
*Material Constitution and the Many-Many Problem*¹

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I Introduction

Amongst the virtues extolled within analytic metaphysics are universality and parsimony. We value an account of what there is that includes everything, and we want a metaphysics that not only excludes what there isn't, but that also avoids the vice of double-counting. This vice leads to redundancies in one's ontology, such as asserting or entailing that there are, for example, minds over and above matter (if one is

1 An earlier version of this paper was given at Monash University, and I thank members of the audience there — especially Dirk Baltzly, John Bigelow, and J.J.C. Smart — for useful feedback. This work developed from a paper that I gave at a conference on personal identity held at Bowling Green State University in April 2004. I thank my co-conferees there — especially Lynne Baker, Stephen Braude, David Copp, John Finnis, David Oderberg, and Marya Schechtman — for their critical feedback on the paper given there. Thanks also to Andrew Brennan, Dean Zimmerman, and Lynne Baker (again) for feedback on related work. And thanks to two referees for the *CJP* whose comments proved helpful in shaping up the final version, and to Jackie Ostrem and Bart Lenart for proofreading help. See also my 'Persons, Social Agency, and Constitution,' *Social Philosophy and Policy* 22 (2005) 49-69; 'A Puzzle About Material Constitution and How to Solve It: Enriching Constitution Views in Metaphysics,' *Philosopher's Imprint* 7(5) (2007) 1-20; and 'The Transitivity of Material Constitution,' *Nous* 43 (2009).

a materialist in the philosophy of mind), or groups of people over and above the individual people in those groups (if one is an individualist in the social sciences). An ontological view must be sufficiently pluralistic to achieve universality or completeness, yet sparse enough to respect parsimony or non-redundancy.

Do constitution views in metaphysics, which hold that a person is constituted by her body, or a statue by a particular piece of marble, achieve these twin goals?² Critics have often charged that such views violate parsimony by positing spatially or materially coincident objects when there is simply one object (e.g., a body) that under certain circumstances has special properties (e.g., those that a person has) or to which we attach distinct descriptions (bodily-like and person-like descriptions). The dialectic between proponents and critics of constitution views here vis-à-vis parsimony is well-worn,³ but it has been conducted with little attention to the question of the universality or completeness of constitution views. Shifting our focus, however, reveals a largely unacknowledged and unexplored problem concerning the parsimony of those views, what I call the *Many-Many Problem*.⁴

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- 2 Well-known appeals to constitution, all focused on the case of persons, include those by David Wiggins, 'On Being in the Same Place at the Same Time,' *Philosophical Review* 77 (1968) 90-5; Mark Johnston, 'Constitution is Not Identity,' *Mind* 101 (1992) 89-105; and Sydney Shoemaker, 'Self, Body, and Coincidence,' *Proceedings of the Aristotelian Society* supp. 73 (1999) 287-306. For a recent discussion of Shoemaker, see Dean Zimmerman, 'Shoemaker's Metaphysics of Minds, Bodies, and Properties,' *Philosophy and Phenomenological Research* in press.
- 3 For a sustained discussion of the standard objection to constitution views that in cases such as that of a person and her body we really have just one thing to which we attach different descriptions, see Kit Fine, 'The Non-Identity of a Material Thing and Its Matter,' *Mind* 112 (2003) 195-234; Bryan Frances, 'The New Leibniz Law Arguments for Pluralism,' *Mind* 115 (2006) 1007-22; Jeffrey King, 'Semantics for Monists,' *Mind* 115 (2006) 1023-58; and Kit Fine, 'Arguing for Non-Identity: A Response to King and Frances,' *Mind* 115 (2006) 1059-82.
- 4 The discussion of constitution views that comes perhaps closest to articulating this problem can be found in the work of Ernest Sosa, especially his 'Subjects Among Other Things,' *Philosophical Perspectives* 1 (1987) 155-87, where Sosa introduces the 'snowdiscall problem.' See also his 'Putnam's Pragmatic Realism,' *Journal of Philosophy* 90 (1993) 605-26, and 'Existential Relativity,' *Midwest Studies in Philosophy* 23 (1999) 132-43, as well as the related, more general discussions of Peter Unger, 'The Problem of the Many,' *Midwest Studies in Philosophy* 5 (1980) 411-67, and Eli Hirsch, *Dividing Reality* (New York: Oxford University Press 1993). One difference between my discussion of the Many-Many Problem and these related discussions is that they question the privileging of whole ontologies, including that provided by common sense, while the Many-Many Problem arises *within* our common sense ontology.

