

## Ontological Individualism Reconsidered

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*The thesis of methodological individualism in social science is commonly divided into two different claims – explanatory individualism and ontological individualism. Ontological individualism is the thesis that facts about individuals exhaustively determine social facts. Initially taken to be a claim about the identity of groups with sets of individuals or their properties, ontological individualism has more recently been understood as a global supervenience claim. In this paper I argue that ontological individualism is false. Only if the thesis is weakened to the point that it is equivalent to physicalism can it be true, but then it fails to be a thesis about the determination of social facts by facts about individual persons. Even when individualistic facts are expanded to include people's local environments and practice, I argue, those still underdetermine the social facts that obtain. If true, this has implications for explanation as well as ontology. I first consider arguments against the local supervenience of social facts on facts about individuals, correcting some flaws in existing arguments and affirming that local supervenience fails for a broad set of social properties. I subsequently apply a similar approach to defeat a particularly weak form of global supervenience, and consider potential responses. Finally, I explore why it is that people have taken ontological individualism to be true.*

The thesis of methodological individualism in social science is commonly divided into two different claims – a controversial claim about explanation, and an innocuous claim about ontology. Explanatory individualism asserts that explanations in the social sciences can or ought to be provided in terms

of individuals and their properties. It is often associated with projects in reducing or providing microfoundations for social theories. Ontological individualism is a thesis about the determination of social properties or facts. As Philip Pettit has recently put it, “Individualism insists on the supervenience claim that if we replicate how things are with and between individuals, then we will replicate all the social realities that obtain in their midst: there are no social properties or powers that will be left out.”<sup>1</sup>

While explanatory individualism has remained controversial, theorists have largely arrived at a consensus with regard to ontological individualism. Ontological individualism was initially cast as a claim about the identity of groups with sets of individuals or their properties, but as in Pettit’s formulation, it has more recently been understood as a supervenience claim. In a widely cited 1984 article, Gregory Currie argues that while social properties fail to supervene locally on individualistic properties of people, they do supervene globally on them.<sup>2</sup> This interpretation of ontological individualism supports the intuition that, while individualistic properties of people exhaustively determine social properties, there may be insurmountable barriers to providing individualistic explanations of particular social phenomena. The global supervenience interpretation is thus endorsed by advocates and critics of explanatory individualism alike.<sup>3</sup>

Ontological individualism is often seen as the only response to the implausible view that there is an autonomous sphere of social properties or

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<sup>1</sup> Pettit (2003), p. 191.

<sup>2</sup> Currie (1984).

<sup>3</sup> Among those explicitly advocating supervenience of social properties on individualistic properties are Macdonald and Pettit (1981), p. 119; Mellor (1982); Currie (1984); Kincaid (1986), p. 499; Tuomela (1989); Little (1991); Bhargava (1992), p. 64; Pettit (1993); Stalnaker (1996); Kincaid (1997); Sawyer (2002); Schmitt (2003), p. 2; Pettit (2003); Kincaid (1998); Sawyer (2005). Schmitt uses a different terminology, taking “ontological individualism” to refer only to identity claims, and asserts that global supervenience is “nearly uncontroversial.”

facts. In a number of discredited social theories, social groups were treated as genuine agents with priority over the individual. Often, these views took individuals to be governed by a deterministic social logic – or worse, by an exercise of a social or group will – independent of individuals. Ontological individualism has traditionally been regarded as equivalent to the denial of this unacceptable dualism.

My aim in this paper is to challenge this. It is surely correct to deny the autonomy or priority of social facts. But ontological individualism is a stronger thesis than this, and on any plausible interpretation, it is false. The reason is not that social properties are determined by something other than physical properties of the world. Instead it is that social properties are often determined by physical ones that cannot plausibly be taken to be individualistic properties of persons. Only if the thesis of ontological individualism is weakened to the point that it is equivalent to physicalism can it be true, but then it fails to be a thesis about the determination of social properties by individualistic ones. This is the case even if we apply a very charitable interpretation to what properties count as the individualistic ones.

But the claim that social properties supervene globally on individualistic ones is widely assumed not only in treatments of the metaphysics of the social world, but also in constructing practical explanations in the social sciences. Many forms of explanatory individualism entail ontological individualism. For these, the failure of ontological individualism immediately falsifies explanatory individualism. Moreover, in many explanatory projects in the social sciences, individualism is taken as a basic principle of model design. The falsity of ontological individualism means that the aims of such projects ought to be reconsidered.

I will begin this paper by disaggregating the main points of controversy surrounding ontological individualism. Following will be a discussion of the local forms of supervenience and a refinement of arguments against local supervenience, correcting some flaws and expanding the failure of local supervenience to a broad set of social properties. I will subsequently apply a similar approach to defeat a particularly weak form of global supervenience,

and consider some potential responses. Finally, I will suggest diagnoses for the persistence of this doctrine.

## **1. The idea of ontological individualism**

Ontological individualism asserts a kind of dependence of the social on the individual. Occasionally the dependence is cast as a linguistic claim, between social predicates and individualistic predicates, for instance. More commonly though, ontological individualism is taken to involve dependence between facts; between facts about society and facts about individuals, or between certain properties possessed by social entities or events, and the properties of individuals that figure into those social entities or events. Though it is rarely broken out explicitly, any treatment involves interpreting the following elements: (1) *What count as the individuals in social science?* (2) *What properties count as individualistic?* (3) *Which entities are social, and which entities bear social properties?* (4) *What properties count as social ones?* (5) *What is the dependence relation in this context and how exhaustive is it?* (6) *On which individuals does a given social entity depend? That is, does some subset of individuals figure into determining the properties of a social entity, or do all individuals need to be taken into account?*

The main areas of contention in understanding ontological individualism historically involve what the relevant properties are, social and individualistic, and how dependence is to be treated. My aim in these preliminaries is not to resolve the controversies, but to note the main ones briefly, and to set up a plausible but generous interpretation of ontological individualism as a baseline.

### *1.1 Individualistic properties*

The issue of which properties count as individualistic often dominates the debates over ontological individualism. Some methodological individualists are stricter than others on this count. A “psychologistic” individualist may insist that the individualistic property set should only include internal

psychological states.<sup>4</sup> More common is to take the physical bodies of people and the relational properties among people to be included in the properties that count as individualistic, while others will also take the local physical environments in which individuals are embedded to be among their individualistic properties.

In this discussion, I will treat the individualistic property set as charitably as possible, in order to demonstrate that independent of controversies over which properties count as individualistic, nonetheless social properties fail to depend on individualistic ones. This involves making the individualistic property set broad and inclusive.

Not *every* property can be included among the individualistic property set, however. Many relational properties among individuals are unproblematic for the ontological individualist, but on pain of triviality, some cannot count as individualistic. I, for instance, have the property of being subject to U.S. tax law, living a few hours from Poughkeepsie, and even being such that George Bush is President, Saturn has rings, and the U.S. GDP rose 1.3% in the fourth quarter. These are properties that are not plausibly individualistic properties of me. At least two kinds of properties must be excluded from the individualistic property set as a whole. One is the social properties themselves, which are the ones taken to be dependent on the individualistic ones. The other is properties that cannot plausibly be ascribed to any person. As I mentioned, many contemporary individualists will take physical bodies and even local environments to be among the individualistic property set. Nonetheless, parts of the physical environment that are not in anyone's local vicinity, and that no one has even encountered, are not plausibly individualistic. Being composed of two-thirds water is plausibly an individualistic property of me, but the third moon of Saturn's being composed of two-thirds water is not an individualistic property of me or of any person.<sup>5</sup>

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<sup>4</sup> Cf. Udehn (2001).

<sup>5</sup> Equally, that some fact is a fact about an individual doesn't only restrict what properties are appropriately included, but to what the property is applied. Even if we admit as an *(footnote continued)*

In other words, even when physical properties are included among the individualistic ones, ontological individualism is a stronger thesis than just the thesis of physicalism. The intuitive claim of ontological individualism is that when we fix the way things are with and between people, we fix their social properties. That implies that what social properties do *not* depend on is properties apart from those that can plausibly be taken as individualistic properties of individual people. As we shall see in Part 3, however, many social properties and facts depend on just those nonindividualistic physical factors.

