Generalism Without Generation*

ABSTRACT

According to generalism, the world is fundamentally general — ultimately, there are no individuals. I distinguish two versions of this view. 'Permissive generalism' holds that facts involving individuals are non-basic: they are generated by purely general basic facts. I argue that permissive generalists will struggle to provide suitably systematic and non-arbitrary explanations for facts involving individuals. These problems are avoided by switching to 'strict generalism': the view that truths about individuals are non-perspicuous, and reduce to purely general perspicuous truths. I illustrate this alternative approach by proposing a metaphysical semantics for individualist truths in general terms. This serves both as a recommendation to generalists and, more broadly, as a case study in two different approaches to metaphysical explanation: one centered on generation, the other on reduction.

According to generalism, the world is fundamentally general — ultimately, there are no individuals: no particles, no spacetime points or regions; nothing. Heuristically, we can think of generalism as positing that the world is fundamentally described by a single complex sentence of the form:

$$\exists x\, \exists y \ldots Q(x, y, \ldots)$$

where Q is some qualitative description (one which involves no essential reference to any individuals).[1] Generalists hold that descriptions like these correspond to complete ways for the world to be. This is only a heuristic — in fact, generalists have sought to give non-quantificational

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[1] This allows for Q to feature identity and distinctness, which may not seem purely qualitative. I leave the exploration of 'pure qualitativism' — the view that fundamental descriptions involve neither individuals nor identity — to future work.

fundamental descriptions. But I will stick to it in what follows; nothing will turn on the subtleties I thereby neglect.

Generalism is revisionary. To put it mildly, individuals are central to our conception of reality: our talk and thought is more or less entirely about them. Even when we use general descriptions which do not mention any particular things, we understand these descriptions as concerning things.[2] Orthodoxy assumes that our fundamental theories will be similarly individualist (albeit concerning only fundamental things).

Why, then, take generalism seriously? One important reason, as Jason Turner (2011) and Andrew Bacon (2019) suggest, is just that it can be illuminating to see what happens when we reject one of our most entrenched assumptions — even if it only teaches us why that assumption is justified. However, I believe that there are powerful reasons — presented by Shamik Dasgupta (2009) — to view generalism as more than just radical experimentation.[3]

First, Dasgupta argues that fundamental individuals would be both physically redundant and undetectable (much like absolute velocities in Newtonian mechanics). If there are fundamental individuals, then there are distinct physically possible worlds differing only by permutations of these individuals. But Dasgupta argues that the laws of physics are blind to such differences (and hence, no physical instrument could detect them): if a world is physically possible, then its qualitative duplicate is also. Thus, by the principle that we should eliminate physically redundant and undetectable structure where we can, we should eliminate fundamental individuals.[4] (We can

[2] For this reason, quantificational fundamental descriptions may seem inappropriate for generalists — see Dasgupta 2009, Turner 2011 and Russell 2018.

[3] Historically, suspicion of individuals has come in many forms which I will not directly discuss here: for example, the concern that they are objectionable 'bare substrata', that they are merely a projection of the noun-verb structure of natural language, that they lead to problematic metaphysical questions (involving identity and ontology), and that no two metaphysical possibilities could differ merely by a permutation of their individuals.

[4] Dasgupta (2009) argues further that we can eliminate fundamental individuals, by outlining his 'algebraic generalism'. The remaining question is whether the apparent gain in parsimony proves worthwhile — see Sider 2020: §§3.14–6.

think of Dasgupta's argument as an empirical reinforcement of the intuitive idea that purely haecceitistic distinctions are 'distinctions without a difference'.)

A second reason to take generalism seriously is defensive in nature: it can explain the radical divergence between our individualist conception of reality and its fundamental generality. A broad point here is that, insofar as our conception has been shaped by its usefulness for navigating our environment, there seems to be little reason to expect it to match the way things are fundamentally. We are non-fundamental creatures navigating a non-fundamental environment; fundamental metaphysics is therefore akin to the more theoretical parts of physics and mathematics, where our ordinary conceptual scheme has little authority. Arguably, for example, our naïve conceptions of time and of sets should be supplanted by less intuitive theories (the former because of its conflict with relativity, and the latter because of its inconsistency).

Generalists can also offer a more targeted defense. Dasgupta (2009: §4.4) proposes that agents inhabiting a fundamentally general reality would find it pragmatically essential to employ referring expressions as representational 'hooks' on which to hang general information. To illustrate, consider belief-updating. Suppose we start with the belief:

> "something which is F bears R to something else".

Now we discover that the 'something else' is a G. To represent this new information, we must transition to the whole new belief (which supersedes our previous belief, and cannot be decomposed into simpler beliefs):

> "something which is F bears R to something which is G".

This holism makes generalist representation extremely impractical: information-gathering requires the constant wholesale replacement of a single extremely complex global belief. By contrast, suppose we introduce some individualist labels 'a' and 'b' to represent our original information as:

"a is F";
"a bears R to b".

This atomistic approach facilitates information storage and revision. For example, we can replicate the transition above by merely adding the belief:

"b is G".

The resulting stock of atomistic beliefs adequately represents the general situation so long as we receive and convey information using rules analogous to the ∃-elimination and -introduction rules of predicate logic. Thus, agents naturally construct an 'ersatz world' of individuals in order to render a general reality representationally tractable. This suggests that generalism would be deeply counterintuitive regardless of its truth.

For these reasons and others, several metaphysicians and philosophers of physics have recently explored various forms of generalism (Dasgupta 2009, 2014, 2015; Turner 2011, 2017, forthcoming; McKenzie 2014; Russell 2016, 2018; Bacon 2019; Dewar 2019; Glick 2020; Sider 2020). This paper aims to contribute to this undertaking, by addressing generalism's core challenge: recovering non-fundamental individuals from a fundamentally general reality.

I consider generalism a serious and interesting enough hypothesis to make my proposal worthwhile in itself. But it also serves more broadly as a case study in two importantly different approaches to the task of explaining the non-fundamental in terms of the fundamental: one based on 'generation', the other on 'reduction'. Part of my aim is therefore to demonstrate a broader methodological point: the evaluation of theories about what is fundamental is crucially sensitive to the approach to metaphysical explanation that is taken.

1. Two Versions of Generalism

There are two importantly different versions of generalism, which may be introduced by analogy with 'atomism': the view that fundamental reality consists in the existence and nature of

mereological atoms (objects with no parts). According to atomism, all composite objects (molecules, tables, etc.) are non-fundamental: their existence and nature may be metaphysically explained in terms of an underlying purely atomic reality. But there are different senses in which these objects may be non-fundamental.

'Permissive atomism' holds that composite objects are generated by, or built out of, their atomic constituents. *Generation* is a worldly 'determination' relation much like causation; the two relations are similarly tied to laws, counterfactuals, and explanation.[5] Generation differs from causation by holding across 'levels of reality' rather than across time, and with metaphysical rather than natural necessity. According to permissive atomism, the most basic level of reality features only atoms; composite objects belong to derivative levels of reality which are generated from this basic level. This view is 'permissive' in holding that composite objects are just as 'real' as atoms; reality is a rich hierarchy, featuring both composite objects and the atoms which make them up.

