NON-COUNTABLE INDIVIDUALS:
WHY 'ONE' AND 'THE SAME'
IS NOT ONE AND THE SAME

Johanna Seibt
University of Texas at Austin

Ramsey once remarked that "when a philosophical dispute presents itself as an irresolvable oscillation between two alternatives, the likelihood is that both alternatives are false and share a common false presupposition." There are some areas within contemporary philosophical debate whose 'irresolvable oscillations' have, so far, failed to elicit presuppositional analyses. One of these areas is the contemporary discussion about individuality. The debate about individuality, I claim, is shaped by the presupposition that all concrete individuals are countable particular entities. As I will argue here, this presupposition does not formulate a conceptual necessity. Not all of what has the 'distinctness' of an individual fulfills the conditions for being counted as one concrete entity. If we abandon the traditional equation of individuality and countability, of sameness and oneness, the debate's most famous dialectical oscillation, namely, the dispute about Leibniz's principle of the identity of indiscernibles, can be dissolved in a straight-forward way.

1. Transcendental and ontological explanation

To preface my argument with two clarificatory remarks, I will, first, neither assume nor argue that sameness amounts to exact similarity, or more precisely, that the predicate 'x and y are the same' denotes the relation of exact similarity. The predicates 'x and y are one' and 'x and y are the same' are two-place predicates in their surface grammar but they are not relational predicates in the usual sense. In either case, the predicate is not true of two different entities; rather, it is satisfied by one entity or the same entity, respectively. By way of contrast, the predicate 'x is exactly similar to y' is a normal two-place relational predicate, one that is true of two different entities.

Second, consider the following two non-sensical claims:
Two entities of kind K are the same entity of kind K.
Different entities of kind K are one entity of kind K.

The fact that these claims strike us as non-sensical might tempt one into assuming that the predicates 'x and y are one entity (of kind K)' and 'x and
y are the same entity (of kind K) are, if not synonymous, at least necessarily co-extensional. Indeed, the Western ontological tradition following Aristotle assumed that all individuals are numerically one — *ens et idem et unum convertuntur*. In questioning the longstanding presupposition that individuality and oneness are co-extensional notions I will of course not argue for any of the two stated non-sensical claims. Rather, I will argue that not all of the entities which satisfy the predicate 'x and y are the same entity (of kind K)' also satisfy the predicate 'x and y are one entity (of kind K).'

With these two preliminary safe-guards put into place, let me begin the argument with a methodological reflection on the construction of ontological explanations. If a sentence of some language L is true, there are some items in the world as L-speakers conceive of it that make this sentence true. An ontology is a theory of such truth-makers. An ontologist defines which *types of beings* occur in a truth-makers. For instance, she might say that truth-makers of sentences of English contain only two types of beings, substances and attributes, or contain only one type, tropes, or contain three types, objects, properties, and state of affairs. An ontologist postulates beings of a certain type in order to explain why we are justified to draw the inferences licensed by a certain language. For example, English sentences grammatically structured like

1. Tom's (only) cat is white
2. whatever is to the left of Tom's cat is not Tom's cat
3. whatever is to the left of Tom's cat is not white.

Observing inferential patterns of this sort, ontologists postulate for instance that the truth-maker of the sentence 'Tom's cat is white' contains a substance and an attribute. An 'attribute' is said to be a general entity, i.e., to be capable of occurring in several places at the same time, while a 'substance' is said to be a particular entity, i.e., to be incapable of multiple occurrence at the same time. Why we are justified in drawing inference (2) from (1) and why we refrain from drawing inference (3) from (1), can thus be explained by pointing out that Tom's cat is a substance and whiteness is an attribute.

Being a particular or a general entity are *modes of being*; since they may be features of more than one category, I call them transcendental, following loosely the Scholastic tradition. Types of beings, or categories, are defined in terms of modes of being, transcendental, which dovetail with certain inferential patterns. The features of particularity and generality dovetail with the pattern instantiated by sentences (1), (2), and (3), and similar correlations hold between inferential patterns and the transcendental 'con-
Non-countable Individuals

crete', 'simple', 'unified', 'persistent', 'unique', 'discrete', 'independent', 'instantiable', and their relevant converses.