Though it will not be my focus here, the longstanding historical problems with the properties that count as individualistic arise mainly with the psychological ones. Psychological attitudes are central to nearly every form of ontological individualism. It has long been recognized, however, that there are significant problems with treating certain attitudes as part of an individualistic property set, and this has been the central issue in some of the most active debates in methodological individualism. There are two historical challenges to accepting some or all psychological attitudes as individualistic. A number of arguments against the claims of individualism in the 1950s and 60s involved the need to refer to institutions in characterizing the states of individuals.<sup>6</sup> More recent is a challenge from externalism, the view widely accepted among philosophers of mind that concepts possessed by individuals themselves depend on factors outside of the individual mind. If attitudes depend on factors other than individualistic properties, then inasmuch as attitudes are involved in determining social properties, social properties too may fail to depend on individualistic ones.<sup>7</sup> Taking account of

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individualistic property of Bush that he has thoughts about Gordon Brown, nonetheless it is not an individualistic property of Gordon Brown that Bush has thoughts about him.

<sup>6</sup> E.g., Mandelbaum (1955); Gellner (1956); Goldstein (1956); Goldstein (1958); Danto (1973 [1962]).

<sup>7</sup> Tyler Burge, for instance, argues that concepts of social entities are individuated in part by examples of the social entities themselves, e.g., in Burge (1986). Consequently, it (*footnote continued*)

this has been the principal focus of some recent attempts to formulate a compromised form of ontological individualism, such as Pettit (1993).<sup>8</sup> Despite this, I will bracket these issues here. To put ontological individualism in the best light, I will work on the assumption that these problems with externalism can be surmounted, and put aside the question of the external dependence of psychological states. I will argue that even if we take internalism to be true, ontological individualism still fails.

### *1.2 Social properties*

Delineating social properties has long been a puzzling area for individualism. For the purposes of demonstrating the failure of ontological individualism, however, a characterization of social properties is less important than that of individualistic properties. Ontological individualism makes a universal claim about the dependence of all social properties. Thus the denial of ontological individualism requires only a single point of failure. Of course, a denial of individualism is only reasonable if it does not depend on the choice of a highly controversial or marginal social property, or a social property that is unlike those typically used in social theories.

For the purposes of demonstrating the failure of ontological individualism, I want to point out in particular that (1) included in the reasonable social property set are both the social properties of groups and of

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may not be possible to individuate concepts without already involving whatever social entities we have attitudes towards. If a social entity or property is involved in individuating a concept, the entity or property can't depend on that concept, on pain of circularity. If externalism is true, then attitudes are not so easily treated. One consequence of externalism is that even concepts of non-social entities, such as *water* or *pain*, are socially individuated.

<sup>8</sup> Although Pettit deems social facts to depend exclusively on facts about individuals, he takes facts about minds to depend on social factors. Pettit thus compromises ontological individualism, accepting the social character of individual minds, but once the facts about individual minds have been determined, these he takes to be sufficient for determining social facts. He calls his view "holistic individualism."

individuals, and (2) an important category of the social properties is properties involving membership, such as *being Prime Minister* or *being the Senate*. It will be these properties that I will argue are a key point of failure of ontological individualism.

Certain social properties may apply to a variety of entities, including individual persons, collections or mereological sums of individuals, and groups like the Senate or the middle class. Happiness and wealth may be such properties, as may be properties such as intention, motivation, and fury. A burgeoning literature on “collective intentionality” explores the conditions for such properties to hold of a group, in particular the kinds of intentions that must hold among the members of a group for the group to be taken to have some intention.<sup>9</sup>

For demonstrating the failure of local and global supervenience, it is important on the other hand to notice that some social properties only hold of certain kinds of entities. A corporate board of directors can have the property of having reapportioned shares among its members, approved the minutes of the board meeting, and conducted certain votes, while an individual cannot have these properties. Moreover, for such properties to be instantiated, something must have the property *being a corporate board of directors*. Certain social properties, such as *being a parliament*, *being a legislative body*, or *being a corporation*, apply to social entities, while others, such as *being a CEO* or *being a Senator*, hold only of individuals.

### 1.3 Dependence

Ontological individualism is widely understood as involving a claim of supervenience.<sup>10</sup> As with any dependence relation, supervenience makes a modal claim. Intuitively, it asserts that once the individualistic properties are fixed, the social properties must be fixed as well. In the simplest

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<sup>9</sup> Gilbert (1990); Searle (1990); Bratman (1993); Tuomela (2002), et al.

<sup>10</sup> This is a change from many historical views, which implicitly regarded the dependence of social properties on individualistic ones as an identity relation; e.g., Lukes (1968).

supervenience claims this is cashed out as a comparison between pairs of objects in any possible worlds. Taking any possible pair of objects, a difference in the social properties of the pair implies a difference in the pair's individualistic properties.<sup>11</sup> A common way of formalizing this is as “weak local supervenience,” as defined by Kim (1987):

(WLS) *A-properties weakly locally supervene on B-properties* if and only if for any possible world  $w$  and any objects  $x$  and  $y$  in  $w$ , if  $x$  and  $y$  are *B*-indiscernible in  $w$ , then they are *A*-indiscernible in  $w$ .

Applying it to the case at hand, the definition holds that social properties weakly locally supervene on individualistic properties if and only if for any possible world  $w$  and any entities  $x$  and  $y$  in  $w$ , if  $x$  and  $y$  are individualistically indiscernible in  $w$ , then they are socially indiscernible in  $w$ . Two objects are individualistically- or socially-indiscernible if and only if they are exactly alike with respect to every individualistic property or every social property, respectively.<sup>12</sup>

In recent years, some philosophers of social science have doubted the utility of supervenience, for capturing the dependence of social properties on

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<sup>11</sup> Some theorists have taken the relation between individuals and groups to be a “part-whole” relation (e.g., Quinton (1975-6); Macdonald and Pettit (1981); Mellor (1982); this view is criticized in Ruben (1985)). Others have made use of the “constitution” relation (e.g., Uzquiano (2004)).

<sup>12</sup> Some discussions of supervenience, particularly in connection with mental causation, take it to be a relation between events or the properties of events, rather than between property sets of objects in a world. I will, as is standard, interpret the dependence claim made by ontological individualism as relating the social and individualistic properties of objects, rather than events. Appeals to supervenience in cashing out ontological individualism, as in the claims cited in endnote 3, take it to be a relation between the social and individualistic properties of objects rather than events. Moreover, while we can intuitively delineate the events that count as “physical events,” for instance, there is no intuitive ontology of “individualistic events.” The way we will understand what counts as individualistic in the first place is in terms of properties of or about individual persons.

individualistic ones. This is for two main reasons. First, there are now so many versions of supervenience (weak, strong, local, global, multiple-domain, etc.), and discussions of it are so technical, that it is unclear which interpretation of supervenience is the appropriate one to use, if any. Second, many philosophers have pointed out that while some form of supervenience is surely necessary to understand the “dependence” of one set of properties on another, supervenience is unlikely to be sufficient to capture dependence.<sup>13</sup>

While these are indeed problems for some uses of supervenience, for our purposes they are actually an advantage. If we were in the business of defending ontological individualism with a supervenience claim, we would have to show two things: (1) that the supervenience claim was true, and (2) that the demonstrated supervenience claim was sufficient to capture the dependence claim that is implicitly made by ontological individualists. To reject ontological individualism, however, the case is strongest if we can successfully deny even the weakest of the conditions for dependence to hold. To demonstrate the failure of ontological individualism with a failure of supervenience, it does not matter that supervenience is not *sufficient* for dependence. What matters is that some form of supervenience is *necessary* for dependence. And while it is possible to deny that the strongest forms of supervenience are necessary for dependence, it can hardly be denied that the weakest forms of supervenience are.