Another version of atomism — 'strict atomism' — holds that reality is mereologically sparse; the atoms are all there 'really' is. Nonetheless, this sparse reality supports our ordinary talk 'about' composite objects; this talk is made true by the ways atoms are arranged.[6] This view countenances no worldly relation between atoms and composite objects — there are no composite objects in reality to stand in such a relation! Instead, the sense in which composite objects are non-fundamental must be understood via representation: only truths about atoms reflect reality's ultimate, intrinsic, objective structure, or 'carve nature perfectly at its joints', whereas talk of composite objects distorts this structure, in ways that reflect our own interests and perspectives 'outside the metaphysics room'. As I will say, only truths about atoms are 'perspicuous'.[7] Non-

[5] See Rosen (2010) on 'metaphysical dependence', Fine (2012) and Schaffer (2016) on 'grounding', Bennett (2017) on 'building', and A. Wilson (2018) on 'metaphysical causation'.

[6] This can be viewed as a form of 'conciliatory nihilism', à la Dorr & Rosen (2002), Cameron (2010), Sider (2013). (Conciliatory nihilists may disagree about whether claims concerning composite objects are strictly true as opposed to 'apt' in some weaker sense.)

[7] Cf. (O'Leary-)Hawthorne & Cortens (1995: §3), Turner (2010:8–9). See also Fine (2001) on propositions holding 'in reality', Sider's (2011) notion of a 'fundamental truth', Russell's (2015) 'objective matters of fact', and deRosset's (2017) 'conciliatory irrealism'.

perspicuous truths about composite objects *reduce* to perspicuous truths about atoms, in that talk of composite objects has something like a semantic analysis or paraphrase in terms of atoms.[8]

All atomists agree that the existence of the table before me is metaphysically explained by the way various atoms are arranged. But this is consistent with two quite different pictures. The permissive atomist picture involves two 'portions of reality': a basic portion, consisting of atoms, and a distinct but collocated derivative portion which this basic portion generates, consisting of the table. The strict atomist picture involves two ways of aptly representing a single portion of reality: a non-perspicuous way, in terms of the table, and a perspicuous way, in terms of the atoms, to which this non-perspicuous way reduces.

Analogously, we may distinguish two versions of generalism. 'Permissive generalism' holds that all individuals are non-basic. This view is permissive in holding that individuals belong to reality itself. But all individuals (not just the composite ones!) are confined to the derivative levels of reality: their existence and nature are generated by purely general facts which involve no individuals. 'Strict generalism', on the other hand, holds that all talk of individuals (not just talk of composite individuals!) is non-perspicuous. Individualist talk is useful and may be true, but it distorts reality's underlying structure. A purely general reality supports individualist talk in that individualist truths are reducible to general truths.

Permissive and strict generalists agree that the existence and nature of all individuals may be metaphysically explained in purely general terms. But they approach this task quite differently. Permissive generalists take the generation approach, seeking to describe how facts involving individuals are generated from basic generalist facts. Strict generalists take the reduction approach, seeking to describe how truths about individuals reduce to perspicuous generalist truths.

There is plenty to say at an abstract level about the distinction between these two approaches to metaphysical explanation.[9] The distinction rests on the notion of perspicuity (or, reality; or,

[8] The analysis won't belong to ordinary semantics since competent speakers need not have any access to it; see Sider (2011: §7.4) on 'metaphysical semantics'.

[9] I explore the distinction in 'Two Approaches to Metaphysical Explanation' (forthcoming).

worldliness) — the idea that a truth may either reflect or distort the structure of the fact it latches onto. I hope to have at least provided a preliminary grip on the two corresponding versions of generalism. Things should crystallize as we proceed: I will argue that permissive and strict generalism differ substantively, and indeed that we have good reason to prefer the latter.

2. Against Permissive Generalism

This section presents two challenges for permissive generalism: it is hard to see how generalist facts could generate individualist facts in a suitably systematic and non-arbitrary manner.

2.1 Systematicity

Explanation should be systematic: the explanans should be connected to the explanandum via law-like general principles. These 'connections' not only subsume the particular case in question, but extend to many relevantly similar cases (both actual and non-actual). For example, when physicists seek to explain why two magnets attract, and why dropped objects fall, they look for general principles which systematize the behavior of magnetic and free-falling bodies respectively. The explanatory project would be deemed a failure if no such principles could be found. If the behavior in question turned out to be utterly haphazard and non-systematic, we would infer that no explanation could be given (at least, no good explanation).[10]

Metaphysical explanation is no exception: a candidate metaphysical explanation is only taken seriously when it may be covered by some systematizing general principle.[11] For example, consider the claim that a certain ball is red in virtue of being scarlet. One reason this explanation seems plausible is that it may be subsumed under a systematic general theory, according to which

[10] Schaffer (2017) provides several arguments that explanation in general—and metaphysical explanation in particular—requires 'laws' in the inclusive sense of 'counterfactual-supporting general principles'. Note that this constraint does not entail any particular account of explanation (e.g. the deductive-nomological account): for example, it is compatible with holding that explanation is a matter of unification (Kitcher 1981), or of tracking dependence relations (Kim 1994).

[11] Witness the widespread practice of attempting to formulate general principles describing how facts of certain kinds are grounded: e.g., Bennett 2004, Rosen 2010, Fine 2012, Schaffer 2016.

it is not only the object in question which is red in virtue of being scarlet, but all scarlet objects, irrespective of their size or shape, and according to which, more generally still, the same holds for any determinate of any determinable, not merely for scarletness and redness. By contrast, consider the proposal that any object has the color which it does in virtue of having the shape which it does. For example, this ball is red in virtue of being round, others are blue in virtue of being round, and yet others are green in virtue of being round (and likewise with objects of other shapes). This theory is implausibly non-systematic: it determines colors on a case-by-case basis, rather than by a general principle.[12]

To take another example, explaining the existence of singleton sets in terms of the existence of their members seems suitably systematic: the existence of {Socrates} is determined by the existence of Socrates, {Obama} by Obama, and so on. We have a concise rule by which the outputted set can be defined in terms of the inputted entity. By contrast, consider the following haphazard 'rule': the existence of {Socrates} is determined by the existence of Cleopatra, {Obama} by Picasso, 'and so on'. One problem with this connection would be its lack of systematicity: the outputted sets cannot be concisely defined in terms of the inputs.

These examples illustrate a key feature of systematic connections between fundamental and non-fundamental facts: they are characterized by way of 'introduction rules' for sub-factual constituents. In the case of determinables, the sub-factual constituent in question is the determinable property, and the introduction rule is that x instantiates the determinable P if x instantiates one of P's determinates. In the case of singleton sets, the sub-factual constituent in question is the singleton-forming operator (which takes an individual and forms its singleton set), and the introduction rule is that the singleton exists if the individual from which it is formed exists. It is hard to see how non-fundamental facts could be outputted systematically if not via connections which are 'indexed' by their sub-factual constituents in this way.

[12] It has a further problem with arbitrariness (discussed below). These problems are distinct: a theory can be systematic whilst providing arbitrary explanations e.g. one which explains all objects' determinable properties in terms of their determinate properties together with the fact that Socrates exists.

Permissive generalists regard individuals as non-fundamental constituents of facts of the form 'a is P' (more broadly, 'a_1, …, a_n are R'). Hence, in order to systematically explain these facts, they ought to provide introduction rules for individuals. These rules will have to take the schematic form: 'if …P…, then a is P'. Since generalists only have qualitative facts out of which to construct individuals, '…P…' must stand for some purely qualitative description.