II The Many-Many Problem

To illustrate this problem, and to see how it goes beyond standard objections to constitution views that appeal to parsimony, grant that a person is constituted by her body. In granting this, we are supposing that persons are not simply bodies in a certain state, and more generally that the familiar deflationary strategies for maintaining a 'one-thing' rather than a 'two-thing' ontology do not work.⁵ Then is that person also constituted by a certain aggregate of cells, by a particular causal network of bodily systems, or by a specific arrangement of elementary particles? If such entities exist, then each would seem to be spatially and materially coincident with, yet not strictly identical to, the person, much as the person's body is, and for the same reasons (e.g., Leibniz's Law arguments). The same questions can be posed with respect not simply to an entity and what constitutes it, but with respect to a given constituent and what *it* putatively constitutes. Consider a person's body, and assume that it constitutes a person. Does that body also constitute a living thing, a member of *Homo sapiens*, or a social agent, such as a prisoner? If such entities exist, then they appear to be spatially and materially coincident with, yet not strictly identical to, that body, much as the person is, and for the same reasons.

In the abstract, the problem is this: given that we are prepared to countenance pairs of coincident entities, precisely *which* entities exist to stand in a relation of constitution to one another? The relationship between any given entity (such as a person) and what constitutes it appears to be one-to-many. And the converse relationship between any given constituting entity (such as a body) and what it constitutes also appears to be one-to-many. Putting these together implies that constitution is a *many-many* relation, implying not just pairs of coincident entities but many, many such coincident entities in a given case, such as that of a person and her body, or a statue and the piece of marble that constitutes it. Since we are granting, with proponents of constitution views, the inadequacy of standard one-thinger responses to the claim that a person and her body are two coincident entities, we cannot simply appeal to such responses in addressing the Many-Many Problem. As we will see, this seriously constrains what a constitution theorist can say in addressing the Many-Many Problem.

5 I borrow talk of 'one-thing' and 'two-thing' ontologies from Karen Bennett, 'Spatio-Temporal Coincidence and the Grounding Problem,' *Philosophical Studies* 118 (2004) 339-71, who owes it, in turn, to Steve Yablo. See also the characterization of constitution views as a 'new dualism' in Michael Burke, 'Persons and Bodies: How to Avoid the New Dualism,' *American Philosophical Quarterly* 34 (1997) 457-67.

Here is another way to express the problem. Any account of what constitution is should provide some guidance as to *when* that relation holds between two or more entities, and so when it does not hold, and thus must face the Many-Many Problem. Suppose that we are convinced by the standard Leibniz's Law arguments to accept certain cases in which one material entity constitutes another. How can we resist the explosion of our ontology to include other entities that are also constituted or constituting entities in those very cases?

The Many-Many Problem threatens to move us beyond the standard two-thing ontology to a many-thing ontology in ways that should give pause. Even the most avid defender of a constitution view will feel no temptation to think that a baseball bat constitutes the red baseball bat that results when we paint it red, or that Adam (the person) constitutes a distinct entity, a bus driver, when Adam gets a new job driving buses. An answer to the Many-Many Problem should justify the constitution theorist's view here. More generally, since such an answer will tell us when an entity constitutes some other entity, it will also distinguish between changes *to* an existing entity and changes *in* the entities that there are. What is the constitution theorist's basis for saying that a material body's acquiring certain properties is the creation of a new entity, the person Adam, while the acquisition of other properties, such as that of being a bus driver, is merely a change in an existing entity, Adam?

I shall argue that the most intuitive and common family of attempts to articulate a constitution view, exemplified by the recent work of Lynne Rudder Baker, are unlikely to succeed in addressing the Many-Many Problem. This is in large part because they have not seriously considered the ideal of universality when thinking about parsimony. While Baker's appeal to constitution in metaphysics is not the only way to develop the concept, she has provided the most explicit and detailed treatment of that concept to date, and the problems for her view on which I shall focus are also problems for at least a large family of constitution views.⁶

6 See Lynne Rudder Baker, *Persons and Bodies: A Constitution View* (New York: Cambridge University Press 2000); 'Why Constitution is Not Identity,' *Journal of Philosophy* 94 (1997) 599-621; 'Unity Without Identity: A New Look at Material Constitution,' *Midwest Studies in Philosophy* 23 (1999) 144-65; 'On Making Things Up: Constitution and its Critics,' *Philosophical Topics* 30 (2002) 31-51; 'Précis' and 'Replies' in a book symposium in *Philosophy and Phenomenological Research* 64 (2002) 592-98 and 623-35; and 'When Does a Person Begin?' *Social Philosophy and Policy* 22 (2005) 25-48. For a sustained critique of Baker's view, see Dean Zimmerman, 'The Constitution of Persons by Bodies: A Critique of Lynne Rudder Baker's Theory of Material Constitution,' *Philosophical Topics* 31 (2002) 295-338; and for a