The structure of the discussion to follow, consequently, involves starting with the rejection of a weak form of supervenience and then weakening it still further, showing that at every stage, even the most minimal forms of supervenience of social properties on individualistic ones fail. In section 2, I start with the failure of weak local supervenience. This is widely acknowledged to fail, following Currie (1984). However, I show that it actually fails for some previously unnoticed technical reasons, rather than the intuitive reasons people have taken it to. This threatens to mangle the case

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<sup>13</sup> Shagrir (2002); Bennett (2004a) in particular discuss formulations of global supervenience and the degree to which they capture intuitive dependence relations.

for local supervenience failure. By shoring up the case, however, we can highlight the underlying reasons that local supervenience often fails, and show that local supervenience fails for a broader set of properties than is commonly thought.

Next I will turn to global supervenience, which in contrast to local supervenience, is widely assumed to hold between social properties and individualistic ones. As with local supervenience, there is a good deal of controversy as to the best interpretation of global supervenience, for capturing dependence. Consequently, I will weaken global supervenience beyond the forms discussed in the literature, to a minimal but intuitive version. Any plausible dependence claim will entail this, and thus demonstrating its failure will also demonstrate the failure of any plausible understanding of ontological individualism.

## **2. The failure of local supervenience**

Interpreted as a local supervenience claim, ontological individualism asserts that the social properties of any entity, like me or the Senate, covary with individualistic properties of that entity. In some ways, the argument against local supervenience is simple; Gregory Currie denies it in a few words. “My being Prime Minister,” he points out, “is not just a matter of what I think and do; it depends on what others think and do as well. So my social characteristics are clearly not determined by my individual characteristics alone.”<sup>14</sup>

The overall point is correct, and widely accepted. Many social properties do fail to supervene locally on individualistic ones. Moreover, it is widely recognized that ontological individualism should not be understood as a local supervenience claim. Ontological individualists have a ready response to the failure of local supervenience: namely, social properties supervene globally, not locally, on individualistic ones. This is the claim that I will discuss in

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<sup>14</sup> Currie (1984), p. 349.

### Part 3.

Nevertheless, there are several reasons for scrutinizing the failure of local supervenience. As many philosophers believe, local supervenience does fail for a broad variety of social properties. However, it fails for different properties, and for different reasons, than has been assumed. If, for instance, we simply employ (WLS) for cashing out the local supervenience claims, then it fails for irrelevant technical reasons, not for the intuitive reasons we would expect it to. Formulated judiciously, on the other hand, it becomes possible to discern the key categories of social properties that do fail to supervene locally on individualistic properties, namely, straightforwardly extrinsic properties, certain social-membership properties, social properties involving those membership properties, and properties that depend on those other ones. This has the interesting implication that local supervenience actually fails for many properties and functions that many people assume to supervene locally, such as *the happiness of the Senate*, *the average age of the freshman class*, and *the incidence of bureaucratic corruption*. Even more importantly for our purposes, clarifying how social properties fail to supervene locally on individualistic ones points the way to demonstrating the failure of global supervenience as well.

#### *2.1 How local supervenience fails*

A straightforward failure of local supervenience of social properties on individualistic ones is straightforwardly extrinsic properties, such as *being outlawed* or *being censured*, applied to an organization, like the Mafia. For the Mafia to have one of these properties clearly depends on individuals outside the Mafia. Such properties, however, might be understood as tacitly relational properties between groups, rather than being social properties of the Mafia, much as *being the smartest* is an obviously extrinsic albeit mental characteristic of some person.

Other sorts of properties are more instructive for highlighting the interesting reasons for local supervenience failure. As Currie points out, it is trivial to see that *being Prime Minister* does not supervene on Gordon Brown's individualistic properties, but depends on relations among the

population.

To highlight what is interesting about this case, it is helpful first to consider what is wrong with it. The Prime Minister case, it turns out, is singularly well-chosen, since it avoids some serious problems that would have come up if Currie had chosen a property holding of a group, such as *being the Parliament* or *being the Senate*, as opposed to a social property holding of an individual. Intuitively, the property *being the Senate* should fail to supervene locally on individualistic properties for similar reasons as does the property *being Prime Minister*: the fact that John Kerry is a Senator, for instance, does not depend on his individualistic properties, but on relations among the population. However, there is an important snag here. *Being a Senator* does fail to supervene locally on individualistic properties, as *being Prime Minister* does. But this does not straightforwardly show that *being the Senate* fails to supervene locally on individualistic properties. In fact, the argument against local supervenience runs into serious trouble when properties of groups are assessed altogether. (WLS) in particular turns out not to be a useful formulation for distinguishing the membership-related properties for which local supervenience intuitively fails from any other properties that apply only to groups, even ones that ought to supervene locally. For instance, (WLS) also fails to hold for such relations as *being a streetgang*, even if we stipulate that all it takes to be a streetgang is the mutual decisions of a group of individuals. The reason is that (WLS) was not formulated to take account of “coincident entities,” a matter of considerable importance in treating the properties of groups. To show that *being a Senate* fails to supervene locally on the individualistic properties of the Senate, while *being a streetgang* does supervene locally on the individualistic properties of the streetgang, we need to move to a weaker interpretation of local supervenience. I discuss the details of this issue in Appendix A.

Nonetheless, the basic thrust of Currie’s Prime Minister case is on target. In particular, it highlights the fact that a key source of local supervenience failure is *membership properties*, when membership in a group depends on the properties of individuals in the population who are not themselves

members of the group. *Being a Senate*, for instance, fails to supervene locally on individualistic properties in virtue of the fact that the property *coinciding with the membership of the Senate* is dependent on factors beyond the membership itself. For any kind of social group whose membership is determined by properties aside from those possessed by the members of the group, both the property *being the group* and *being a member of the group* will fail to supervene locally on the properties of the members of the group. Moreover, any properties that can apply only to such a social group will also fail to supervene locally on the individualistic properties of the group.

This failure of local supervenience of these social properties is intuitive. It is widely overlooked, however, that this source of local supervenience failure also implies that local supervenience fails as well for many properties and functions that are what we might call “simple aggregates” of the properties of individuals. Even the values of functions such as *the happiness of the Senate*, *the average age of the freshman class*, and *the incidence of bureaucratic corruption*, depend on the individualistic properties of a broader population than those of members of the groups themselves.<sup>15</sup>

## 2.2 Success and failure of local supervenience for simple aggregate properties

To see this, contrast some typical simple aggregate properties of social groups with typical simple aggregate properties treated in the natural sciences. Consider, for instance, the value of the function *temperature* applied to the gas in a balloon at a time. Taking the individual molecules in the gas, the temperature is exhaustively determined by their velocities. Those velocities are the only factors on which the temperature of the gas depends: if we change a property of the environment outside of that balloon, while the molecules remain indiscernible from before, the temperature of the gas does not change. The value of the function, in other words, supervenes locally on

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<sup>15</sup> I discuss implications for the modeling of bureaucratic corruption in particular in [Author], “When Local Models Fail,” *forthcoming*.

the physical properties of the gas molecules.

For certain simple aggregate properties of certain kinds of systems of people, local supervenience will hold as well. Consider the choices of a pair of prisoners, each given certain information and certain alternatives. Then the only factors on which the output of the “choice” function applied to the pair of prisoners depends are their local characteristics. The same is true for the audience in an auditorium in the well-known example discussed by Thomas Schelling (1978). To determine why an audience has spontaneously organized to sit bunched together in the seats at the back of the auditorium, as opposed to populating the better seats, the only factors that pattern depends on are again the local characteristics of the individuals in that audience. The reason is that the property *being in an auditorium*, like *being a molecule in a balloon*, plausibly supervenes locally on the characteristics of that local spatial region.<sup>16</sup>

In the typical case, however, a simple aggregate property of a social

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<sup>16</sup> Notice that the local supervenience of a property like *being an auditorium* is compatible with its being non-natural or socially defined, and also with its being employed for social purposes. The role of social factors in generating a property or choosing to mark or refer to that property does not mean that the property in question depends on supervenes on those social factors. Many locally supervenient properties, like *being a balloon* or *being made of plastic*, are socially defined.

If we interpret the individualistic property set to exclude local physical properties of the individuals, then strictly speaking *being in an auditorium* is not locally supervenient on the individualistic properties of the people in the auditorium, since *being an auditorium* involves physical properties, such as having seats and perhaps a stage. I discuss the issue of the inclusion of local physical properties in the individualistic property set in 1.1 and 3.3.2.