The natural strategy is to appeal to a 'qualitative essence' Q[a] which can serve as a surrogate for the individual a in the underlying qualitative facts: the a-involving facts will vary in accordance with the Q[a]-involving facts. For example, this essence should plausibly satisfy the introduction rule: 'if something is Q[a], then a exists'. The natural extension to facts about a's nature is: 'if something is Q[a] and P, then a is P'. (We can think of these rules as governing the introduction of an 'individual-forming operator' *i*, which takes in some qualitative essence Q and forms the individual *i*(Q), where *i*(Q[a]) = a.)

However, this strategy fails in worlds containing qualitatively indiscernible but distinct individuals. For a familiar illustration take TWINS, a world containing two duplicate fundamental particles, Castor and Pollux, floating one mile apart in an otherwise empty universe.[13] Let Q[Castor] be Castor's essence and Q[Pollux] be Pollux's essence. Given the proposed introduction rules, Pollux instantiates Q[Pollux] (since something does). Since Castor and Pollux are qualitatively indiscernible, Castor also instantiates Q[Pollux]. But then it follows that something instantiates Q[Pollux] and is identical to Castor, and hence, from our introduction rule for Pollux, that Pollux is identical to Castor! By similar reasoning, it follows that Castor and Pollux are co-located. Thus, the proposed strategy fails to recover the non-qualitative properties of individuals, as well as the qualitative relations that they bear to one another.

When applied to symmetric worlds, this approach also faces a version of what Dasgupta (2014:12) calls the 'differentiation problem'. Castor and Pollux presumably have the same qualitative essence. (If not, what could explain the asymmetry?) Thus, their existences are each generated by

[13] C.f. Black 1952, Adams 1979. The fundamental description of TWINS takes the form:

$$\exists x\, \exists y\, (Px \,\&\, Py \,\&\, Rxy \,\&\, Ryx \,\&\, x \neq y \,\&\, \forall z\, (z = x \,\vee z = y))$$

the fact that something instantiates this essence. But it is a plausible principle that if two facts are distinct, it must be possible for them to be generated in different ways.[14] At least, the facts that Castor exists and that Pollux exists do not seem plausible counterexamples to this principle: the worldly difference between these non-basic individuals should somehow be reflected in their basis.[15] Unlike individualists, generalists cannot appeal to a brute non-qualitative distinction between them.

Excluding symmetric worlds like TWINS from the domain of the generalist's systematic explanatory principles seems ad hoc: why shouldn't their account of the generation of individuals extend to such worlds? Granting that they belong to this domain, then, generalists seem forced to abandon the idea that individualist facts can be explained by matching individuals to qualitative essences in the manner suggested above. But how else are they to be systematically explained? For the explanation of individualist facts to be systematic, their constituent individuals must co-vary with some corresponding feature of the underlying generalist facts, as determinables co-vary with their determinates, and sets with their members. It's hard to see what this feature could be, if not some form of qualitative essence. (Below, I consider the idea that individualist facts are generated holistically, either through 'joint essences' (§3.2) or 'plural generation' (§4.1).)

2.2 Arbitrariness

Metaphysical explanation should not be arbitrary. For example, suppose we want to explain the existence of composite objects in terms of their parts being 'stuck together'. How tightly must they be stuck together? Any answer would seem implausibly arbitrary.[16] Or suppose we want to explain the existence of natural numbers in terms of pure sets. Should we explain them in terms of von

[14] Perhaps [p or q] and [p or r] are each actually generated by [p], but the first is possibly generated by [q] whereas the latter isn't. Perhaps [{Obama} exists] and [{{Obama}} exists] are each necessarily generated by [Obama exists], but the first generates the second and does not generate itself.

[15] Perhaps the fusion of Obama with Trump and the set {Obama, Trump} are each necessarily generated by Obama and Trump's existences. But if so, this is because there are two different kinds of 'construction-operation' at work on the same raw material. The case of Castor and Pollux is not plausibly like this; presumably, there is only one kind of construction-operation at work in the generation of Castor and Pollux.

[16] For arguments along these lines, see Lewis 1986:212-3; van Inwagen 1990:126-7; Sider 2001:§4.9.

Neumann ordinals or Zermelo ordinals? Any choice seems arbitrary: infinitely many sequences of sets implement the natural number structure equally well, with nothing privileging one over the others (Benacerraf 1965).

It is not obvious how this 'arbitrariness' constraint should be analyzed. It seems to concern the choice of a metaphysical basis failing to be suitably 'privileged'. Leaving this at an intuitive level suffices for my purposes; as the cases illustrate, it seems clear both that there is such a constraint and that we have some grip on it.[17]

When facing problems like those described above, we can either embrace extremity or indeterminacy. Take the mereological case. The 'hard-liner' embraces an extreme connection which revises our intuitions. For example, the claim that all collections of objects have a fusion seems attractively non-arbitrary, but revisionary in its commitment to gerrymandered mereological sums (e.g. Lewis 1986:213). Conversely, the claim that no (or only very special) collections of objects have a fusion trades arbitrariness for a revisionary denial of ordinary composites like tables (e.g. van Inwagen 1990:127). The 'soft-liner' embraces the idea that our notion of composition is indeterminate between many eligible candidate connections, thus avoiding the arbitrary choice between them.[18] Where these connections disagree on the outputted mereological truths, those truths are indeterminate. For example, when the cement between some bricks is drying, the point at which the wall exists is indeterminate.

An analogous situation arises for permissive generalists: to avoid arbitrariness in their connection between general and individualist facts, they must embrace extremity or indeterminacy. Take Joe the electron: what must generally be the case for Joe to exist? It is easy to see how answering such questions involves apparently arbitrary decisions. Consider all the qualitative situations vis-à-vis electrons, corresponding to the various ways of threading electron-trajectories through spacetime (supposing that they have well-defined trajectories). How are we to label these trajectories: what makes one occupied by Joe, and another by Anne?

[17] For discussion, see Korman 2010, Fairchild & Hawthorne 2018, Builes 2021.

[18] Hirsch (1999) defends a view along these lines.

Focus on worlds containing a single electron. Do any contain Joe? If so, which? Any choice of the trajectories 'open to' Joe seems arbitrary: for any cut-off, we should wonder why Joe's existence depends on following a trajectory on one side rather than the other. But if no single-electron world contains Joe, then why not? How many electrons must there be before Joe appears? Any answer to this question would also seem arbitrary.[19]

Extreme views appear to avoid arbitrariness, at the cost of rejecting our intuitions about how individuals vary across generally described situations. At one extreme, permissive generalists might adopt the plenitudinous view that there is an electron for every 'trajectory-choosing function', where a trajectory-choosing function is a function whose domain consists of some generalist worlds, and which maps each world in its domain to some electron-trajectory which is occupied at that world.[20] This avoids 'global arbitrariness' in the distribution of electrons across worlds: at each world, there are simply as many as there can be (given the constraint of no more than one trajectory per electron per world).[21] Any occupied trajectory T at world w is occupied plenitudinously: one electron for every trajectory-choosing function which maps w to T. There is a clear cost associated with this: even if non-basic individuals do not count against the view's ontological parsimony (as Bennett (2017: §8.2.2) and Schaffer (2015) argue), it is surely counter-intuitive to think that the world contains so many co-located electrons.[22] (I discuss this view further in §3.2.)

[19] Compare Chisholm (1967:6) on assigning essential properties to Adam.

[20] Trajectories need to be understood here as qualitative properties, e.g. occupying a given trajectory is a matter of occupying a path with i) a certain shape, and ii) certain distance relations to other occupied paths. (In symmetric worlds, this will collapse distinct paths into a single 'trajectory', so trajectory-choosing functions will not settle relations of co-location. We might wonder: how are the facts about co-location non-arbitrarily settled at such worlds?)