2. The transcendental notion of individuality
Let us consider four of these transcendental features and the inferential patterns they are designed to explain.

(a) \( \alpha \) is a particular entity \( \equiv \) if \( \alpha \) exists at time \( t \), \( \alpha \) occurs at \( t \) in one spatial location only

As I pointed out, the transcendental of particularity is associated with the inferential pattern instantiated by sentence [1] and [2] above—a particular entity is not repeatable in space, and thus we are entitled to conclude that whatever is left of Tom's cat is not Tom's cat.

Consider now the following three sentences.

[4] The chicken was cackling and the lamb was bleating when he entered
[4'] The chicken was sizzling and the lamb was smoking when he entered

[5] The room he entered contained two connected spatial regions, one filled by the chicken, the other filled by the lamb.
In order to explain why we are entitled to infer [5] from [4], but not from [4'] ontologists resort to the transcendental of countability or numerical oneness:

(b) \( \alpha \) is a countable unit (\( \alpha \) is numerically one) \( \equiv \) \( \alpha \) has a determinate spatial or temporal shape.

As sentence [4'] displays, not every usage of the grammatical singular warrants the feature of countability. The referent of 'the chicken' in [4'] does not have determinate shape and thus cannot be counted. Notice also that countability or numerical oneness may signify determinate temporal spell as well as determinate spatial spread—one may not only count one's chickens but also one's blessings.3

Third, consider sentences [6] and [7], and the contrast pair [6'] and [7']:

[6'] Tom's sailing club visited Paris for a week.
[7] All parts of Tom's friend were located in Paris for a week.
[7'] All parts of Tom's sailing club were located in Paris for a week.

The fact that [7] is licensed by [6] (and that [7'] is not licensed by [6']) ontologists explain by stipulating that the truth-maker of [6] contains an entity which has the feature of being unified:

(c) \( \alpha \) is unified \( \equiv \) \( \alpha \) is moved iff any part of \( \alpha \) is moved

Finally, there are inferences which indicate that when we perform a singular reference, we presuppose that the entity in question may be identified and re-identified.

227
Johanna Seibt

[8] This is New York.
[9] The city you are pointing at and the city I am looking at are the same city.
[10] Bill moved from the kitchen to the study.
[11] The person in the kitchen and the person in the study are the same person.

The inferential pattern encoded here ontologists trace to the fact that truth-makers of these sentences contain an individual, a 'distinct' entity. All and only distinct entities can be evaluated with respect to conditions of sameness. (These conditions may be said to involve necessarily a 'bare individuator' or to be exhausted by the conditions of exact similarity or to be necessarily relative to a kind, etc. — for present purposes such differences in philosophical accounts of individuality do not matter.)

(d) x is an individual = x satisfies the predicate 'x and y are the same (K).'

The following sentence pairs [12], [13], and [14], [15] suggest the fact that we can 'latch onto' an individual entity a by the mechanisms employed in our practices of singular reference depends on a's distinctness, but not on a's being a particular, countable or unified entity.

[12] Cedar is my favourite wood—I have used it for my deck, too.
[13] The wood of your deck and the wood of my deck are the same wood.
[14] This is vanilla.
[15] You and I are experiencing the same taste.

Thus, taken as a transcendental feature, as an explanans of the inferential connection between reference and re-identification, at least prima facie the notion of individuality does not imply particularity, countability, or unity—any association of these features amounts to a substantial assumption and should not be presupposed without argument.

3. 'Individual' as Transcendental and as Category Term

Since transcendentals are the 'conceptual building blocks' of ontological categories, one might expect that, throughout the history of ontology, a large variety of combinatorial possibilities has been employed for the construction of ontological categories. But this is not so. Aristotle experimented comprehensively with a category uniting the features: persistent, changing, unique, particular, non-instantiable, independent, discrete, simple, and unified. Since that time ontologists have faithfully traded this experimental hypothesis, losing the tentative and exploratory character of Aristotle's stipulations on the way. The fact that Strawson's distinction between "revisionary" and "descriptive" metaphysics is received so readily suggests...
Non-countable Individuals

that many contemporary ontologists believe the notion of 'substance' or 'object' to provide a particularly powerful and certainly the most 'natural' ontological category. Insofar as this trust in the explanatory superiority of the category 'substance' or 'object' remains unquestioned, it documents and reinforces the traditional bias. To put it poignantly, besides the "myth of the museum," the "myth of the ghost in the machine," and the "myth of the given," there is a fourth piece of traditional ideology to be critically examined—the myth of substance.