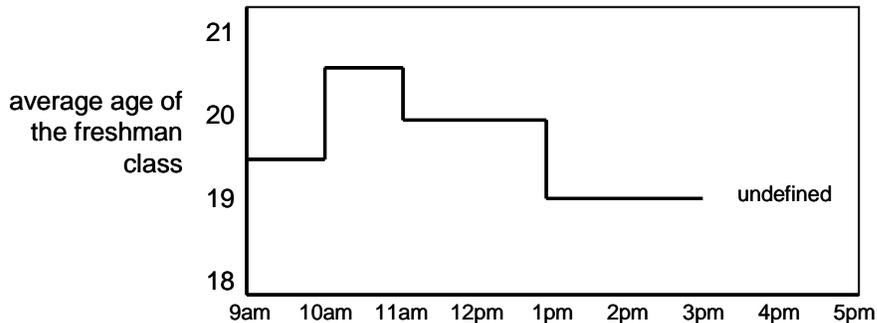
Still, the relevant issue here is that *the seating pattern of the people in the auditorium* does not depend on the characteristics of people or things that are not spatiotemporally local to auditorium. Being a member of the freshman class, however, like being a Senator, is determined by factors entirely apart from the characteristics of the freshmen or the spatiotemporal regions in which they reside.

group will fail to depend only on the local properties of the members of the group. The reason is simply that membership in the group is a component of the typical simple aggregate property.

Suppose that P, Q, R, and S are freshmen, aged 18, 19, 20, and 21 respectively. Evaluating *the average age of the freshman class* in the actual world, we consider the ages of P, Q, R, and S, which average to 19½. Suppose that all four of them go to a day-long lecture one day during the fall term. Over the course of the day, their individualistic properties, including their ages, remain relatively unchanged. But imagine that while they are sitting in the auditorium, the world changes radically around them: at 10am, P's parents and Q's parents win the lottery, and immediately withdraw their kids from school, so that they can go sailing around the world; at 11am, S's parents go bankrupt, and withdraw S from school, since they can't afford it; at 1pm, P's parents have second thoughts and re-enroll P; and then at 3pm, the board of trustees dissolves the school entirely.

Over the course of the day, the individualistic properties of P, Q, R, and S remain more or less constant, but the value of the function *the average age of the freshman class* fluctuates:

**Fig. 1:**



This function fluctuates in virtue of changes in properties other than the individualistic ones of the freshmen themselves. The value of a function such as *the average age of the freshman class* or *the happiness of the Senate* does not only depend on the happiness or ages of a collection of individuals, but it also depends on whether the appropriate membership property applies to

those individuals. It is not that the values of these functions do not depend on the properties of individual Senators or freshmen; but rather, that they also depend on those nonlocal properties that figure into determining the holding of the properties, *being a Senator* or *being a freshman*.

To contrast *the clustering of the audience in the auditorium* with *the average age of the freshman class*, suppose that in the actual world, P, Q, R, and S are the people in the auditorium at the beginning of the day. So long as the individualistic properties of the people in the auditorium do not change, and are not construed too narrowly,<sup>17</sup> there will be no changes in the value of

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<sup>17</sup> As mentioned in the previous footnote, it must be assumed that the individualistic properties of the audience include some of their local environmental and/or relational properties, as we have generally taken the individualistic property set to do.

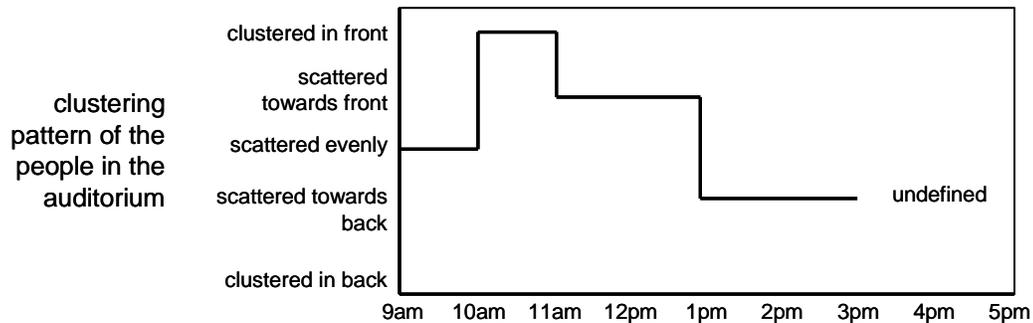
Suppose that in the two situations, we take P, Q, R, and S to have the same narrow individualistic properties, but that in situation 2, a person T is also seated in the auditorium, so that now the audience is P, Q, R, S, and T. Notice how this fails, from a local supervenience perspective. We have two entities with the same individualistic properties across worlds, i.e., the collection of people P, Q, R, and S. Those two entities, in the first and second situations respectively, have the same clustering properties across the situations. So there is an entity in the second that is individualistically indiscernible from the one in the first, and that has the same clustering properties. However, that entity does not have the property *being the audience in the auditorium* or *coinciding with the audience in the auditorium*.

This failure is a special, but kind of interesting, case. Probably the best way to understand this is to notice that even those typical local supervenience claims that succeed, tend to speak a little loosely. The intuitive local supervenience of audience clustering properties on individualistic properties is basically correct, but to be perfectly strict needs either (1) to interpret individualistic properties as incorporating the relations with the local region around the individuals, (2) to interpret it as regional local supervenience, rather than supervenience on narrow individualistic properties, or (3) otherwise assume conditions that eliminate this counterexample.

To be sure, though, this doesn't much compromise the disanalogy between the audience case and the freshman case. With the freshman class case, we can fix everything a set of people sees and knows and with whom they interact, etc., and still change the value  
*(footnote continued)*

the function *the clustering of the audience in the auditorium*, regardless of changes in the world around them. If we do see that the graph of the clustering pattern of the people in the auditorium behaves similarly to the above graph, e.g.,

**Fig. 2:**



then we can conclude that the individualistic properties of the people in the auditorium must have changed.

Just as *the average age of the freshman class* involves a membership property, functions like *the temperature of the gas* or *the clustering pattern of the audience in the auditorium* involve membership properties as well, i.e., *being part of the gas*, or *being in the auditorium*. Notice, however, that these properties, in contrast to *being a Senator* or *being a freshman*, are themselves locally determined. Whether a molecule is part of a gas depends only on what the individualistic and local relational properties of the molecules in that region are. This is why the functions *the temperature of the gas* and *the clustering of the audience in the auditorium* do supervene on properties local to the gas or the audience, while the values of *the happiness of the Senate* and *the average age of the freshman class* can vary even when the local properties

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of the function *the average age of the freshman class*, since we have changed the holding of the property *being a freshman* despite those properties. With the auditorium case, however, if we start with a group of people who have a clustering property, and simply fix everything in their local vicinity, then we will have succeeded at fixing their clustering properties.

are held fixed.

The failure of local supervenience has direct implications for constructing models of social properties. While local supervenience failure in the abstract is accepted in the philosophical literature, its impact is often overlooked for model construction in the social sciences. In particular, local supervenience failure implies that a simple aggregate property of a group can depend on factors may not even be causally connected to the individuals who are members of that group. Elsewhere, I discuss the application of this point to models of corruption in economics.<sup>18</sup> Here, let us apply these clarifications to the issue of global supervenience.

### **3 Extending the argument to global supervenience**

Interpreting ontological individualism as a global supervenience claim allows that the entire distribution of individualistic properties of people can potentially figure into the determination of an entity's social properties. Global supervenience is particularly appealing to skeptics of reductive explanation since it captures a kind of holist dependence of social entities without holding that social entities are agents acting independently of individuals.

