrassment: how could there possibly be brute and secret facts about which collection of simples composes the cat on the mat? (Would looking closer help?) Epistemicism looks as awkward as ad hoc ontological decision-making. A remedy suggests itself: when answers prove difficult, deny the sense of the questions. If moderation compels answers to unanswerable questions, moderation must go: composition is immoderate.

This line of thought is rather hasty. Moderation should only be turned back if it demands *impossible* — not merely difficult — answers. Sense must be made of ‘impossible’ in this context. The intrepid moderate might not blush easily at the usual challenges. Perhaps there is nothing *general* we can say about composition. There might simply be brute mereological facts. Immoderates press the thought that *any* moderate theory of composition, like brute facts, must be intolerably arbitrary. But this seems ironic. For immoderation is not a positive theory: it leaves us yet with an arbitrary choice between Nihilism and Universalism. How shall the immoderate make that choice without running afoul of the charge of arbitrariness?

3. *The Trouble with Moderation*

Back to the moderate’s predicament. Where do we start looking for mereological facts? What do my cells and the Washington Monument’s bricks have in common so as to compose those two majestic items? And what do they collectively lack — why do the Washington Monument and I *fail* to compose anything? We fail to satisfy *many* relations, but one salient, general relation comes immediately to mind: we have fairly little to do with each other causally. Push me and I may fall, but nothing much will come of the Washington Monument. Is what we lack what the parts of composite objects *have?* Often, yes. But having *some* causal relation will evidently not do as an answer to the SCQ (even if it is a necessary condition for the xs to compose something).

Even supposing this is on the right track, deeper problems remain. Unger’s (1980) “Problem of the Many”. Take some ordinary composite object — the famous Tibbles the Cat, say. Since Tibbles is composite, there is a certain set of simples (whatever the non-composite objects happen to be) whose
members compose Tibbles. This set is only one of a large number of similar (largely overlapping) but distinct sets of simples which differ from each other by only a few apparently non-crucial simples. Now, having got all those sets before your mind’s eye (as van Inwagen puts it) forget the assumption that Tibbles exists. Can you say which set of simples is such that its members compose a cat? Is just one of these sets Tibbles? We need something like a selection principle to pick out the “real” Tibbles from all those Tibbles look-alikes — all those things that are Tibbles-plus-a-little or Tibbles-minus-a-little — but any selection principle looks like it will be intolerably arbitrary. Whatever causal relation Tibbles’ parts had, the members of these Tibbles+ and Tibbles− sets have too (at least to some degree). And without a principled way to say which set corresponds to Tibbles, we have many cats on our hands contrary to our assumption that there was just one. Faced with this absurdity, we identify the offending assumption as the existence of at least one composite kitty. Nothing else seems to do.

This statement of the problem is too crude as it stands, for we move from one “intuitive absurdity” (that there are many cats right here when we thought there was just one) to another (that there are in fact no cats on the mat when we thought there was just one). We might just as well accept the conclusion (that there are very many cats on the mat) as deny the premise that there are any. In any case, assumption of moderation leaves us with a dilemma: on the one hand, any mereological principle according to which we get the “right number of objects” is intolerably arbitrary; on the other hand, a more even-handed principle has us counting too many cats or one too few. But if given to choose, say the radicals, we must choose the workable, immoderate theory, dispensing with commonsensical intuitions. A similar way of putting these considerations gets expressed in that famous passage in Lewis (1986). The folk intuitions about mereology, as I’ve suggested, have it that composition is moderately restricted. But these moderate restrictions (as causal relations) are invariably vague. The Sahara Desert, to take Lewis’ example, does not have any definite boundaries. For many grains of sand, there’s just no saying whether they are parts of the Sahara. But the resultant picture is strange. Vague boundaries open the door to vague existence:

What is this thing such that it sort of is so, and sort of isn’t, that there is any such thing? No restriction on composition can be vague. But unless it is vague, it cannot fit the intuitive desiderata. So no restriction on composition can serve the intuitions that motivate it. So restriction would be gratuitous. Composition is unrestricted. (Lewis 1986, 212)

Let us suppose with Lewis that vague existence is not only strange, but absurd. And let us suppose that vague restrictions on composition imply vague existence. Two central issues remain. One, do the intuitive desiderata for a theory of composition demand that composition is not only moderately restricted, but only vaguely so? And two, if the intuitive desiderata cannot be met, is unrestricted
composition the compulsory alternative? Notice that Lewis suggests these considerations in support of “Universalism” (unrestricted composition: the theory according to which any collection of xs compose a further thing) not simply immoderation.