Such views have two distinctive features. First, unlike some discussions of constitution, they articulate a notion of constitution that is *non-mereological*. That is, constitution is characterized without an appeal to the relationship between parts and wholes.⁷ Second, such views are *ampliative* in that they imply some kind of ontological commitment to the distinctive existence (or at least non-identity)⁸ of constituting and constituted entities. Tables, computers, and lakes are, in some sense, something more than the entities that constitute them; they are additions to a world that merely contains entities, such as pieces of wood, systems of silicon and wires, or bodies of water. If persons are (non-mereologically, ampliatively) constituted by bodies, and statues by pieces of marble, then there are persons as well as bodies in the world, statues as well as pieces of marble.

There is, one should note, an ontologically deflationary concept of constitution that deserves treatment in its own right, one that implies that when A constitutes B, A is *nothing-more than* B in a certain state or condition. In fact, my own view is that such a notion is required as a supplement to the ampliative notion if we are to do justice to the full range of relatively ordinary uses of 'constitution.' For example, when we say that a liquid in a cup is constituted by molecules of H₂O, we make use of such a deflationary notion of constitution. Although I shall conclude by saying something briefly about this conception, I will be concerned exclusively in the body of the paper with the ampliative views of constitution held by two-thingers.⁹

recent account of constitution alternative to Baker's, see Ryan Wasserman, 'The Constitution Question,' *Noûs* 38 (2004) 693-710.

- 7 For mereological views, see, for example, David K. Lewis, *Parts of Classes* (Oxford: Blackwell 1991), esp. 81-7 (where the discussion is cast in terms of 'composition'); Dean Zimmerman, 'Theories of Masses and Problems of Constitution,' *Philosophical Review* 104 (1995) 53-110; Michael Rea, 'The Problem of Material Constitution,' *Philosophical Review* 104 (1995) 525-52; and Judith Thomson, 'The Statue and the Clay,' *Noûs* 32 (1998) 149-73. For Baker's discussion of why she eschews mereology in her account of constitution, see *Persons and Bodies*, 179-85, but note the mereological element in her 'Unity Without Identity: A New Look at Mereological Constitution.' Whether foregoing a mereological element in the constitution view is a mistake is an issue beyond the scope of the current paper.
- 8 In 'On Making Things Up: Constitution and its Critics,' Baker characterizes constitution as a form of non-identity that is different from separate existence, in part to highlight the sense in which constitution is a unity-making relation. This is a shift in emphasis, rather than a substantive change in view, and what I say below should hold on either characterization.
- 9 The distinction between what I am calling ampliative and deflationary views of

Having already sketched the Many-Many Problem, I turn next to a basic, semi-formal version of the constitution view (section III) and briefly show how the Many-Many Problem arises for it (section IV). Ontologically more robust versions of the constitution view, including Baker's own, might be thought to go some way to restoring parsimony (section V). But, I shall argue, they do not go to the heart of the problem (section VI). Since these represent the most natural and common ways to develop constitution views, my argument points to a problem that has been insufficiently recognized for the depth of the challenge it poses to constitution views. I conclude with some comments about the broader significance of the Many-Many Problem and about constitution views more generally (section VII).

III An Intuitive Characterization of Constitution and the Simple View

Like other proponents of constitution views, Baker develops her own account of constitution with a focus on the two standard examples thus far mentioned — persons and bodies, and statues and pieces of marble. Yet (again, along with other constitution theorists) Baker also recognizes the generality of the constitution relation. As she says, 'Constitution is everywhere: Pieces of paper constitute dollar bills; pieces of cloth constitute flags; pieces of bronze constitute statues. And constitution applies not only to artifacts and symbols, but to natural objects as well: strands of DNA constitute genes.'¹⁰ Any complete account of constitution should incorporate and develop three features of such intuitive examples.

First, the entities in each pair are spatially and materially coincident for some extended period of time.¹¹ For the entire time that Michel-

constitution is developed in my 'A Puzzle About Material Constitution and How to Solve It: Enriching Constitution Views in Metaphysics.'

10 *Persons and Bodies*, 21

11 I follow Kit Fine, 'The Non-Identity of a Thing and Its Matter,' 197-8, in appealing to both spatial and material coincidence chiefly as a way of bypassing continuing disagreement (especially between Baker and her critics) about which of these should feature in an account of constitution. Baker's abandonment of mereology (see footnote 7 above) left her with only spatial coincidence in her own non-mereological view of constitution. But an appeal to material coincidence is compatible with eschewing mereology, provided that one avoids analyzing material coincidence in terms of the sharing of parts. A weaker notion of constitution that requires only spatial coincidence has counter-intuitive implications — such as a

angelo's David exists, it is spatiotemporally and materially coincident with a particular piece of marble. When a geneticist identifies a long series of base pairs as the gene for a given disorder, the gene and the base pairs are in the same place, and the strands of DNA and the gene share the same matter.