Theorists endorsing global supervenience as an interpretation of ontological individualism do not tend to argue for it directly; its justification seems to be mostly on intuitive grounds. Currie, for instance, says "There simply would be no content to the claim that while worlds *u* and *w* are absolutely indistinguishable with respect to what individuals are thinking, perceiving, saying and doing, there is a difference between them in terms of

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<sup>18</sup> Not *every* social property fails to supervene locally on the individualistic properties of individual persons, but many of those employed in ordinary social theory and those that ontological individualism takes itself to account for, do fail. Interestingly, there may be fragments of social theory that deal only in the properties of extensional collections of individuals. Perhaps some of the successful individualistic projects in social theory ought to be conceived as such fragments.

how some social concept is to be applied.”<sup>19</sup>

The idea behind a claim of global supervenience on individualistic properties is that even if a social property, such as being Prime Minister, depends on the properties of people other than the Prime Minister himself, nonetheless it is fully determined by the individualistic properties of the population as a whole. From the discussion of local supervenience failure, we can see that the factors that determine membership in groups have to be counted among those that determine what the social facts are. The question, then, is whether expanding the supervenience base to the individualistic properties of the population as a whole suffices to determine membership in social groups in general. In this section, I will show that even on a generous understanding of the individualistic property set, the answer is no. Thus for similar reasons that local supervenience failed, global supervenience fails as well.

The failure of global supervenience I will discuss is not that there is an unavoidable circle involving social factors in determining membership in groups, though there well may be. Rather, the failure I will focus on is that social properties are determined by physical properties that are not plausibly the properties of individuals.

### *3.1 The global supervenience claim*

Like local supervenience, formalizations of global supervenience are fraught with technical problems. Much discussion in the literature has to do with how global supervenience can be formulated so that it can be sufficient to capture an intuitive dependence claim. As I mentioned above, that is not our concern here. Rather, I will spend a moment reformulating it so as to be as weak as possible, without worrying that the result is not a sufficient condition for dependence, but rather ensuring that it is a necessary condition for even the stingiest interpreter of dependence.

As with the other forms of supervenience, global supervenience is cashed

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<sup>19</sup> Currie (1984), p. 354.

out in terms of indiscernibility. Indiscernibility applies to worlds as a whole with respect to a property set. The claim of global supervenience is that if two worlds are individualistically indiscernible, then they are also socially indiscernible.

There are a number of ways of making this claim precise, in varying strengths. The currently prevalent approach starts with a weak definition of two worlds that are individualistically indiscernible; i.e., that there is an “individualistic property-preserving isomorphism” between the worlds. The use of isomorphism is meant to capture the requirement that the worlds have the same pattern of individualistic properties spread over them. Putting it formally, it is that a mapping exists between the two worlds such that whatever individualistic properties hold of the entities in  $w_1$  also hold of the mapped entities in  $w_2$ . Global supervenience claims of various strengths can then be constructed depending on how broadly this definition is applied. Weak, intermediate, and strong forms of global supervenience are proposed, the weak form claiming that for all pairs of worlds where an individualistic property-preserving isomorphism exists, a social property-preserving isomorphism exists as well.<sup>20</sup>

Let us consider a more intuitive way of understanding global supervenience which is more straightforwardly applicable to ontological individualism, and moreover weakens our already weak version of supervenience in two ways. First, for the purpose of clarifying ontological individualism, we can employ a stronger and more intuitive notion of individualistic indiscernibility than the isomorphism version. Namely, two worlds  $w_1$  and  $w_2$  are individualistically indiscernible when the worlds have the same individuals and all the individuals have the same individualistic properties in both worlds.<sup>21</sup> This is a stronger notion of individualistic

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<sup>20</sup> Sider (1999); Shagrir (2002); Bennett (2004a).

<sup>21</sup> This involves some understanding of “sameness” of people across worlds, but is compatible with various interpretations.

indiscernibility than the standard, but a global supervenience claim is a conditional, so by strengthening the antecedent, we weaken the claim.

A second way of weakening the claim while making it more intuitive is to consider a single social property, rather than the entire spread of the world's social properties. Intuitively we want to ensure just for a given entity, that if it has some social property Q, then in an individualistically indiscernible world that entity will have Q as well. But to put it extremely weakly, we might simply want to guarantee that there will be *something* in the other world that has Q, which saves us the complexity of mapping the social objects between the worlds.

A social property Q, I propose, “very weakly” globally supervenes on individualistic properties when for all pairs of worlds  $w_1$  and  $w_2$ , if they are individualistically indiscernible from one another, and if something has Q in  $w_1$ , then something has Q in  $w_2$ :

$$(VWGS) \forall w_1, w_2 [(w_1 \text{ is indiv-indiscernible from } w_2 \wedge \exists x(x \in w_1 \wedge Qx)) \rightarrow \exists y(y \in w_2 \wedge Qy)]$$

Very weak global supervenience is about as weak a claim as can be made while still asserting a kind of covariation between social and individualistic properties. Very weak global supervenience does not make demands on the distribution of social properties, and it is entailed by all the forms of local supervenience, coincident-friendly supervenience, as well as all the other forms of global supervenience. Nonetheless, weak as it is, it still fails.

### 3.2 Defeating very weak global supervenience

Ontological individualism understood as local supervenience was defeated by noticing that membership in groups to which certain social properties apply depends on the properties of individuals other than the members of the groups. Failure of global supervenience on individualistic properties will involve a similar observation, but in this case, it is that membership is determined in part by non-individualistic properties altogether.

The non-individualistic factors I will consider are physical properties that do not count among the physical properties of any individuals at all. I will

make two claims. First, that social properties commonly depend on physical or environmental characteristics of the world. And second, that the sorts of physical conditions on which such properties depend are not individualistic. Even when we stretch the definition of what properties count as individualistic, these physical conditions will fall outside of them.

### *3.2.1 Dependence on physical factors*

From a contemporary perspective, it is relatively obvious that social properties depend on physical factors. While social theories debate how to construe social practices, it is almost universally acknowledged that individual and social habits, practices, and actions are fundamental to any reasonable social explanation, and that these cannot be characterized apart from physical in addition to psychological characteristics. In early discussions of ontological individualism, however, physical properties were largely regarded as superfluous in constituting social properties, under various banners of “psychologism” and “interpretivism.” Here I cannot do justice to the history of this move, but let me simply point out an example.

In a well-known defense of methodological individualism, J.W.N. Watkins stated explicitly that physical factors are superfluous for social explanation:

Speaking loosely, one can say that climate, famine, the location of minerals, and other physical factors help to determine history, just as one can say that alcohol causes road accidents. But speaking strictly, one should say that alcohol induces changes in people who drink it, and that it is the behaviour of alcohol-affected people, rather than alcohol itself, which results in road accidents.

Thus the fact that physical causes operate in society does not invalidate the assumption on which the principle of methodological individualism rests. For they operate either by affecting people, or through people's ideas about them. In either case it is people who determine history, however people themselves are determined.<sup>22</sup>

Here Watkins acknowledges that physical factors are part of the causal chain affecting facts about social history. On his view, however, the social facts themselves are not dependent on these physical factors at all. Even in responses to Watkins by methodological holists at the time, this point generally went unquestioned. For instance, K.J. Scott (1960) criticized Watkins on these very paragraphs, but did so with the argument that the opponents of methodological individualism need not deny the superfluity of physical factors either.<sup>23</sup>

Contemporary methodological individualists do not typically make any such claim. Even Watkins, in later work, explicitly includes physical factors in his definition of methodological individualism: "(1) Human beings (together with their material resources and environment) are the only causal factors in history. (2) Explain all social events in terms of human factors."<sup>24</sup> It is difficult even to conceive of any satisfactory characterization or explanation of a social phenomenon such as a dance or an orchestral performance or a riot, without incorporating physical factors as well as psychological ones. Likewise, physical factors are involved in the determination of membership in groups as well. It is not only the dance and the orchestra and the riot that involve physical factors, but also the holding of the properties *being a dancer*, *being a cellist* and *being a rioter*. If there were no cellos, then regardless what Yo-Yo Ma and the rest of us thought and did, there would be no cellists.

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<sup>22</sup> Watkins (1955), p. 58.

<sup>23</sup> Scott (1960).

<sup>24</sup> Watkins (1959), p. 320.