The research paradigm engendered by the myth of substance is fraught with several problematic conventions. One of them is the terminological conflation of individuality as transcendental feature and the usage of the term 'individual' as a category term. Aristotle held that all and only substances are individual entities in the transcendental sense. The ontological tradition not only adopted this assumption but also proceeded to use the term 'individual' as a category term, as a terminological variant of 'substance'. Individual entities in this sense receive by definition all the transcendental features of substances. In particular, if the term 'individual' is restricted to the class of substances or objects, one can claim that all individuals are countable particulars.

Principle [P] has the status of a definition and is thus trivially true. More explicitly it should be formulated thus:

[IC] If an entity is said to be an 'individual' in the sense of the ontological tradition, it is a countable particular entity.

If it is not formulated as thesis [IC], principle [P] is likely to be misunderstood as the following claim about transcendental features.

[IT] Any individual or distinct entity is a countable particular entity. Whoever presents [IT] as a conceptual truth confuses the transcendental and the categorial notion of individuality. Only if we mean by 'individual' a substance or object as in [IC], only then the claim that all individuals are countable particulars is a --- definitional --- truth. However, without this definitional restriction of the term 'individual' to the class of substances, the claim that all individuals are countable particulars, is false. Before arguing against [IT], let me show that [IT] is operative in the depth-structure of any conceptual analysis performed with the formal tools of Quine's "canonical notation."

4. The myth of substance in canonical notation

Whenever ontologists use the analytical tools of logical grammar they come, as Sellars put it, "always already with dirty hands." A variety of presuppositions are built into our standard interpretation of predicate logic, among
Johanna Seibt

them the principle that all individuals are countable particulars, that sameness and oneness are one and the same. Consider the following passages from Quine’s Methods of Logic. Quine reminds us that “despite its simplicity, identity invites confusion” and proceeds to introduce identity as the relation of sameness:

Identity is such a simple and fundamental idea that it is hard to explain otherwise than through mere synonyms. To say that \( x \) and \( y \) are identical is to say that they are the same thing.\(^6\)

He continues to explain that the essential function of identity statements is to establish informative redundancies among (complex) names.

For truth of a statement of identity it is necessary only that \( '=' \) appear between names of the same objects. If our language were so perfect a copy of its subject matter that each thing had but one name, then statements of identity would indeed be useless.\(^7\)

Finally, he translates quantified identity statements, e.g., \( \forall x(\exists y(x \text{ is a god } \land y \text{ is a god } \rightarrow x = y)) \), “as numerical statements, e.g., “There is one god at most.”\(^8\) This yields the following result. First, the notion of identity to be introduced is the notion of sameness simpliciter; it is not the relation ‘\( x \) is the same substance or physical object as \( y \).’ Second, the relation of sameness is said to be functionally exhausted in the indication of coreference of names; since for Quine names always denote a particular, all entities that stand in the relation of sameness are thus said to be particulars. Third, the relation of sameness is read as the relation of numerical oneness; this, I take it, amounts to a commitment that all entities which stand in the relation of sameness are countable. Altogether, entities standing in the relation of sameness, that is, individuals in the transcendental sense, are said to be countable particulars.

5. Non-countable Non-particular Individuals

But there are individuals which are neither countable nor particular entities. By incorporating the equation of individuality and countability into logical grammar, the latter is importantly restricted in its range of applicability. For consider again sentences [12] and [13] above. Stuff or mass terms can be used to perform singular identifying references, as witnessed by [12], and, as witnessed by [13], they satisfy as much the predicate ‘\( x \) and \( y \) are the same’ as do substances or objects, horses or tables. But unlike horses or tables, static and dynamic stuffs like milk, water, gold, lightening, do not have determinate spatial and temporal shape and thus cannot, as such, be counted. Static and dynamic stuffs are also not particulars; milk, water, gold, and lightening may occur at many places at the same time without being just scattered particulars, like Indonesia or Orion. A sentence like
Non-countable Individuals