[21] This mirrors Bennett's (2004:355) suggestion that the modal difference between Statue and Lump is primitive and yet non-arbitrary since modal profiles are instantiated plenitudinously. For discussion of plenitude, see Fairchild (2019).

[22] This view also seems to unduly restrict which generalist worlds are possible: for example, any world featuring one electron features many co-located electrons.

At the other extreme, they might adopt the view that each electron only exists at a single world. Again, this seems to avoid global arbitrariness in that each individual is treated equally — they are all maximally fragile — and in this sense, their generation is principled.[23] But again, there is a cost: it is surely counterintuitive to think that all electrons depend for their existence on the most specific details of their qualitative situation, many of which seem irrelevant.[24] Intuitively, for example, the trajectories of some faraway electrons have nothing to do with Joe's existence![25]

If permissive generalists do not wish to endorse an extreme view of the kind I have described, an alternative way to avoid arbitrariness is to embrace indeterminacy. For example, they might say that, in single-electron worlds, the electron's identity is indeterminate: it is indeterminate whether such worlds contain Joe or Anne (although they determinately do not contain both). Embracing some such indeterminacy seems natural for generalists, but it is uncomfortable for permissive generalists. Permissive generalists treat individuals like Joe and Anne as real (albeit non-basic) constituents of the world; their connections output worldly facts, not merely representational truths. Hence, if these outputs are indeterminate, the indeterminacy pertains to reality itself, not merely to our representation of it. This is a serious cost: it is at best bizarre—and at worst nonsensical—to think that reality features individuals but that it is indeterminate which.[26]

The choice appears stark: if permissive generalists wish to avoid arbitrary connections between generalist and individualist facts, they must either embrace counterintuitively extreme connections or else worldly indeterminacy.

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[23] Although one might still wonder about 'local arbitrariness': why do the actual generalist facts generate *these* individuals rather than some others?

[24] This claim about dependence is distinct from Lewis's (1986) view, in the context of his modal realism, that individuals are 'world-bound'. The latter concerns mereological overlap between spatiotemporally isolated concrete worlds, not how individuals' existences depend on qualitative facts.

[25] The intuition being violated here is not merely modal but concerns explanatory relevance directly. Hence, the issue would not be addressed by detaching modality in some way from the explanatory connections between generalist and individualist facts.

[26] There have been several proposals for making sense of worldly indeterminacy (e.g. Barnes & Williams 2011, Wilson 2013) but none, I think, make its application to the case at hand especially attractive.

3. Strict generalism

We have been considering how purely general facts could generate an individualist reality. But strict generalism denies that there are individuals in reality; instead, our talk of individuals non-perspicuously describes purely general facts. Hence, strict generalists face a different question: how can we use names (and other referential devices) to truly represent a general reality?

This 'reduction' approach targets individualist *truths*: ways of truly representing the world which are particular in form and which are 'about' individuals. There are different conceptions of truths, but for concreteness I focus on sentences. Hence, the task is to make it plausible that the truth of all true individualist sentences can be explained by purely general facts.[27] In Sider's (2011:112) terms, strict generalists require a 'metaphysical semantics' which shows 'how what we say fits into fundamental reality'. In particular, I aim to give generalist 'metaphysical truth-conditions' for individualist sentences, such that their truth may be explained by the obtaining of the corresponding metaphysical truth-conditions. My proposal is intended to serve as a 'proof by construction': I am more interested in illustrating the broad advantages of the reduction approach than in the contentious details of its implementation.

I help myself to the complete collection of generalist truths, including many non-fundamental truths (e.g. that something is tall). Thus, I am not providing a complete generalist explanation for individualist truths in fundamental terms, and it remains open that the complete explanation will involve the generation of some general facts by others. But the crucial question for generalists is how individualist truths may be explained in general terms, and I am showing how reduction is a better tool for this critical step.

[27] This is somewhat simplified. Actual languages are only capable of referring to a tiny portion of the individuals there are, whereas generalists should be obliged to show that they can (in principle) explain what is true about *all* the individuals there are. Moreover, their theory of how individualist truths are determined should apply in worlds containing no language. Thus, it may be more accurate to characterize their task more abstractly: they must show that they can explain the truths expressed by individualist sentences in all 'hypothetical' languages. This might be tantamount to explaining all true individualist *propositions*; I avoid this formulation since the nature of propositions is contentious.

3.1 The proposal

In order to give individualist sentences systematic truth-conditions, we ought to assign 'metaphysical contents' to names, which systematically contribute to metaphysical semantics in the way that ordinary contents systematically contribute to ordinary semantics.[28]

I propose that a name's metaphysical content is its referent's 'qualitative profile': the most specific qualitative property which its referent instantiates. Take some complete generalist description of a world in quantificational form. The (monadic) qualitative profiles witnessed at that world correspond to open formulae generated by removing one of the existential quantifiers in this description. For any individual a, let 'Q_a' denote a's qualitative profile, i.e. its most specific qualitative property.[29] If name n refers to a, its metaphysical content — which I denote '[[n]]' — is Q_a. For example, the metaphysical content of 'Obama', [['Obama']], is Q_{Obama}, i.e. Obama's qualitative profile.[30]

I assume that for every qualitative property, the generalist language I am using to give metaphysical truth-conditions has some corresponding (perhaps complex) predicate, and I use the italicized 'Q_a' to abbreviate the predicate corresponding to the qualitative profile Q_a. Thus, to say that something instantiates Q_{Obama} in this language we may write: '$\exists x\ Q_{Obama}x$'. Here is a natural first pass for monadic qualitative truths — atomic truths about a single individual instantiating a qualitative property:

> 'a is P' is true iff $\exists x\ (Px\ \&\ Q_a x)$.

[28] For simplicity I focus on the core case of names, ignoring other referring expressions such as pronouns, demonstratives, *etc.* Questions of metaphysical content should be distinguished from questions of ordinary content. For strict generalists, names must have purely qualitative metaphysical contents, but the Millian claim that a name's ordinary content is its referent can be accommodated as a (non-perspicuous) truth of ordinary semantics.

[29] Individualist talk of names and their referents is needed to communicate a theory of metaphysical truth-conditions. At the end of this section I 'kick away the ladder' by applying the theory to itself.

[30] Ordinary indeterminacy concerning a name's referent yields indeterminacy concerning its metaphysical content: if 'Obama' is indeterminate between various micro-aggregates, then [['Obama']] will be correspondingly indeterminate between the qualitative profiles of these micro-aggregates.

Thus, for example, ‘Obama is tall’ is true just in case something is Q_{Obama} and tall.

This first pass is extensionally adequate in that it only entails true biconditionals, and moreover, the truth-condition on the right varies systematically with the sentence on the left.[31] But it does not seem appropriately explanatory: its truth-conditions include much irrelevant detail. For example, Obama’s tallness is explained in terms of every last trifling detail of Obama’s qualitative profile. This profile tolerates no difference to the world whatsoever, and yet all kinds of differences preserve Obama’s tallness.