Given the long history of psychologism with regard to social properties, it cannot be taken as obvious that social properties do depend on physical or environmental factors. In retrospect, however, it can only be seen as a kind of blockage or bias to exclude physical conditions for the holding of social properties or for group membership, in light of the fact that we are not disembodied minds but live in physical environments that have properties of concern to us.

### *3.2.2 Dependence on nonindividualistic factors*

Recognizing that social properties depend on physical factors, we can show that among the physical factors they depend on are nonindividualistic ones. Consider the physical factors that figure into the determination of the property *being President*. Rewind to the US presidential election in 2000, Bush versus Gore, and consider the controversy surrounding the hanging chads. Hanging chads are circles of paper punched out of paper ballots that do not completely detach from the ballot. Recall that these do not count as valid votes under Florida law. A great deal of focus was placed on the estimation of genuine votes, taking into account that some of the ballots had hanging chads. For our purposes, let us presume that the actual truth is as we have been told, i.e., that there were very few hanging chads and that the total vote, even taking those into account, resulted in a victory for Bush.

Now consider a counterfactual situation in which we stipulate that all of the people in the population are in identical psychological and physical states as those in the actual situation. For the difference in the counterfactual situation, let us suppose that unbeknownst to anyone there are a number of unnoticed ballots with hanging chads. Maybe they are folded down in some way so the election workers do not see them, or maybe the election workers are looking for hanging chads so as to invalidate Gore votes and so do not notice the thousands of hanging chads on the Bush ballots. Let us suppose that in the counterfactual case, there are enough hanging chads to change the outcome of the election.

In the two circumstances the winner of the election, at least prior to the intervention of the judiciary, is different. It may be the prerogative of the

judiciary to change that fact, but at the time of the election there is a fact about the winner, which is not solely a matter of the psychological or physical characteristics of the voters, but of the physical character of the environment in which they live.

To defeat very weak global supervenience, we can imagine that the facts about hanging chads do not tip the balance in favor of Gore, but rather push up the votes of a third-party candidate, so that she wins Florida's electoral votes and no one wins the national election. The property of *having won the election*, or *being President-elect*, which holds of Bush immediately after the election in the actual world does not hold of anyone in this counterfactual situation.

Taking a different real-world case, consider the recent Ohio governor's race. It is apparently a law in Ohio that voter registrations are only valid if they are printed on 80-pound paper.<sup>25</sup> Being a legitimately registered voter, then, depends on the physical characteristics of a piece of paper. Change nothing about the voter but the thickness of that paper and the property *being a legitimately registered voter* changes. Being legitimate governor of Ohio depends on being elected by a majority of valid votes, i.e., votes cast by legitimately registered voters, so among the conditions for being elected legitimate governor is a physical property of pieces of paper.

Intuitively, these physical conditions for membership – the physical characteristics of ballots – do not seem individualistic. That a piece of paper has a certain thickness, or has some kind of hole in it, is not a property of any individual person. And in fact, nearly any group one can think of has such nonindividualistic membership conditions. The Ohio case is an unusual one, but it has been far more common for there to be other nonindividualistic physical conditions required of voters, such as land ownership conditions. These physical conditions involve facts about the world, including the existence of pieces of land, that extend beyond the properties of the individual. It would not be difficult to come up with a variety of

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<sup>25</sup> *New York Times*, June 7, 2006, A22.

nonindividualistic physical conditions for being a hurricane victim, a drug abuser, a bank officer, a welfare recipient, a deadbeat dad, a felon, a U.S. citizen, delinquent on one's taxes, and so on.

There are, however, arguments to be made against the ability of these examples to counter ontological individualism. The obvious individualist response is to agree that physical properties are involved in group membership, but to deny that the relevant physical characteristics are not among the individualistic ones. No doubt, many individualists have focused on psychological properties to the exclusion of others. However, other individualists do include physical properties to be among the individualistic ones on which social properties depend.

If this individualist response amounts only to including the intrinsic physical properties of individuals alongside the other properties of individuals (such as those that are psychological and behavioral), then the aforementioned examples already show this response to be insufficient. These examples all involve environmental factors beyond the intrinsic physical properties of individuals. A more broad-minded ontological individualist, however, is not without resources.

### *3.3 Strategies for rescuing global supervenience*

Following are three different strategies for discounting the anti-individualistic implications of environmental factors:

1. Environmental properties are not relevant counterexamples because they are background conditions, or can be taken as exogenous factors, upon which individual and social properties are placed.

2. By including appropriate individualized parts of the environment among the individualistic properties, the supervenience base is sufficiently broadened to determine the social properties. The set of individualistic properties does need to include some parts of the environments in which individuals reside, but these are nonetheless fundamentally individualistic.

3. Even if environmental factors do figure into the "metaphysics" of social entities, they are irrelevant for practical social explanations. The only factors that are relevant are those that impinge on or that can be interpreted by

individuals.

I will argue that none of these strategies succeeds.

### *3.3.1 Strategy 1: The environment as a background condition*

The treatment of environmental factors as exogenous appears largely in discussions of individualism in economics. The point can be illustrated by taking a simple example of constructing an individualistic model. Suppose the orchestrated movements of a school of fish depend on the temperatures and currents at various points in the ocean. There is no reason for a model of the school's movements to include the temperatures and currents as dependent variables. Rather, the temperatures and currents can be taken to be independent or exogenous variables in the explanation, since they affect, but are only negligibly affected by, fish movements.

In characterizing the methodological individualism of general equilibrium theory, Kenneth Arrow articulates an approach along these lines. He distinguishes individualistic factors, which are the aspects of the world that social theory models, from environmental factors, which can be treated as exogenous:

Each individual is conceived of as acting in the way determined partly by his psychology and his physical surroundings and partly by the actions of others... Therefore, given the reaction of each individual to his total (social and other) environment ... and given the nonsocial environmental factors, which we may term exogenous, we can determine the behavior of any individual in society.<sup>26</sup>

According to Arrow's approach, in order for a social theory to explain social properties, the social variables should be endogenous to the model. But we do not need an individualistic explanation to account for environmental variables, so nonsocial variables can be taken to be exogenous.

There are two problems with extracting a defense of ontological individualism from this. First, there is no reason to assume that in modeling

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<sup>26</sup> Arrow [1951] 1968, p. 640.

any social phenomenon, it is preferable to take environmental variables as exogenous in general. Taking environmental variables as exogenous can be a useful idealization, but not for all purposes. When modeling phenomena in which environmental variables are sensitive to social properties, it is often useful to take them as endogenous.

More importantly, even when environmental factors are reasonably taken to be exogenous to a model or kind of model, we cannot infer that those factors fail to figure into the individuation of social properties. We may choose to treat ocean temperature as exogenous because the effects of the fish on the temperature are so small, or we can treat it as endogenous for the purposes of monitoring small effects. How this choice goes, however, does not affect the matter of what individuates the properties of the school of fish. Likewise, there may be a variety of factors that determine membership in the Senate or in some university's freshman class. But even though certain physical factors and institutional policies may clearly figure into the determination of the membership of the class, we might take some of them to be exogenous to a model of the composition of the class simply because those factors and policies are insensitive to change. Nonetheless the physical factors and institutional policies remain a factor in determining what it is to be a member of Senate or the freshman class, even if an acceptable model neglects them.

### *3.3.2 Strategy 2: Individualizing the environment*

A second reaction to the role of physical properties in determining social properties is to insist that only "individualized" parts of the environment can be relevant to social properties. This point too can be discerned from the school of fish: the effects of the ocean apply independently to each fish in the school. That is, the only part of the ocean temperature or current that is relevant to an individual fish is that part that interacts causally with the fish, and how the temperature or currents as a whole affect the school as a whole is exhausted by the effects of the local ocean properties on each fish in the school. An individualistic explanation of the movements of the fish does not have to neglect these sorts of environmental factors to remain acceptably

individualistic.

This reaction, then, is that even though social properties involve physical factors, that does not violate individualism. Many approaches to social phenomena in the past generation have taken a broad notion of individualistic building blocks, particularly following Wittgenstein-influenced critiques of psychologistic social science.<sup>27</sup> Rather than regarding the building blocks of social science as mental states or behaviors, these theories reconceive actions relevant to social properties so as to incorporate local contexts and environments. Social practices do not encompass just the properties of the physical makeup of the individual, but the context in which action takes place. While some work in this area rejects individualism, a number of theorists have developed approaches that assimilate the role of context into the individualistic property set.