Second, there is some kind of dependency relation between each of these pairs of entities, such that the constituted entity — the particular person, statue, dollar bill, flag, or gene — in some sense owes its existence to the material entity that constitutes it. Like the realization base for so-called 'higher-order properties,' such as mental or social properties, material entities that constitute other entities are typically thought of as ontologically more fundamental than the entities (properties) that they constitute (realize). This is the basis for taking constitution to be an asymmetrical relation of determination of some kind.

Third, the relata in each of these pairs of examples are entities with distinct conditions of existence. Not any old piece of paper constitutes a dollar bill, even one identical in its intrinsic properties to an actual dollar bill; a body continues to exist after the person it constitutes dies; and statues are sculpted from pieces of marble, and so seem to come into existence later than those pieces. This third feature underwrites the intuition that constituted entities are not strictly identical with their constituents, while the first and second features, spatial-material coincidence and ontic dependence, indicate ways in which such entities are not simply numerically distinct, as say a pair of flags are.

The most obvious way to articulate a view of constitution incorporating these features is to make each a necessary condition for constitution that together are sufficient for a relation of constitution to hold between two entities. Doing so produces what I will call the *Simple View* of constitution, according to which some entity, x , constitutes some entity, y , during some time period, p , just if:

- (i) **Coincidence:** x and y are spatially and materially coincident during p .
- (ii) **Dependence:** there are conditions that necessitate the existence of y , in the sense that if x (or something of x 's kind) exists in those conditions, an instance of y that is spatially and materially coincident with that thing also exists.

material object being constituted by the region of space it occupies, or ghosts that spatially coincide with a person for some period of time being constituted by that person — implications that do not hold of a stronger notion that requires material coincidence as well.

- (iii) **Distinctness:** it is possible for x to exist without there being anything of y 's kind that is spatially and materially coincident with x .

The Simple View is both non-mereological and ampliative, and is cast in terms general enough to have application to a wide range of cases. Since Coincidence and Distinctness are relatively well understood, let me explain the idea of Dependence, and the necessitating conditions it refers to, by means of an example.

Consider the statue David and the piece of marble of which it is constituted (hereafter, following Baker, *Piece*). Amongst the conditions necessary for statues to exist are certain kinds of human practices, institutions, and intentions, such as practices of sculpting, institutions of artisan craftsmanship, and the intentions to produce particular, meaningful works of art. As cultures shift, these conditions may change, and we might think that none of them is strictly necessary for statues to exist, as evidenced by the production of statues by machines and with the intention merely to make as much money as possible. But the general point is that some such conditions must hold if there are to be statues, rather than merely pieces of marble. In general, these conditions concern in part the nature of the world beyond the spatial boundary that David and Piece share, and once they are in place, nothing more than Piece needs to exist for David also to exist.

The same is true of the conditions necessary for the existence of dollar bills and of flags, and, perhaps more controversially, of genes and of persons.¹² But having said enough by way of introducing the Simple View, I want now to show briefly just why that view faces the Many-Many Problem.

12 The controversy here stems largely from the common but mistaken view that both genes and persons are individuated entirely by their intrinsic properties. On many views of persons, and especially those appealed to within constitution views, persons are individuated in part by their mental states or mental capacities. Yet these in general are not intrinsic properties, for well-known externalist reasons. Genes, by contrast, are functional entities, where their function is not simply to code for proteins (although many do), but also to regulate the functioning of other genes in various ways (as promoters, enhancers, inhibitors, etc.). This characterization of genes implies that their existence conditions include facts about the world beyond the spatial boundary shared by particular genes and particular strands of DNA. For a development of this point in the context of a broader discussion of genetics and development, see my *Genes and the Agents of Life* (New York: Cambridge University Press 2005), chapters 6-7.

IV The Simple View and the Many-Many Problem

The Simple View articulates a relation that is irreflexive, asymmetrical, and transitive, all I think desirable properties in a notion of (ampliative) constitution.¹³ While the Simple View defines constitution so as to apply to pairs of entities, there is nothing in that view to rule out one entity's being constituted by many different entities, or one entity's constituting many different entities. Consider again the standard example of a person and her body.