Note that the demand here is not to recover certain *modal* truths, like ‘possibly, Obama is tall and p’ (for various p). Recovering such truths is a further task, which I discuss below. Rather, the current problem is that non-modal truths — like ‘Obama is tall’ — should have the appropriate flexibility: our theory should count ‘Obama is tall’ as true in worlds where things are different in various ways. Letting worlds be maximally specific qualitative propositions, we can require that metaphysical truth-conditions describe the worlds at which a sentence is true. Since $\exists x (Px \,\&\, Q_a x)$ only describes the actual world, it fails to adequately describe the worlds at which ‘a is P’ is true.[32]

To fix this, I propose that the truth-conditions for individualist truths be specified using a counterpart relation. Lewis (1983, 1986) accounted for de re modal truths using a counterpart relation — henceforth, the L-counterpart relation — between actual and possible individuals. I am proposing, analogously, to account for individualist truths using a counterpart relation between qualitative profiles. My counterpart relation is importantly different from Lewis’s, however. First, it is ‘higher-order’: it relates properties — in particular, maximally specific qualitative properties — not individuals. Second, it has a different target: it is introduced to account for *non-modal* truths

[31] Left-to-right: if ‘a is P’ is true, then a is P and Q_a (since a is Q_a), hence something is P and Q_a. Right-to-left: if something is P and Q_a (where P is qualitative), then anything which is Q_a is also P, hence a is P, and so ‘a is P’ is true.

[32] As discussed below (n.35), this needn’t amount to requiring that metaphysical truth-conditions entail *necessary* biconditionals.

about individuals. Where Lewis's counterpart relation determines what is possible for an individual, mine determines what is true about an individual at various generalist worlds.

According to Lewis, 'Possibly, a is P' is true (where P is qualitative) just in case some L-counterpart of a is P. Similarly, my proposal is that 'a is P' is true (where P is qualitative) just in case some counterpart of Q_a is co-instantiated with P. Equivalently, let the 'expansion' of a qualitative profile Q, Q^R, be the qualitative property generated by disjoining all those profiles related to Q by the counterpart relation R.[33] (Thus, Q^Rx iff $\exists F\ F$x & R(Q, F).) My proposed metaphysical truth-conditions for monadic truths can then be stated as follows:

'a is P' is true iff $\exists$x (Px & $Q_a{}^R$x).

This evades the problem with the first pass: a qualitative profile's expansion omits its irrelevant details. For example, 'Obama is tall' is plausibly only true at worlds where something instantiates some counterpart of Q_{Obama}. Expanding the profile achieves the appropriate flexibility.

It remains to characterize counterparthood itself. Since my counterpart relation plays a different role from Lewis's, it is subject to different constraints. In particular, Lewis (1983:29) allowed that x may be L-counterparts with distinct world-mates x1 and x2, and conversely, that world-mates x1 and x2 may share an L-counterpart in x. This has the result that x is possibly Q_{x1} and possibly Q_{x2}, even though it is impossible to be Q_{x1} and Q_{x2}, and that x1 and x2 are each possibly Q_x, even though it is impossible for two things to be Q_x. The analogous allowances for my counterpart relation would be implausible. If Q_x is counterparts with Q_{x1} and with Q_{x2}, then 'x is Q_{x1}' and 'x is Q_{x2}' are each true at Q_{x1} and Q_{x2}'s world — but nothing is both Q_{x1} and Q_{x2} in this world! Conversely, if Q_{x1} and Q_{x2} are each counterparts with Q_x, then 'x1 is Q_x' and 'x2 is Q_x' are each true at Q_x's world — but only one thing is Q_x in this world![34]

[33] This parallels Lewis's (1983:35) notion of a thing's essence.

[34] Later (1986:232), Lewis even allowed that world-mates may be L-counterparts. But if Q_x is counterparts with a distinct world-mate profile Q_y, my proposal falsely entails that 'x is Q_y' is true at Q_x's world.

Thus, we should require that no qualitative profile be counterparts with distinct world-mates (that is, qualitative profiles instantiated at the same world as each other), and conversely, that no world-mates share a counterpart. In this way, my counterpart relation better fits the intuitive idea that your counterparts are ways you *would* have been, had things been different (on the assumption that there can only be one way that you would have been, and if it's the way that *you* would have been, then it can't also be the way that someone else would have been).

To flesh this out, my counterpart relation obeys the following three conditions — $R(Q_a, Q_b)$ if and only if:

(i) Q_b is similar enough to Q_a that a could instantiate it;
(ii) Q_b is more similar to Q_a than any other profile instantiated in Q_b's world is to Q_a;
(iii) Q_a is more similar to Q_b than any other profile instantiated in Q_a's world is to Q_b.

As with L-counterparthood, which of many candidate relations best satisfies these conditions is indeterminate and context-dependent. The first condition should be applied in accordance with our *de re* modal intuitions: for example, we think that Obama could have been one inch shorter, but are less inclined to believe that he could have been a poached egg. Thus, Obama's qualitative profile, Q_{Obama}, is counterpart to profiles just like it except for small differences in height, but not to profiles corresponding to poached eggs. (Recall, however, that we are not fixing modal truths here; as discussed below, it is an open question how *de re* possibility connects to this counterpart relation.)

The second and third conditions should be applied in accordance with our intuitions about relative similarity. For example, we think that Q_{Obama} is more similar to a situation just like it except for the positions of some electrons, Q_{Obama*}, than it is to a likewise modified version of Q_{Trump}, Q_{Trump*} (a world-mate of Q_{Obama*}). Thus, in accordance with conditions (ii) and (iii), Q_{Obama} (and not Q_{Trump}) is counterpart to Q_{Obama*} (and not to Q_{Trump*}). Intuitively, Q_{Obama}'s counterparts are not merely Obama-ish (in accordance with (i)), but *distinctively* Obama-ish (in accordance with (ii) and (iii)): they are not merely similar enough to Q_{Obama}, but they are also more similar to Q_{Obama} than any of their world-mates are, and more similar to Q_{Obama} than they are to any other actual profile.

Consider a world containing two versions of Earth, one featuring Obama-1 and the other Obama-2. Don't we want to say that Q_{Obama} has a counterpart instantiated at such a world, even if $Q_{Obama\text{-}1}$ and $Q_{Obama\text{-}2}$ are equally similar to Q_{Obama}? If the world is perfectly symmetric, so that $Q_{Obama\text{-}1}$ and $Q_{Obama\text{-}2}$ are the same profile, then there's no problem: that profile is Q_{Obama}'s counterpart. If the world is only almost-symmetric, so that $Q_{Obama\text{-}1}$ and $Q_{Obama\text{-}2}$ differ slightly, then there will be ways of evaluating similarity which select the former as Q_{Obama}'s counterpart and ways which select the latter. These ways will correspond to different precisifications of counterparthood: Q_{Obama} is either counterpart to $Q_{Obama\text{-}1}$ or to $Q_{Obama\text{-}2}$, but it is indeterminate which.

To repeat, this isn't intended as an account of what is possible for Obama. In some sense, perhaps, it is (determinately) true both that Obama is possibly $Q_{Obama\text{-}1}$ and that he is possibly $Q_{Obama\text{-}2}$. These two possibilities correspond to a single generalist world, so this sense of possibility is haecceitist. Nonetheless, it is compatible with my proposal. My proposal says that 'a is possibly P' is true iff something is both Q_a^R and possibly P. But it is silent on what it is to be possibly P.