[12] the water of the Alps is colder than the water of the Pyrenees is not about a concrete scattered particular, since at any time there is a different scattered portion of water which is the referent of 'the water of the Alps'. Notoriously and symptomatically, logical grammar fails in the analysis of mass terms. Mass terms behave neither like singular terms nor like general terms, as these are defined in logical syntax. This has motivated a 'sour grape reaction' among ontologists who tend to relegate stuffs to categorial freaks. Quine, for instance, suggests that "because of [their] indecisiveness in relation to the sophisticated dichotomy between singular and general" they are treated as an "archaic category" with "protean character," as a logical atavism of the onto-genetic development of language users.

But the ontological discrimination against non-countable individuals is by no means justified. For a simple cross-linguistic comparison can provide evidence that, pace Quine and Strawson, a principle of individuation does not have to incorporate a principle of countability. The entire class of classifier languages (that is, Southeast-Asian, Amazonian, and some Mayan languages) contains lexical items which "have a type of reference that is consistent with their being neutral as to intrinsic unit." In order to express singular reference to a concrete, countable particular, as in the English 'this is a chair', the relevant nouns of classifier languages must be combined with a numeral classifier and a numeral. The result could be mimicked by the English expression 'one portion of chairing.' Nouns in classifier languages do not imply that their instances have certain shapes, and in some of these languages they do not even imply that their referents are homogeneous stuffs. In Yucatec, for example, a Mayan dialect spoken in Southeastern Mexico, nouns seem to refer to stuffs in a generalized sense of this term, namely to items which have no determinate shape and no determinate (i.e., homogeneous or non-homogeneous) structure.

Where appropriate, the chain of connection among referents covered by a single lexical item apparently referring to some common substance can extend quite far. For example, the lexeme h'o'n can be used to refer to a type of tree, to the bark of the tree which traditionally was used to make a type of paper, to paper as a material, to any given piece of paper, and to items made of paper such as books. Different embodiments of such stuff must be coded with numeral and mensural classifiers:

un-c'iit h'o'n as one/a 1-dimensional banana (i.e., the fruit)
un-w'at h'o'n as one/a 2-dimensional banana (i.e., the leaf)
un-p'eel h'o'n as one/a 3-dimensional banana (e.g., the fruit)
The semantics of classifier languages show clearly, I submit, that individualization and singular reference are independent of the requirement of being countable. They show this at least in the sense that we can project such individuating and referential practices onto the foreign linguistic communities considered. The fact that we can impute an ontology of non-countable non-particular individuals to foreign speakers, provides evidence for the fact that we can also impute such an ontology to ourselves. The projected ontology documents that we can conceive of non-countable non-particular individuals. When we translate classifier languages into our own idiom we treat sameness and oneness are separable features.

6. The PII: a principle of sameness, not of oneness
Leibniz’ ‘principle of the identity of indiscernibles’ (henceforth PII) is still at the center of the recent debate about individuality, not least because certain quantum-physical phenomena seem to violate it. At least fourteen different readings of the principle are discussed, all of which share the presupposition that PII is a postulate about the sameness and the oneness of substances. This is certainly suggested by Leibnizian formulations of the PII, such as “no substances are completely similar, or differ solo numero.”
Nevertheless, I propose that we consider a fifteenth reading of the PII which treats it as a principle of the sameness of substances only.

Let us consider what has probably become the best-known counterexample to PII.

Isn’t it logically possible that the universe should have contained nothing but two exactly similar spheres? We might suppose that each was made of chemically pure iron, had a diameter of one mile, that they had the same temperature, colour, and so on, and that nothing else existed.

Later the specification is added that the two spheres occur in a radially-symmetric space, i.e., that the total set of points constituting the space under consideration (call it S) is organized in the following way:

For any point \( p \) in \( S \) with co-ordinates \( x^*, y^*, z^* \), there is a point \( q \) with co-ordinates \( x^*, y^*, z^* \).