Different versions of this approach to individualizing the environment could be constructed on various interpretations of local context and of practices. One issue with choosing an interpretation is avoiding circularity, since typical ways of specifying context and practices involve the use of social properties. A simple way of understanding local context is by apportioning the environment regionally, where what is local to individuals is some appropriate spatiotemporal region, allowing that these regions can overlap. Perhaps a more plausible way to understand local context is in terms of what objects in the environment come in causal contact with the individual, where the relevant causal contact is broader than just those elements that directly physically impinge on the individual, but narrower than any object involved in any causal chain leading to anything impinging on the individual. While it may be a stretch to consider properties of the entities coming into causal contact with a person to be individualistic properties of the person, this admission of individual context seems to retain both the ontological and methodological spirit of stricter individualistic approaches.

However, the same counterexamples to global supervenience on strict

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<sup>27</sup> Most prominently, Winch (1958).

individualistic properties defeat this response. The issue is that the physical conditions for determining social properties may exceed any context that can plausibly be considered local, whether “local” is understood as regional or causally connected.

In the hanging chad case, for instance, the result of the election depends on objective conditions of the ballots, whether individuals are in causal contact with them or not. Even clearer are examples in which membership in a group depends on an objective condition, the individuation of which involves large-scale properties, such as eligibility for Federal hurricane assistance. Among the conditions that determine whether someone is a member of that category is if that person has been a victim of a hurricane. But whether an event is considered to be a hurricane depends on factors other than the local environments of individuals in contact with the event, and even factors beyond those with which any individual has a causal connection with.

### *3.3.3 Strategy 3: Practical irrelevance of the nonindividualistic*

A third strategy is to argue that any way social properties fail to supervene on individualistic properties must be, for actual purposes, irrelevant. We can admit that there are metaphysical differences in the exemplification of some physical or social property, and yet if they are outside our epistemic purview, they have no effect on our thinking or behavior. Inasmuch as the goal of social science, in the end, is to explain individual thoughts or behaviors, these metaphysical points have no practical impact. Rather, to account for the determination of social properties or to construct social explanations, what matters is just those parts of the physical world that have impinged on us, and thus that are local to us.

This reaction is a misapprehension. It is true that if two worlds are individualistically indiscernible, historically and currently, there are no individual differences in thought and behavior between the worlds,

historically and currently.<sup>28</sup> Differences in social properties, if they are grounded only in nonlocal environmental differences, have no effect on individual action in the present. However, even the nonlocal determinants of the social properties today can have enormous impact on behaviors in the future, and can also have enormous impact counterfactually.

Recognition that a social property held of some object in the past, for example, can have practical implications, even if there was no way of knowing that at the time. A well-known illustration of this phenomenon can be drawn from certain cases of “moral luck.” Throwing a brick over a wall does not change one’s social status, but throwing a brick over a wall and accidentally destroying an antique vase does. Destroying the antique vase makes one a negligent destroyer of property, even if no one knows about it. There are factual, not just epistemic, conditions for being a negligent destroyer of property.

The reason we have social statuses, such as being a negligent destroyer of property, is partly because we usually do have an epistemic connection to the facts about when someone acquires that status. We would not employ a status concept if we did not have any way of knowing, in normal circumstances, whether someone had that status. Still, that does not mean that the epistemic connection to the facts is entirely constitutive of that status. We appeal to properties of the world, apart from our beliefs about them, in determining social statuses. Even when we lack an epistemic connection to the holding of those properties, they may nonetheless figure into the determination of a status.

To use a more careful example, suppose a hunter shoots a pair of birds at time  $t$  and, unbeknownst to him or anyone else, has killed the last member of the species. Or that a logging company, also unbeknownst to anyone, takes down the last of a species of tree, also at time  $t$ . The hunter and the company are inadvertent environmental criminals, which would not be the case if there

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<sup>28</sup> Again leaving externalist considerations to the side with respect to indiscernibility and individual differences.

were more such birds or trees in existence. The fact of their criminality obtains as soon as the action takes place. The penalty for being an environmental criminal may be a fine that accrues from the day that the crime occurs. Until someone finds out, there will be no impact on any individuals, but if discovered, the fact that these people were environmental criminals at  $t$  affects the punishment they receive. Evidence that they were environmental criminals at  $t$ , like most evidence, will be indirect, and after the fact. Still, the later *discovery* of the evidence does not make them criminals at  $t$ , or explain that punishment is what it is.

Social properties are quite generally determined by properties of the world, rather than just individualistic properties of people and their practices. We can use local features of the world to approximate these determining characteristics because we tend to set up social categories which are discernible given their local effects. In large part, we introduce social properties to be what they are, because we have epistemic access to the conditions that make them obtain. That does not, however, mean that their holding is determined only by those factors we actually have epistemic access to.

#### *3.4 The properties failing to supervene globally*

The range of properties for which global supervenience fails is roughly the same as those for which local supervenience fails. Namely, many social membership properties, and properties that are dependent on these. The fact that *the Senate is happy*, for instance, fails to supervene very weakly globally on the individualistic properties of the population as a whole.

There are a few exceptions. Some social properties and facts will supervene globally on individualistic properties while failing to supervene locally. These are cases in which there are no non-individualistic physical conditions for membership. The fact *My favorite advisee is happy* depends on something being my favorite advisee, which may in turn depend only on the individualistic characteristics of me and of my advisee. Here the membership arguments against local supervenience apply, but the arguments against global supervenience do not. Also, cases involving only local

physical conditions may survive the global supervenience test under the expanded understanding of what properties count as individualistic.

In general, however, where global supervenience succeeds, local supervenience is likely to succeed as well. This means that the move from interpreting ontological individualism as local supervenience to interpreting it as global supervenience is, in general, ill-conceived. That move relinquishes the intuition that the properties of a social group are determined by the properties of its members, without having the benefit of covering all the factors on which the properties of a group do depend.

#### **4. Conclusion**

Ontological individualism is committed to the claim that individual people are the ultimate constituents of the social world in which we reside. Ontological individualism is consistent with allowing agents to be externally individuated to some extent, as Pettit and others take them to be. But ontological individualism holds that once the individualistic properties of people and relations among them are appropriately understood, those properties and relations suffice to determine the social facts. This is mistaken. While social properties are affected by individuals, they are not exhausted by individualistic properties, even most charitably interpreted.

The reason we erect social properties as we do, such as *being president* or *being a hurricane victim*, is that we generally can correctly assess whether someone or some group has the property. That does not mean, however, that the conditions for the holding of such a property is exhausted either by our psychological characteristics or by epistemically available parts of the environment. Social properties often depend simply on features of the world, whether or not these features are ascribable to individuals.

Ontological individualism fails when interpreted as a very weak global supervenience claim, for a wide range of social properties and with a wide interpretation of the individualistic properties. In response to this, we might consider whether the supervenience interpretation altogether was too strong and whether ontological individualism ought to be formulated with a different

understanding of dependence. Supervenience, however, only captures the covariation aspect of dependence, and the forms of supervenience considered here are extremely weak. It is unlikely that there is any relation that could count as a dependence relation that does not imply at least very weak global supervenience, and it almost certainly takes much more than this.

Ontological individualism is driven by two different commitments, one correct and one mistaken. Ontological individualists rightly refuse to postulate a mysterious dualism with respect to social entities. However, based on the observation that social groups only have individuals as their members, they mistakenly commit themselves to limiting the determinants of social properties to the properties of individuals. Here ontological individualists seem to have been misled by an erroneous analogy between individuals and physical atoms. In considering the ontological dependence of some high-level property, if we find that it is not determined by the spread of physical properties in the world, then our only recourse is to infer a mysterious dualism. But if some property is not fully determined by individualistic properties, then the recourse is obvious and unmysterious: it is partly determined by non-individualistic properties. This is bad news for social theories that are built on a strictly individualistic base, but that only makes those social theories incomplete; it does not make social ontology dualistic or mysterious.