A natural approach introduces another counterpart relation, R*, which shadows Lewis's: Q_x bears R* to Q_y just in case (supposing modal realism) x is an L-counterpart of y.[35] (Hence, R* violates clauses (ii) and (iii).) For something to be possibly P (where P is qualitative) is for it to instantiate some profile Q which is R*-related to some profile Q* which entails P (where one qualitative property F entails another G just in case all Fs instantiate G in every generalist world). If Q_{Obama} bears R* to $Q_{Obama\text{-}1}$ and to $Q_{Obama\text{-}2}$, then it is true both that Obama could have been $Q_{Obama\text{-}1}$ and that he could have been $Q_{Obama\text{-}2}$. (Thus, this approach reconciles strict generalism with a kind of 'cheap' haecceitism, à la Lewis 1986: 228.)[36]

[35] This is merely intended to characterize the kind of relation I have in mind, not to define it.

[36] Unsurprisingly, my proposed truth-conditions do not correspond to biconditionals which are necessary in this 'haecceitist' sense. For example, suppose that $Q_{Obama\text{-}1}$ is in the expansion of Q_{Obama}, so that $Q_{Obama\text{-}2}$ is not. Then, possibly: Obama is $Q_{Obama\text{-}2}$ and nothing is Q_{Obama}^R and $Q_{Obama\text{-}2}$. I don't view this as problematic, since the sense in which metaphysical truth-conditions ought to be necessary is fully captured by the constraint that they should adequately describe the worlds at which the sentence in question is true. Since haecceitist possibilities overflow generalist worlds, certain sentences (like 'Obama is $Q_{Obama\text{-}2}$') may be possibly true (in this second-rate sense) without being true at any worlds. (In Dasgupta's (2020: §8)

Lewis (1983: 44) observed that counterpart theorists must treat de re possibilities for multiple individuals holistically. Likewise, I need holistic metaphysical truth-conditions for truths about multiple individuals. The most similar individual to Trump Sr at world *w* inhabits Earth 1, and the most similar individual to Trump Jr at *w* inhabits Earth 2. According to the proposal above, 'Trump Sr inhabits Earth 1' and 'Trump Jr inhabits Earth 2' are each true at *w* — but *w* hosts no interplanetary relatives!

To fix this, the counterpart relation must be extended to joint profiles. For any individuals $a_1,\ldots, a_k$, let $Q_{<a_1,\ldots,a_k>}$ be their 'joint qualitative profile' — the most specific k-place qualitative relation that they instantiate — and let this be the metaphysical content of a corresponding sequence of names $<n_1,\ldots, n_k>$.[37] Let this profile be counterpart to relevantly similar joint profiles in a manner which obeys conditions parallel to those set out for monadic profiles. To illustrate, the metaphysical content of <'Trump Sr', 'Trump Jr'> is Trump Sr and Trump Jr's joint profile (the maximally specific binary qualitative relation that Trump Sr and Trump Jr instantiate). Since this relation is 'paternal' — x's bearing it to y entails that x is y's father — it should only have paternal relations as its counterparts (insofar as the father-of relation intuitively holds with necessity).
This generalized counterpart relation yields generalized truth-conditions for atomic individualist sentences as follows:

'$Pa_1\ldots a_n$' is true iff $\exists x_1\ldots\exists x_n\, Px_1\ldots x_n$ & $Q_{<a_1,\ldots,a_n>}{}^{R}x_1\ldots x_n$

Thus, for example:

terminology, my point is that biconditionals corresponding to metaphysical truth-conditions may be possibly false in the 'loose' but not the 'strict' sense.)

[37] In symmetric worlds, this joint profile is not determined by the monadic qualitative profiles in question. Hence, one might worry that metaphysical contents fail to be 'compositional': the content of a sequence of names is not determined by their contents in isolation. But since the metaphysical content of a sequence of names is defined as the joint profile of their referents, it is determined compositionally by their ordinary contents (assuming these contents fix reference). This seems to be compositionality enough: it allows the metaphysical content of a sequence of names to be accounted for in terms of their reference-fixing features (causal history, pattern of use, etc.).

‘Trump Sr is Trump Jr’s father’ is true iff

$\exists x\, \exists y$ x is y’s father & $Q_{<Trump\ Sr,\ Trump\ Jr>}{}^{R}xy$

i.e. some distinctively <Trump Sr, Trump Jr>-ish things instantiate the father-of relation. Hence, we may suppose that Trump Sr is Trump Jr’s father (and that they inhabit the same planet) at *w*, since no interplanetary pair is <Trump Sr, Trump Jr>-ish.[38]

One might worry that the proposed metaphysical semantics illegitimately presupposes certain linguistic truths about names and sentences which are themselves individualist. However, these linguistic truths can themselves be reduced (so the official theory could be stated in fully generalist terms). To illustrate, let S be the sentence-token: ‘Obama is tall.’. Let N be the name-token which S features. The proposal above provides the following truth-conditions:

‘S is true’ is true iff $\exists x$ (x is true & $Q_S{}^{R}x$).

‘N refers to Obama’ is true iff $\exists x\, \exists y$ (x refers to y & $Q_{<N,\ Obama>}{}^{R}xy$).

Of course, these clauses themselves presuppose further linguistic truths about names and sentences, but these may be similarly analyzed.[39]

[38] To ensure consistency between the truth-conditions for various individualist truths, the counterparts for profiles of various adicities must mesh appropriately. For example, if the counterpart at *w* of $Q_{<Trump\ Sr,\ Trump\ Jr>}$ is instantiated by some pair of Earth 2-inhabitants, then the counterpart at *w* of $Q_{Trump\ Sr}$ should be instantiated by the first of this pair. Otherwise, the proposed truth-conditions might make ‘Trump Sr and Trump Jr each inhabit Earth 2’ true but ‘Trump Sr inhabits Earth 2’ false. The required constraint is as follows (for any natural number n):

At any world *w*, $\forall x_1 \ldots \forall x_n\ (Q_{a_1}{}^{R}x_1 \,\&\, \ldots \,\&\, Q_{a_n}{}^{R}x_n \leftrightarrow Q_{<a_1,\ldots,a_n>}{}^{R}x_1 \ldots x_n)$.

An admissible counterpart relation trades off the constraints applying to profiles of different adicities.

[39] The ensuing regress is non-vicious because the linguistic truths presupposed in stating the truth-condition for a sentence are not themselves involved in *reducing* the truth that it expresses. Compare: that ‘Obama’ refers to Obama is relevant to the truth that ‘Obama is tall’ means that Obama is tall, but not to the truth that Obama is tall.

3.2 Progress

I can now show how the above proposal makes progress, by addressing the problems with systematicity and arbitrariness that I raised for permissive generalism.

Firstly, recall that permissive generalists cannot make the generation of individualist facts appropriately systematic by outfitting individuals with qualitative essences, since this strategy fails in symmetric worlds like TWINS. The proposal above is systematic: it provides a concise rule by which individualist truths vary systematically across generalist worlds in accordance with the metaphysical contents of the names used to expressed them. But it has no difficulty with symmetric worlds such as TWINS.

Suppose our world is symmetric, and let 'Obama*' refer to Obama's qualitative duplicate on the other side of the universe. Then the truth that Obama is distinct from Obama* reduces to a general truth of the form:

$$\exists x \exists y (x \neq y \ \& \ Q_{<Obama,\ Obama^*>}{}^{R} xy)$$

i.e. there are some distinct <Obama, Obama*>-ish things. Similarly, the truth that Obama is far away from Obama* but not from himself reduces to a general truth of the form:

$$\exists x \exists y (Dxy \ \& \sim Dxx \ \& \ Q_{<Obama,\ Obama^*>}{}^{R} xy)$$

i.e. there are some <Obama, Obama*>-ish things such that the first is far away from the second but not from itself.