On the Simple View, a person (Adam) is constituted by his body (Adam's body): Adam and Adam's body are spatially and materially coincident for some period of time (Coincidence), there are conditions that, together with the existence of Adam's body, necessitate the existence of a person (Dependence); and it is possible (e.g., after death) for Adam's body to exist without there being a person that is coincident with that body (Distinctness).¹⁴ Yet that body bears just these relations to many other entities, such as a living thing, a member of *Homo sapiens*, and a prisoner. In particular, Adam's body and each of these entities satisfies the condition of distinctness for just the reason that body and *person* do: there are conditions under which that very body could exist yet not be spatially and materially coincident with a living thing, a member of *Homo sapiens*, or a prisoner. Conditions in which the body is buried, in which that body does not have the right kind of phylogenetic history, and in which there is no social institution of imprisonment, respectively, would do the trick.

Precisely which of these entities stand in a relation of constitution to the person's body? Since it is possible for (i) — (iii) to be satisfied by Adam's body and each of a living thing, a member of *Homo sapiens*, and a prisoner, the Simple View implies that the answer is 'all of them.' But there is, I think, a strong temptation to say that there is really just *one* constituted entity here — Adam — one that has certain other properties or that we can subsume under different descriptions. (Likewise, in the earlier examples of the baseball bat painted red and the bus driver.) My

13 Although I view each of these formal properties as desirable, at one time or another all have been called into question as properties of constitution. For discussion of some of the complexities concerning the transitivity of constitution, see my 'The Transitivity of Material Constitution.'

14 For an interesting, recent discussion of views that in effect deny distinctness because they deny that dead bodies exist at all, see David Hershenov, 'Do Dead Bodies Pose a Problem for Biological Approaches to Personal Identity?' *Mind* 114 (2005) 31-59.

only point about this for now is that the Simple View does not provide the resources to support such a view.

Conversely, to turn to the other half of the Many-Many Problem, Adam would seem to be constituted not simply by his body but by many other entities, such as a causal network of bodily systems, a certain organization of cells, and an arrangement of elementary particles. At least that's what the Simple View implies, since there are circumstances in which conditions (i) — (iii) are satisfied by each of these entities and Adam (the person). Again, however, there is a strong and natural temptation to dismiss such examples by saying something like 'Well, none of *those* so-called entities are real entities — they are not individuals or things at all, like Adam's *body* is!' And again I would point out that there is nothing in the Simple View itself that licenses this move.

The obvious moral? The Simple View is insufficiently constrained. It lacks the resources to distinguish between cases in which a new entity is created (a statue from a piece of marble), and those in which an existing entity is modified in some way but no new entity is brought into being (a baseball bat being painted red). However, the temptations noted above suggest ways to develop the Simple View that solve the Many-Many Problem. If you share either the intuition that a person, a living thing, a member of *Homo sapiens* and a prisoner might all be *the very same thing*, or the intuition that 'Adam's body' might name an entity that constitutes a person but that specifications of 'a causal network of bodily systems,' 'a certain organization of cells,' and 'an arrangement of elementary particles' do not, then it may seem that there is an obvious way to constrain the Simple View so as to solve the Many-Many Problem.

V Aristotelian Strengthening of the Simple View

The natural modification of the Simple View that I have in mind is broadly Aristotelian in character, and insists that the relation of constitution holds between not just any old entities but only between entities that have some kind of privileged ontological status. For Aristotle, such entities are substances, the paradigm examples of which are individual human beings and other living creatures.¹⁵ But there are other ways to

15 Whether Aristotle himself should be seen as accepting what I am calling 'Aristotelian strengthening' turns on complicated issues concerning not only how we should understand the distinction between form and matter, but also on the appropriateness of reading a constitution-based metaphysics into Aristotle's metaphysics at all. (Thanks to Dirk Baltzly for a comment that prompted this caveat.)

specify the nature of this privileged ontological status. Lynne Baker, for example, builds on the Simple View by claiming that it applies to two entities only when those entities are of different *primary kinds*, where these specify what each entity is essentially. On Baker's view, Adam is essentially a person, and only non-essentially a bus driver; Michelangelo's David is essentially a statue, and only non-essentially a beautiful object; and a baseball bat is essentially a bat but non-essentially a red bat.¹⁶

One criterion for distinguishing such privileged entities that Aristotle himself suggested draws on the following asymmetry. When a given person (Adam) goes out of existence, then necessarily so too does the bus driver that he is. But the converse is not true: Adam's ceasing to be a bus driver is (at least typically) a change in Adam, rather than the end of Adam. The same asymmetry holds in the case of the baseball bat and the red baseball bat. Thus, substances are the individual things in the world whose existence is presupposed by the existence of other kinds of thing, but whose existence in turn does not stand in this relation to anything else.