Even if we grant both that moderate composition restrictions (of a certain sort) are necessarily (or often) vague and thus incoherent, the correct upshot of the argument should simply be that moderation is unsupportable. Putting the question in terms of moderate restrictions on an otherwise promiscuous mereology suggests that if the restrictions have to go we should be left with our default position: Universalism. Too much of this argument relies on rhetoric. We did not begin with a theory which we subsequently restricted: we began with a moderate theory, which Lewis has purportedly shown to be unsupportable. This, of course, is no great defense of the moderate. To block the argument, she must either show that moderation need not be vague or that vague objects are acceptable (Parsons 1987; Van Inwagen 1990). In a certain trivial way, it’s obvious that moderation tout court need not embrace vague mereological restrictions: a technically “moderate” theory might have it that the xs compose a y just in case the xs are prime in number. Lewis’ point is that a moderate theory of composition which fits our intuitive desiderata must be vague and is thus unsupportable. And if the intuitive desiderata cannot be met, there is no point to laboring on behalf of moderation when the theoretical elegance of immoderation can be had for cheap.

4. Non-Arbitrariness of Composition

If immoderate answers to the SCQ are precise why are precise moderate answers trouble? Why could composition not be, as Markosian suggests, “brutal” — why could it not be that “whenever composition occurs . . . it is just a ‘brute fact’ that the relevant objects compose something, and whenever composition fails to occur, this too is just a ‘brute fact’” (Markosian 1998, 214)? Say the immoderates: positing that many “brute facts” is just implausible. ¹ We might identify a sort of meta-mereological principle governing answers to the SCQ. Horgan, for example, describes what he calls the Non-Arbitrariness of Composition Principle (NAOC):

There cannot be a body of specific compositional facts that are collectively disconnected and unsystematic, and are individually unexplainable. Such arbitrariness is not possible in the mind-independent discourse-independent world. (Horgan 1993, 695)

¹ Perhaps that is supposed to be a brute fact.
It is not *entirely* clear what counts as disconnected or unsystematic, as both these notions admit of
degrees. But the intuition is plain: reasonable mereologies, like reasonable scientific theories, should
minimize bruteness. Better to have a far-reaching and systematic mereology than a collection of brute
facts. Even systematic moderate mereologies — according to which it was just a brute fact that
composition occurs precisely when the xs are, e.g., in contact, fastened, or prime in number — might
be regarded as “too brute” in positing precise joints in the material world. The existence of natural
joints is incredible. Yet the alternative vagueness is unworkable — so composition is immoderate.
Systematic answers to the SCQ trump arbitrary commonsensical mereological decrees. As Horgan
writes, “in metaphysical theory construction, the NAOC principle takes precedence over preserving
our ordinary, pre-theoretic, ontological beliefs — especially of statements expressing those beliefs can
be paraphrased into a more austere idiom” (Horgan 1993, 695). Immoderates can speak the folk
language while denying its substance.

Perhaps moderates should ask after the intuitions behind the NAOC. Whence the
presumption against precise boundaries or unsystematic facts? While certainly a common
presumption, I would not say that it is *obviously* true. In its defense we might rehearse the usual
methodological precepts about theoretical simplicity, but that doesn’t seem quite on the right track:
NAOC expresses the *necessity* of mereological simplicity, not merely its defeasible presumption.
Horgan has in mind the mind-independence of mereology. *Prima facie*, mereology has ontological
consequences — and what there is is never a matter of mere stipulation — so nor may we stipulate
mereological precepts, systematic or otherwise. A reasonable theory of composition might have it that
we can bring items into existence by rearranging old ones (say, by fixing bricks together or fusing
lumps of clay), but it will never be that we may “bring objects into existence” by rewriting mereology.
But here we must step delicately over a confusion invited by my earlier statement of the problem of
the many: we said that it would be intolerably arbitrary to *choose* one of those many different sets as
the set that included all and only Tibbles’ parts, but it must be rather that it would be intolerably
arbitrary for only one of those sets to have as members all and only Tibbles’ parts. Arbitrary theory
*choice*, after all, may nevertheless be for a correct, *non-arbitrary theory*. We must recognize “a
distinction between finding fault with a claim and finding fault with its pedigree” (Wright 1993, 67),
not presuming that the folk are in fact *wrong* solely on methodological grounds.

Yet leaving aside methodological arbitrariness still leaves us with vague worry that somehow
for there to *be* a brute, precise answer to the SCQ would be arbitrary in a way the world is just not.
What could possibly make it the case that this hair was a part of Tibbles the cat while this ever so
similar hair is not? Sympathizers with epistemicism or “brutality” may deny sense to this question, but
the issue does not easily go away. Perhaps a better tack would be to deny the difference between a
collection of unsystematic facts that stand alone as brute and a collection of facts that are implied by a
general (though at bottom equally) brute theory. What makes moderate compositional facts
intolerably arbitrary and immoderate compositional facts not? Replies the immoderate: even if
‘intolerably arbitrary’ is vague, there are still clear cases of it. There may be facts about what there is,
but among those facts is surely not a description of Tibbles’ unique boundary. Most of the world just
isn’t divided up for us like that. It is simple a primitive metaphysical intuition about the world that has,
to a great extent, found support in our experience.