The key to this resolution of the systematicity problem is holism: the collective semantic contribution made by some names cannot always be read off their individual contributions. The names 'Obama' and 'Obama*' have the same metaphysical content, and yet the pairs <'Obama', 'Obama*'> and < 'Obama', 'Obama'> do not.

Now, the generation approach may be made similarly holistic: instead of assigning joint contents to collections of names, we could assign 'joint essences' to collections of individuals, not determined by their individual essences (cf. Fine 1994:65). Thus, for example, distinctness is essential to <Castor, Pollux>, even though Castor is not essentially distinct from Pollux, nor Pollux from Castor.[40] Castor and Pollux's distinctness may then be generated from the generalist fact that some distinct things instantiate Castor and Pollux's joint essence.

I regard this parallel solution as significantly more costly than the proposal I have outlined. In order to give systematic explanations, each side needs some sort of 'defining properties' for both individuals and collections of individuals, which determine how and when they appear in various generalist situations. But for permissive generalists these must be real definitions, i.e. worldly essences, whereas strict generalists merely need metaphysical contents together with the counterpart relation (which might be thought of as a kind of 'linguistic essence'). Positing joint worldly essences goes out on a metaphysical limb, in a way that assigning holistic contents to names used in symmetric worlds does not. Indeed, it is unclear how the facts about worldly essences may themselves be systematically generated. By contrast, the reduction approach can explain how names get their metaphysical contents. For example, we can reduce the truths that (i) 'Obama' refers to Obama, (ii) 'Obama*' refers to Obama*, and (iii) Obama and Obama* instantiate $Q_{<Obama, Obama*>}$, and use these truths to explain why $Q_{<Obama, Obama*>}$ is the metaphysical content of < 'Obama', 'Obama*'>.

The reduction approach has a further advantage when it comes to the 'differentiation problem'. Recall that Castor and Pollux plausibly share a worldly essence, and so are both generated by the fact that something instantiates this essence. This violates the plausible principle that different facts ought to at least be possibly generated in different ways. The reduction approach faces an analogous phenomenon: truths involving names used within symmetric worlds —such as 'Obama exists' and 'Obama* exists'—reduce to the same general truth. However, the analogous principle that different truths reduce (or at least, possibly reduce) in different ways is not nearly as plausible:

[40] Alternatively, we might suppose that Castor and Pollux's essences each mention the other. But reciprocal essences appear to yield unattractive explanatory circles: how Castor is would be partly explained by reference to Pollux, and vice versa (Fine 2015:297).

it is a familiar point that sentences involving different names may differ representationally without differing in their worldly basis.[41]

Secondly, recall that permissive generalists face a stark choice: if they wish to avoid arbitrary connections between generalist and individualist facts, they must either embrace counterintuitively extreme connections or else worldly indeterminacy. The proposal above embraces indeterminacy. In particular, in any given context, it is indeterminate which relation plays the counterpart role: many admissible candidates satisfy the relevant constraints equally well.

I favor a supervaluationist resolution: an individualist sentence is true iff true relative to all admissible counterpart relations, and indeterminate iff true relative to some and false relative to others. Thus, many individualist sentences have indeterminate truth-values at many generalist worlds.[42] For example, suppose that any particular electron could just as well exist alone as any other. Then, for any profile corresponding to a lonely electron, it will be indeterminate which of the profiles instantiated by actual electrons are its counterpart: on some admissible counterpart relations, Joe's profile is its counterpart, and on others, Anne's is. Thus, at any single-electron world, it is indeterminate whether any given actual electron exists (although it is determinate that at most one actual electron exists, by condition (iii)).

This result is natural from a generalist perspective. Where generalists recognize a single qualitative possibility, our individualist conception envisages a world where Joe exists alone and a distinct world where Anne exists alone. It is natural for generalists to deny that their fundamental qualitative possibilities determinately map into the second-rate pluriverse of individuals. On the reduction approach, this indeterminacy is linguistic. It is indeterminate what makes it true that Joe exists, since the mechanism by which our names extend to hypothetical scenarios doesn't nail down what it takes to be distinctively Joe-ish. Linguistic indeterminacy is familiar: it is indeterminate which of the many precisely-bounded Everest-candidates makes it true that Mount Everest exists, since the content of 'Mount Everest' does not specify precise boundaries. The

[41] Though see §4.2 below for a related concern.

[42] Since all admissible counterpart relations are reflexive, this proposal does not make for any (extra) indeterminacy when it comes to truth at the actual world.

parallel move on the generation approach would be to suppose that Joe has an indeterminate essence, and hence that, at some generalist worlds, it is indeterminate whether Joe exists. Since individuals like Joe are worldly, this is worldly indeterminacy—analogous to the odd idea that some single best Everest-candidate makes it true that Mount Everest exists, where it is indeterminate which boundaries this best Everest-candidate has.

As discussed above, an alternative solution for the generation approach provides a principled and determinate mapping from generalist worlds to individuals by embracing plenitude: roughly, for every consistent disjunction of profiles, there is an individual whose existence is generated by the instantiation of the corresponding property.[43] This profligacy seems unmotivated in light of the reduction approach, which ties referring expressions directly to qualitative aspects of reality, without detouring through corresponding individuals. Individualist truths can be explained in a principled way without an unexpected plenitude of unfamiliar individuals. (In a sense, the reduction approach is also plenitudinous: not with respect to individuals themselves — of which reality has none! — but with respect to the corresponding consistent disjunctions of complete qualitative profiles.)[44] Compare: mereological universalists posit a composite object for every collection of simples, using the resulting plenitude to provide semantic values for names. If names could instead be tied directly to collections of simples, then composite objects are redundant, and mereological nihilists have a compelling parsimony argument against them.

4. Remaining issues

4.1 Proportionality

Dasgupta (2014: §3) argues that generalists cannot provide grounds for individualist facts which are proportional — that is, specific enough to necessitate these facts without including irrelevant detail. Consider Obama's instantiating some intuitively local (and accidental) property:

[43] Presumably it would be indeterminate which of these many properties actual names correspond to, and hence, indeterminate which of many co-located duplicates they refer to.

[44] The selection of these profiles by actual names is constrained both by the actual profiles of the individuals we can refer to and by the counterpart relations which we can adopt.

(O) Obama is smiling (at time t).

Any qualitative fact intrinsic to the solar system can obtain in almost-symmetric worlds where, intuitively, it is an Obama-impersonator rather than Obama who is smiling.[45] Indeed, since we can repeat this argument for any region, the only qualitative facts which could necessitate (O) are global facts about the entire universe. But such facts are intuitively irrelevant: surely what is going on around Alpha Centauri, for example, has nothing to do with Obama's smiling!

One reaction—proposed by Dasgupta (2014) himself—is to retreat to 'structuralism': individualist facts have no explanation in isolation, but only as part of a plurality. Whilst a global generalist basis isn't wholly relevant to any particular fact in this plurality, all of its details are relevant in some way to the entire plurality. Since this response abandons the ambition of explaining facts like (O), I view it as a last resort. However, it is worth noting that it is equally available to strict generalists: just as permissive generalists may embrace plural generation, strict generalists may embrace plural reduction.

Moreover, structuralism does not address the problems raised above. Structuralist permissive generalism will struggle to provide systematic and non-arbitrary connections between generalist facts and pluralities of individualist facts. It is hard to see how these holistic connections could be systematic in the absence of any systematic 'sub-connections' between generalist facts and particular individualist facts. And the shift to structuralism does nothing to avoid the need for seemingly arbitrary decisions concerning the general situations in which a given individual exists.