Baker offers a different basis for identifying her privileged entities, those that instance primary kinds. She suggests that we have distinct primary kinds just when we have 'whole classes of causal properties' that are distinctively different, claiming that it is only when there are such distinctive classes of properties that we have an object of one primary kind constituting another. In such cases, claims Baker, we have the creation of new individuals. Thus, Adam's primary kind is person, and his body's primary kind is body. Because the classes of causal properties that persons and bodies have are distinctively different, Adam is something more than his body; the same is true, claims Baker, for David and Piece. Since neither bus drivers nor red baseball bats are primary kinds, they do not stand in relations of constitution.¹⁷

For Aristotle's views on substances, see his *Metaphysics*, especially books VII (Z) and VIII (H), in Jonathan Barnes, ed., *The Complete Works of Aristotle: The Revised Oxford Translation*, Volume Two (Princeton, NJ: Princeton University Press 1984).

16 See, for example, *Persons and Bodies*, 39-46. Others (including Aristotle and Peter Strawson, in *Individuals: An Essay in Descriptive Metaphysics* [London: Methuen 1959]) have used the term 'primary kinds,' but such uses appear to be coincidental with Baker's usage. For a very brief discussion of how the constitution view compares to Aristotle's own views, see Baker's 'On Making Things Up,' footnote 4 and the paragraph it footnotes. For a recent exploration of ontologically privileged categories, see Jan Westerhoff, 'The Construction of Ontological Categories,' *Australasian Journal of Philosophy* 82 (2004) 595-620.

17 The quotation is from *Persons and Bodies*, 41. See also Baker's discussion more generally in Chapter 2 of that book.

Such views make explicit the idea that amongst the plurality of things that might be said to exist, not all are created equally, for some — substances, primary kinds — are metaphysically more fundamental than others. In the examples above, entities such as persons, statues, and baseball bats have ontological priority, with bus drivers, beautiful objects, and red baseball bats being some type of derivative modification of these entities (if they can be said to exist at all). We might characterize these as ways things can be, or properties that things can have, but they are not *things themselves* in the way in which persons, statues, and baseball bats are. Constitution is a relation that obtains only between such privileged things, since there is a very real sense in which these are the only things that there are.

This kind of Aristotelian strengthening of the Simple View thus appears to have the resources to solve the Many-Many Problem, and it suggests a natural project for proponents of constitution views: to articulate just what the privileged ontological kinds are, plugging that result into one's account of what constitution is. Indeed, this is Baker's own view, and her own account of constitution is relativized to instances of primary kinds. But I want to argue now that Aristotelian strengthening does not in fact solve the Many-Many Problem, and subsequently that it represents a mistaken way to develop constitution views.

VI Why Aristotelian Strengthening Does Not Solve the Many-Many Problem

There are two different reasons why developing the Simple View by an appeal to ontologically privileged entities, such as primary kinds or substances, does not get at the heart of the Many-Many Problem. The first is that there is a variety of examples in which there is no single answer to the question of which of a number of putative entities are ontologically privileged, and so no way for versions of the Simple View strengthened by an appeal to such entities to address the Many-Many Problem. This is a respect in which Aristotelian strengthening of the Simple View is *too weak*. The second is that such strengthening of the Simple View calls into question the plausibility of viewing constitution as the relation between persons and bodies, and statues and pieces of marble, which I take to be an unwelcome consequences of such modifications of the Simple View. This is a respect in which Aristotelian strengthening of the Simple View is *too strong*.

To make a case for the first of these objections, consider David and Piece. Put aside questions about Piece, and concentrate on David. Suppose that Piece constitutes David and that David is essentially a statue, i.e., in Baker's terms, that statue is David's primary kind. What Piece

constitutes is also a work of art, a valuable artifact, and a creation of Michelangelo, amongst other things. To raise the Many-Many Problem vividly here, let *Art* be the name of the entity that is a work of art, *Val* be the name of the entity that is a valuable artifact, and *Mick* the name of the entity that is a creation of Michelangelo's. Since the conditions of Coincidence, Dependence, and Distinctness are satisfied by Piece and each of Art, Val, and Mick, on the Simple View each of these entities would be constituted by Piece.

The Simple View strengthened by an appeal to ontologically privileged entities such as primary kinds or substances claims to avoid this outcome by implying that Art, Val and Mick are only putatively entities: only David is a substance or belongs to a primary kind. It is *David* that is a work of art, a valuable artifact, and a creation of Michelangelo's, where each of these is properly conceived as a property that David happens to have, rather than as an entity on a par with David that is also constituted by Piece. Here we have the 'is' of predication, rather than the 'is' of identity or constitution, with David as the subject of that predication.