5. Mereological Immoderacy: Nihilism v. Universalism

I suggested that the above considerations against mereological moderation devolve from an aversion
to ontological arbitrariness. Yet they leave us with an arbitrary choice. I do not suggest that
immoderates mean to leave us with this choice — immoderates are rarely simply immoderate.
Claiming simply that composition is immoderate is about as informative as claiming that composition
is causal: it serves merely as a first step, a clearing of ground. Their offered considerations are taken to
serve as an argument for one of Universalism or Nihilism. Lewis takes his Sahara Desert example as
showing not that there is no such thing as the Sahara, but many things, all good candidates for the
title. But note how little Nihilism differs on this count: there’s no saying where the Sahara begins an
ends because there’s no one collection of grains of sand which composes the Sahara (because no
collection of xs compose anything). Salient mereological boundaries disappear either way: they might
be swamped out of salience or there might be no mereological boundaries at all.

Nihilism and Universalism resemble each other also in their ability to offer us consolation for
our folk-intuitions lost. If there are no ordinary objects (Nihilism), paraphrase can provide the
semblance of a folk-semantics for ordinary claims like “there are two fine chairs in the next room” (so
long as such claims are not made in a spirit of strict and philosophical rigor). If there are “too many”
ordinary objects (Universalism), we remind ourselves that we do not ordinarily speak with our
quantifiers “wide open”: trout-turkeys can be ignored as ontologically inconsequential (Lewis 1991).
Our ignoring them doesn’t make them go away. The theories seem also empirically indistinguishable.
Consider Dorr’s (2000) thought experiment about two worlds, identical with respect to their (non-
mereological) non-mereological natural laws and the qualities, positions, and interrelations of their
non-composite matter, but which differed in their compositional facts. Suppose that Nihilism is true
in one world whereas Universalism is true in the other. Now we have in a certain sink in each world,
four plates (mereological simples, suppose) stacked one on top of the other. So according to our
description, in one world, the plates compose further object (a pile); in the other, they compose nothing. Suppose you were dropped into one of these worlds at random and asked to tell which world it was. How exactly should your investigation go? All the light gets reflected from the plates in just the same way, they’ll feel the same, weigh the same when lifted en masse out of the sink, &c. The thought experiment is more suggestive than decisive. If a mereology is to be metaphysically necessary, the scenario is impossible. Likewise, to Goodman’s similarly suggestive slogan that to emphasize every syllable is to emphasize none, one might rudely counter: “NO IT IS NOT!”2 There is a difference between the theories — a metaphysical difference.

Indeed, I think that this winds up as a problem for the immoderate. For all their similarities (their immoderacy, simplicity, ability to console the folk, &c.), Nihilism and Universalism differ wildly in their ontologies. On one theory, composition is fictional; on the other ubiquitous. Nihilism is the paradigm of a desert landscape ontology (only simples) while Universalism is up to its neck in ontological commitments (simples plus fusions of simples). Ontological consequence is what gives Horgan’s principle bite — arbitrariness is only a worry if composition is not ontologically innocent (a claim Lewis 1991 denies in propounding the “ontological innocence” of mereology). For if there are ontological consequences at stake, the decision between Nihilism and Universalism — for all its practical inconsequence — cannot be made by the flip of a coin. The ontologically serious must insist on a non-arbitrary decision between the two theories. But what could make it?

Again, we must be careful not to recoil simply from methodological arbitrariness. I am not so foolish as to suggest that there are no considerations to decide between Nihilism and Universalism: there are serious (though I don’t think decisive) arguments against each (nor do I want to be taken as pressing a tired verificationist line about the meaninglessness of the question). I myself tend toward Nihilism simply because it means that my intuitions about how many cats there are on the mat is off by one instead of N. Others are likely to have more subtle reasons perhaps arising from broader theoretical considerations. Does Universalism get us out of insisting that the existence of simples is metaphysically necessary? Does Nihilism avoid needless ontological clutter? I cannot survey these charges and counter charges here — but I wonder if whatever is said really does anything to avoid the charge of arbitrariness. Do any of the theoretical preferences really address the substance of the counter-charge of arbitrariness? It looks like bad conscience for the immoderate to give up defense of Nihilism or Universalism and convert to epistemicism: if it is acceptable that of one of Nihilism or Universalism is brutally and unknowably true, why is it intolerably arbitrary for a moderate theory to

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2 I got this Morgenbesserian quip from Roy Sorensen.
posit brute facts. We might forgive a moderate for sorites-mongering on ‘intolerably arbitrary’ in response.

All this, I think, is represents more than thinly veiled worry about metaphysics overstepping its bounds — it is more like a *tu quoque* from equally metaphysically serious mereological moderates.

Rendered in Lewisean cadences, we might phrase the worry about immoderation thusly:

What is this theory such that for any xs it is either never the case or always the case (we don’t know which) that they compose any further thing? No restrictions on composition can be moderate (for otherwise they would be arbitrary). But if they are immoderate, we are left with an arbitrary choice still. So immoderation cannot serve the intuitions that motivate it. So immoderation would be gratuitous.

That might put the moderates and radicals in the same boat. It’s another question whether one side of the boat is in deeper water.

REFERENCES