This also explains why the attempt by ontological individualists to reject local but defend global supervenience was a red herring. If the intention is to provide a set of properties that exhaustively determine social properties, nothing short of physicalism will do. If the intention is to preserve the idea that groups are made up only of their members, then the relation must be local, not global.

Even if the advocacy of ontological individualism is largely rooted in confusion, we cannot overlook that a number of explanatory methodologies have been served by pursuing individualism as a regulative principle. A number of methodologies generally regarded as individualistic, such as general equilibrium theory and rational choice theory, seem to imply

ontological individualism, and these methodologies seem to justify ontological individualism inasmuch as they have provided insight for a variety of applications.

Tentatively we can assert that such theories are not, in fact, genuinely individualistic, or that where they are individualistic, the theories apply only to an idealized fragment of social properties. This qualification does not counter their utility. Newtonian physics similarly remains enormously useful, even while ignoring factors that figure into every actual physical phenomenon.

A focus on individualism in social science, however, also has a downside. It excludes approaches that explicitly violate the strictures of individualism, but which are on firmer ontological footing than individualism. While in some ways individualism as a regulative principle has been useful, in others it leaves out a potentially productive space that is susceptible to modeling. It is an empirical question, to what extent nonindividualistic factors do affect various social properties, and to what extent models of such properties would be well-served to incorporate them. It may be perfectly adequate for some models to ignore the nonindividualistic factors that figure into the determination of social properties being modeled. As demonstrated above, however, it may also be that in many contexts, nonindividualistic factors are quite relevant to behavioral and other properties of social entities.

Macdonald and Pettit assert that it is “not inconceivable, but unlikely that there are social regularities that aren’t individualistically explainable.”<sup>29</sup> On the contrary, there is no limit to the extent to which regularities involving social entities can be affected by nonindividualistic factors. Depending on what we seek from an explanation, individualistic treatments may serve satisfactorily. But by ignoring factors that may figure equally large in the determination of social properties, considering only individualistic properties is as likely to leave an explanation impoverished.

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<sup>29</sup> Macdonald and Pettit (1981), pp. 146-7.

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## Appendix A: Fixing local supervenience failure

One problem in assessing whether *being the Senate* or *being Prime Minister* supervenes locally on individualistic properties is that they are object-dependent properties; that is, properties the instantiation of which depends on the existence of one particular object, the United States, or the UK. This raises questions as to what properties these can possibly supervene on, because object dependent properties may require more than just qualitative properties in the supervenience base. (Cf. Hofweber (2005)). We can avoid this issue by replacing these with membership properties, such as *being a prime minister*, or *being a senate*.

More significant is that (WLS) does not fail for the expected reasons, in the case of typical properties of social groups. Let us assess whether *being a senate* (let us call that property F) supervenes locally on individualistic properties, interpreting local supervenience as (WLS) and employing a standard supervenience test. In the actual case there are the individuals, including Clinton, Obama, Lott, Craig, and so on, who are the actual members of the Senate. Let us call the mereological sum of these individuals M. For the doppelganger case, suppose there is a sum of people individually indiscernible from M in some context c; call that sum N. In c, however, suppose that the population at large has voted differently so the individuals in N are not senators, but rather they have voted some people with different qualities as their senators; then F does not hold of N. The scenario looks analogous to the conclusion about *being a prime minister*. However, it does not in fact successfully make the same point.

First, the argument misses the mark in that it does not actually show supervenience failure. It is true that in context c, F does not hold of N. But imagine that we were to make the same argument about mental properties and brain properties. It is not a counterexample to the supervenience of mental properties on brain properties that the *actual* neurons that some particular brain is made up of could have been displaced or changed, and that new neurons could have taken their place. What matters is not the identity of the neurons, but the qualitative properties of the object whose supervenience we

are considering. Likewise, in considering the supervenience of Senatorial properties on individualistic ones, we should not be asking whether the individualistic properties of *that collection of people* determine the social properties of the Senate, rather we should be asking whether the individualistic properties of *the Senate* determine its social properties. In the case of the Senate, two senates are only individualistically indiscernible if they are qualitatively identical, i.e., if they have compositions that are indiscernible from one another. In the case proposed, however, the Senate in our context and the Senate in context c are not individualistically indiscernible, so the supervenience test never gets set up. The reasoning applied to the Prime Minister case thus collapses, when applied to the case of the Senate.

Trumping this problem, however, is a different problem, that threatens even properties that intuitively *should* locally supervene. On closer inspection, supervenience fails even if we only consider objects in the local context, not even considering the doppelganger context at all. Suppose ten of us choose to form a violent gang, call it the Crips. Let us stipulate that membership in the gang is a matter only of mutual agreement among us. As with the case above, one of the entities in the local environment is the mereological sum of the ten of us. But the properties *being a violent gang* and *being a senate* do not hold of mereological sums. This is a point that is familiar in discussions of the metaphysics of “coincident objects” (cf. Sosa (1987); Burke (1994); Zimmerman (1995); Fine (2003); Bennett (2004b); Koslicki (2004)). This yields local supervenience failure not only for properties like *being a senate*, that intuitively should fail, but it also yields local supervenience failure for any number of properties like *being a streetgang* that seem as though they should supervene on individualistic properties.

So the Prime Minister example is more carefully chosen than it might seem. The problem with more ordinary social properties is not demonstrating the failure of local supervenience, but preserving the intuition that certain properties of groups *do* supervene locally on individualistic properties. To

capture this intuition, more care needs to be taken in articulating which social properties of which entities are being assessed.

A careful choice of properties can show the expected failure and success of weak local supervenience using (WLS), but still leaves the common membership properties unaddressed. (WLS) is satisfactory if we ignore property F, *being a senate*, applied either to the Senate (to which F holds necessarily) or to sum M (to which F does not hold), but rather consider applying to M the related property *coinciding with the membership of a senate*. Call this property F'. F' is a social property, one that does apply to M, and that fails to supervene on the individualistic properties of M. This, then, is an example of a social property that does not get retained in the indiscernible counterfactual case, albeit an unusual one. Inasmuch as F' is a social property, the argument demonstrates the failure of local supervenience of social properties on individualistic ones. It seems, however, that we ought to be able to put on a stronger case than this.

One viable approach is to follow Zimmerman (1995), Bennett (2004b), and others in weakening local supervenience to be less stringent about the entities to which properties are taken to apply. The idea of “coincidence-friendly local supervenience” (CFLS), roughly speaking, is that when we assess the social properties of any individualistically indiscernible pair, we do not only see if *that pair* is socially indiscernible. Rather, we look around the domain for other pairs of objects that coincide with and are individualistically indiscernible from the respective members of the original pair. In other words, in assessing whether property F applies to the Senate in  $w_1$  and a sum N in  $w_2$ , we do not stop when we see that F does not hold of sums at all, and hence not to N. Rather, we look for other entities that coincide with N, and see if they have property F. If there is *any* such entity, then F is regarded as holding for that pair.

On this slightly weaker but still plausible interpretation of local supervenience, supervenience failure doesn't follow just from the fact that ordinary social objects exist and have properties that do not apply to sums. Instead, it fails for more intuitive reasons, and in fact it shows how properties

like F, in addition to properties like F', also fail to supervene on individualistic properties.

For property F, *being a senate*, suppose that in the counterfactual case no other people have ever voted, so there is no Senate at all. (As always, M remains individualistically indiscernible from the actual case.) In the actual case, there is an entity coinciding with M and individualistically indiscernible from it, that has property F. But in the counterfactual case, although there exists an entity that is individualistically indiscernible from M, no entity has property F. Local supervenience thus fails. This conforms to the intuitive point. If *holding the office of Prime Minister* does not supervene locally on individualistic properties, then neither does *being a prime minister*; and if *coinciding with the membership of a senate* does not supervene locally on individualistic properties, then neither does *being a senate*. Hence the set of social properties that fail to supervene locally on individualistic properties does not only include the peculiar membership properties of individuals or groups, but also the more intuitive properties that apply to social entities as well.