Yet this view, implying an asymmetry between David, on the one hand, and Art, Val, and Mick, on the other, is hard to sustain. The basic problem is that it is very difficult to see what in the world could make David (rather than Art, Val, or Mick) an instance of a primary kind or a substance. Let us grant that David instantiates a whole cluster of properties that Piece in itself does not possess. But that is also true of Art, Val, and Mick. Moreover, the kind of asymmetrical existential dependence that holds between pairs of entities such as Adam the person and Adam the bus driver, or a baseball bat and the red baseball bat it becomes when painted, do not hold between David and any of Art, Val, and Mick. For example, none of these entities is a phase sortal or properly thought of as a mode of David. Suppose that David is essentially a statue, and so that statue is David's primary kind. But there seems nothing to stop us from similarly taking Art essentially to be a work of art, Val essentially a valuable artifact, and Mick essentially a creation of Michelangelo's. If we assume this about these three entities, then being a statue is merely a property that Art, Val, and Mick happen to have, much as being a work of art, a valuable artifact, and a creation of Michelangelo's are properties that David happens to have.

We could make this point about the symmetry between David and these other entities in another way. What is the basis for thinking that *statue* is the ontologically privileged kind that David belongs to *rather than work of art, valuable artifact, or creation of Michelangelo's*? 'The David' and 'Michelangelo's David' designate something in our world that has all of these properties, but what makes that referent essentially a statue rather than any of these other kinds of thing? We can agree that these

form a cluster of properties that, given certain necessitating conditions, result in an entity that is not simply identical to Piece. But there seems to be no reason to view being a statue as uniquely essence-identifying for that cluster in a way that would serve as the basis for thinking of the statue as David's primary kind. As we have seen, we could define David as the thing that is essentially a statue, and so make statue David's primary kind, but that would serve only to underscore the symmetry with the other entities, since we can define Art as the thing that is essentially a work of art, Val as the thing that is essentially a valuable object, and Mick as the thing that is essentially a creation of Michelangelo's.

The sorts of problem that arise here deepen when we consider less familiar kinds of example. Consider islands and the land that constitutes them. In a given case, that land might also be thought to constitute a tourist resort, a wildlife refuge, a country, or a volcano. The Simple View is committed to all of these entities being constituted by the land, and so faces the Many-Many Problem. But attempting to address that problem by appealing to ontologically privileged entities and restricting the account of constitution to relations between those doesn't get any purchase at all in a case like this. Here the whole idea that there is one kind of thing that a constituted entity essentially is seems wrong-headed, as I think it is (albeit less obviously so) in the case of David and Piece, at least as a way of addressing the Many-Many Problem. The question 'What is this thing essentially?' seems to demand an answer informed by the context in which the question is asked, both in the case of what entities are constituted by the land and, I think, in the case of those constituted by Piece.

What of the second problem for Aristotelian strengthening, that of calling into question whether persons are constituted by bodies, and statues by pieces of marble? To see how this problem arises, let us shift our focus from constituted entities, such as David, to *constituting* entities, such as a piece of marble or a person's body. That such entities can be given something like a proper name, such as 'Piece' or 'Adam's body,' does not itself tell us what kind of thing such entities are, or even whether they *are* a kind of thing at all. Earlier I noted one response to the Many-Many Problem that claimed that entities such as a causal network of bodily systems, an aggregate of cells, and an arrangement of elementary particles were not things or individuals, and so were not, like bodies, candidates for being the constituents of another thing, a person. On the view we are now considering, it is not enough that bodies simply be things; rather, they must be instances of particular types of things, primary kinds. But what kind of entity is a body? Several candidates for the primary kinds that a given person's body might instantiate come to mind — for example, material object and living thing.

But these are distinct primary kinds, just as each is distinct from the primary kind person, and neither has the same identity conditions as does body. Squish up the body enough and you might well have the same material object but no body at all; when the person dies, there is no living thing coincident with the body but the body continues to exist. Likewise, a given piece of marble might be thought to instantiate a number of distinct primary kinds, such as material object and metamorphic rock, but whatever the precise identity conditions for a piece of marble are, they are not the same as those for either of these kinds. Since marble forms from limestone under extreme temperatures and pressures over a long period of time, it is possible for there to be a material object that becomes a piece of marble; and since marble is a kind of metamorphic rock, the identity conditions for a piece of marble are more specific than those for a piece of metamorphic rock.

So it seems that neither 'a body' nor 'a piece of marble' are very good candidates for names or descriptions that refer to primary kinds, or more generally to the type of ontologically privileged entity drawn on by Aristotelian strengthening of the Simple View. In particular, there seems little here to distinguish (say) body as such an entity from a network of bodily systems, an aggregate of cells, and an arrangement of elementary particles. Given the right conditions, particular instances of any one of these would constitute a person. Characterizing something that constitutes a given statue as a piece of marble likewise does not identify that thing's primary kind, or at least does not do so distinctively. Other possible ways to characterize that thing — as a material object, a piece of metamorphic rock, a compressed block of minerals — seem no worse candidates for primary kinds than does a piece of marble. And given the right conditions — in fact, just the conditions that would make a given piece of marble a particular statue (such as David) — any of those things would constitute that statue.