A second — to my mind, more promising — reaction denies our relevance intuitions: the way things are globally may be wholly relevant to how they are with respect to a particular individual.[46]

[45] Such worlds are reached by a two-step modification of the actual world: first, add a faraway duplicate solar system containing a smiling Obama-impersonator; second, modify the actual solar system so that Obama is not smiling.

[46] A third reaction denies that the qualitative grounds for individualist facts must be necessitating (perhaps the only necessitate in conjunction with holistic 'background conditions'). Prima facie, this response is

Here, I think that strict generalists may have an advantage: only they can give a plausible error theory for the intuition that individuals should have a local basis. In particular, this locality intuition may reflect the implicit assumption that individualist truths are perspicuous. If there really are worldly individuals, it seems bizarre for them to be non-locally generated: we expect worldly individuals to be 'anchored' to their own patch of reality.[47] If, however, truths like (O) turn out not to involve individuals in their worldly basis, then it is less surprising that this basis turns out to be global. The non-locality reflects the way in which names latch onto an individual-free reality: by contrast with the local matter of simply being Obama, being distinctively Obama-ish is a global competition amongst the profiles instantiated at a world.[48]

4.2 Singular thought

It might seem that permissive generalism has an advantage over strict generalism when it comes to the phenomenon of singular thought, since it provides individuals in reality for such thought to latch onto. To make this vivid, suppose we are living in a symmetric world. On Earth, Trump is thinking that Obama is happy; on the faraway duplicate planet Earth*, Trump* is thinking that Obama* is happy. Trump and Trump* are clearly thinking thoughts with different contents. For example, suppose that Trump is brought unknowingly to Earth* overnight. When he meets Obama*, he does not know that this man is happy, even if he knows that Obama is happy.[49]

Since Obama and Obama* are qualitative duplicates, how can strict generalists make sense of this purely *de re* difference? On the proposal above, Trump and Trump*'s thoughts would have the

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equally available to strict and permissive generalists. (Skiles 2015 defends the general idea that grounds don't always necessitate.)

[47] Perhaps an individual can be generated by facts which transcend its location; as a referee notes, cases of 'emergence' seem to be like this. However, we should distinguish isolated cases of 'non-local' generation — where an individual is anchored to a larger patch than we might expect (e.g. one which goes beyond its parts) — from the pervasive 'global' generation that permissive generalists seem committed to — where no individuals turn out to be anchored to any patches.

[48] Compare simultaneity. Intuitively, whether e1 and e2 are simultaneous ought to be 'internal' to these events. But this intuition is no longer compelling in light of the discovery that truths of the form 'e1 and e2 are simultaneous' hide relativity to a contextually specified reference frame, so are non-perspicuous.

[49] See Turner (forthcoming: §8) for a version of this concern.

same metaphysical truth-condition: that something is both $Q_{Obama}{}^{R}$ and happy. By contrast, permissive generalists can view the two thoughts as latching onto distinct facts involving distinct individuals (at the cost of making it mysterious how these facts are generated!)

But strict generalists should distinguish the ordinary truth-conditions of our thoughts, which may be singular, from their metaphysical truth-conditions, which cannot be. For example, Trump and Trump*'s thoughts share a metaphysical truth-condition, but they have different ordinary truth-conditions, since Trump is thinking about Obama whereas Trump* is thinking about Obama*. This reduces to a generalist truth of the following form (where 'T' denotes the relation of thinking about):

$$\exists x \exists x^* \exists y \exists y^* (Txy \,\&\, Tx^*y^* \,\&\, Q_{<Trump,\ Trump^*,\ Obama,\ Obama^*>}{}^{R} xx^*yy^*).$$

More generally, strict generalists can accommodate any ordinary representational notions like reference and truth and epistemological notions like knowledge and justification so long as they can be accounted for in qualitative terms.

It is hard to shake — but perhaps harder to precisely articulate — the feeling that something has gone missing. Even if we can account for there being two thinker-referent pairs, one of which is <Trump, Obama> and the other of which is <Trump*, Obama*>, we cannot make sense of the intuitive idea that there is a further question of 'which is which'. We can put it metaphorically by imagining a 'Godseye' perspective on the symmetric world. From this lofty position, we might imagine pointing to one of the Obama-duplicates and asking: is *that* Obama, or his duplicate?

Strict generalists should deny that this question makes sense. First, there are no individuals in the world for the demonstrative '*that*' to identify: all we can 'point at' are instantiated qualitative profiles. Asking this question is like selecting a variable in the world's quantificational description, and asking whether '*it*' corresponds to Obama or his duplicate.

Second, it is crucial to Trump's thinking about one of the Obama-duplicates that his thought is itself embedded within the world, and may thus bear different relations to them. Once a thought is

'brought outside' the world, there is nothing to determine its reference. What remains, from the Godseye perspective, are certain 'penumbral connections': for example, that Obama and Trump share a planet, and that Obama is denoted by the concept OBAMA. Thus, I suspect that the elusive dissatisfaction with the strict generalist's description of reality has its source in a broader concern, arising for individualist and generalist alike, that any objective description misses the indexical truths about 'who is where'.[50]

5. Concluding remarks

I have argued that the generation approach to generalism faces serious difficulties, and that these difficulties can be overcome by switching to the reduction approach. In conclusion, I want to return to the initial appeal of generalism. As I will argue, strict generalism is not only a more successful version of the view — it is also more attractive in the first place.

First, recall Dasgupta's (2009) argument that individuals are physically redundant and empirically undetectable. Permissive generalism avoids physically redundant individualist facts: worlds differing on their individualist facts at some time must also differ on their general facts at that time, and hence on their general facts at later times. But compare the case of absolute velocities (after which Dasgupta's argument is modeled). We could avoid physically redundant absolute velocities in a parallel way, by generating them from relative velocity facts. It seems clear that preserving non-basic absolute velocities in this way would be unmotivated and, in some sense, unparsimonious. The more natural response is to eliminate absolute velocity structure altogether (whilst allowing for non-perspicuous truths about absolute velocity, with respect to contextually specified reference frames). If Dasgupta's argument succeeds, I see no reason why our attitude towards individuals should be any different: positing individualist facts, whether basic or not, seems unmotivated.[51] (Relatedly, strict generalism provides a much clearer vindication of the intuition that permuting individuals makes no 'real' difference than permissive generalism does; cf. Sider 2020:8.)

[50] I leave the question of whether (strict) generalists face any special version of this problem to future work.

[51] A more detailed discussion of physical redundancy and fundamentality must be left for future work.

Secondly, recall the idea that our individualist conception is explained by its usefulness: agents inevitably construct an 'ersatz world' of individuals in order to render a holistic general reality representationally tractable. The vision this motivates is strict generalism: an explanation along such lines would make it understandable that we represent the world in a radically non-perspicuous way. If anything, it only makes permissive generalism *more* mysterious! After all, the ersatz world would appear to do its work irrespective of any derivative individualist facts: given that individualist language aptly represents the general facts, perspicuously representing some derivative reality seems to provide no additional expediency.[52] From the generalist perspective, then, there seems little reason to expect reality to indulge our individualist conception this way — and, as I have argued, plenty of reason not to.

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[52] There is plenty more to say about the practical upshots of representing perspicuously. The claim here is not that perspicuity is practically irrelevant, but only that it is hard to see why an individualist conception should be more adaptive in a permissive generalist reality than in a strict generalist reality.

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