As with my earlier objection, the problem here deepens as we move beyond the standard examples of persons and bodies, statues and pieces of marble. We can put my objection here as a dilemma. In a quotation I provided from Baker's *Persons and Bodies* we saw that amongst the constituting entities that Baker takes her view to apply to are strands of DNA (constituting genes), pieces of cloth (constituting flags), and pieces of paper (constituting dollar bills). If a strand of DNA or a piece of cloth or paper is an instance of a primary kind, then so too is a causal network of bodily systems and an aggregate of cells. But if that is so, then the Many-Many Problem survives Aristotelian strengthening. Conversely, if a strand of DNA or a piece of cloth (paper) is not a primary kind, then requiring that the relata of constitution be instances of primary kinds restricts the generality of a constitution view in unacceptable ways. It not only implies that constitution views will fail to

be general in their applicability, but calls into question whether even persons are constituted by bodies, and statues by pieces of marble.

VII Conclusion

Much of the debate over constitution views has focused on the issue of their parsimony: do we really need to recognize the existence of coincident entities, persons as well as bodies, statues as well as pieces of marble? I have argued that once we side with proponents of constitution views and answer these questions affirmatively, we must then address the Many-Many Problem, a problem that arises within the common sense framework in which a number of versions of the constitution view have been developed, including that of Lynne Rudder Baker. My argument implies that the most natural and common way to develop the constitution view — building on the Simple View through Aristotelian strengthening, as Baker herself does and I think as many find quite intuitive — leads to a metaphysics that does not satisfy the twin ideals of parsimony and universality.

As some of my passing comments may suggest, I view the Many-Many Problem as posing a *prima facie* challenge rather than a knockout blow to constitution views in metaphysics. The problem is particularly pressing for those views, since once they have opened the door to embrace spatially and materially coincident entities they face the question of whether such coincidence is more promiscuous than even the most ardent two-thinger can bear. I have articulated the problem as one arising within the common sense metaphysics that most proponents of constitution views (including Baker) take for granted, and in this respect the Many-Many Problem is particularly pressing for proponents of constitution views.

Such proponents may find some consolation in that fact that something like the Many-Many Problem is one to which alternative metaphysical views must also respond, including one-thingers about persons (such as animalists, who view human persons as essentially animals) and four-dimensionalists in metaphysics more generally, whose must answer the question of exactly *what* temporal stages are stages of.¹⁸ What all metaphysical views share is the problem of providing a defensible criterion for what there is, or for what there is most

18 For animalism, see Eric Olson, *The Human Animal: Personal Identity Without Psychology* (New York: Oxford University Press 1997), and for four-dimensionalism, see Theodore Sider, *Four-Dimensionalism: An Ontology of Persistence and Time* (New York: Oxford University Press 2001).

fundamentally. What is special about constitution views, if what I have argued here is correct, is that the most natural way of doing this — via an appeal to primary kinds or substances — leaves the Many-Many Problem unsolved.

At the end of section II, I acknowledged the existence of both an ampliative and a deflationary conception of constitution. On the ampliative conception (which I have assumed throughout the paper), tables, computers, and lakes are, in some sense, something more than the entities that constitute them, additions to a world that merely contains pieces of wood, systems of silicon and wires, or bodies of water. Yet we also talk of this table being made of wood, of my computer being just silicon chips and wires organized in a certain way, and of a given lake being composed of water. If we were to understand such talk in terms of an ampliative notion of constitution, then the Many-Many Problem would imply an even more expansive ontology than I have argued it does imply for constitution theorists. Alternatively, we might think that it is just here that we need to appeal to a *deflationary* conception of constitution, one that implies that tables are nothing more than wood, computers nothing more than silicon and wires, and lakes nothing more than water. Although I have not tried to show how one might address the Many-Many Problem facing constitution views that embrace coincident entities, the availability of a deflationary notion of constitution suggests that we should be sensitive to the interplay between these two notions in articulating and evaluating further solutions to the Many-Many Problem.

So there is the possibility that a concept of constitution fashioned to capture ampliative intuitions (e.g., persons are not simply bodies in a certain state, statues are something over and above pieces of clay) will be inadequate for all of our uses of ‘constitution’ and its cognates. Those exploring the space of possibilities for constitution views who aspire to universality, whatever they think of the place of Aristotelian strengthening in such views, need to keep in mind that when they settle on an acceptable view of constitution that is ontologically ampliative, their job may be only half-done.

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