The conjunction of these two claims I call ‘Black’s Mysterious World’ or the BMW for short. Assuming that Black’s radially-symmetric space is a Euclidean 3-space \( ‘B’ \) with origin \( O \) and a special metric with distance function ‘distance,’ we can describe the BMW as follows.
Non-countable Individuals

(\text{BMW}) \exists x, y \text{ (sphere}(x) \text{ and (sphere) } y \text{ and (distance (x, O) = distance (y, O))) and } \forall f(f(x) \leftrightarrow f(y)).

There is an infinite number of models satisfying (BMW). We, using a Euclidean metric, may distinguish these models as containing one line, or a plurality of lines, one circle, or a plurality of circles, one sphere, or a plurality of spheres.

A selection of possible models for the 'Black-Scenario,' with one-dimensional, two-dimensional, and three-dimensional 'spheres' in \( B^3 \) with a metric generating 'radial-symmetric space.'

But relative to (BMW) these models are the same. They belong to an equivalence class whose members are indistinguishable from within the theory which they satisfy. (BMW) describes the arbitrary representative of

\[ \begin{array}{c}
| s | d | \hline
s & \hline
s & \hline
s & \hline
\end{array} \]

an equivalence class defined by a maximally comprehensive comprehension property. If we give the existential quantifier in formula (BMW) the conventional sortal reading, 'There is an \( x \), there is a \( y \) etc.,' the representative of that equivalence class is categorically predetermined as a countable individual. But what satisfies the predicate 'sphere' in the (BMW) precisely does not have determinate shape and thus cannot qualify as a countable entity. Rather, the individuals quantified over in formula (BMW) are individuals which are indeterminate with respect to dimension and countability. In order to give a reading of formula (BMW) which reflects this indeterminacy with respect to number and shape, we need to adopt the perspective linguists impute to speakers of Yucatec:

(\text{BMW*}): There is (n-dimensional) spherating at a distance \( d \) from O.

Thus, insofar as formula (BMW) does not contain any constraints to exclude models with 'sphering' occurring in disconnected regions, duplication scenarios like the BMW can be said to show that the same set of properties may be instantiated by \textit{more than one} entity. But duplication scenarios do not show that the same set of properties may be instantiated by \textit{different}
entities. That is, duplication scenarios may be taken to show that PII fails as a principle of oneness. But they do not show that PII fails as a principle of individuality or sameness. If we liberate ourselves from the traditional substance-metaphysical presupposition that only countable entities are individuals, the controversy about the PII dissolves into two supplementary strands of valuable clarifications about the conditions of oneness and the conditions of sameness for concrete entities.²

Notes


2 The force of the traditional association of individuality and countability surfaces not only in the substance-ontological tendency to identify individuals with substances, but also in Aristotle’s decision to consider even ‘individual accidents’ (‘an individual white’) to be numerically one, cf. *Cat.* 1a20ff. If individual accidents are countable at all (‘this white and that white are two whites’), they are not countable per se but only by virtue of ‘being in’ a countable entity. Cf. the following footnote.

3 The notion of countability as introduced here pertains only to concrete entities. Of course we also count numbers (I am indebted to Jim Swindler for drawing my attention to this point) and we count types of entities—red, white, blue are three colors, honey and milk are two stuffs. But when we can count entities like numbers and types we relate to their feature differences, not to a determinate shape or spell. There are two senses, then, of being ‘a countable entity.’ In the first sense, a of kind K is a countable entity iff a satisfies the predicate ‘is one K’; in the second sense, a of kind K is countable iff there is a kind G such that a satisfies the predicate ‘is one G’. A concrete individual (milk, this white) can be non-countable in the first sense and countable in the second. In using the term ‘countable’ I am focusing in this paper on the first sense—all and only entities of kind K which satisfy the predicate ‘is one K’ are ‘countable units’ as defined above.

4 I am assuming here that an entity may satisfy a predicate P of a language L even if there is singular term in L to which P can be applied to yield a true sentence of L. More precisely, there are two names. This definition does not state a ‘principle of individuation.’ In particular, note that if names ‘a’ and ‘b’ do not refer to the same entry a, but to different entities a and b, this does not imply that a and b are dissimilar (not exactly similar). For instance, a proponent of ‘bare individuators’ may stipulate that the predicate ‘x and y are the same K’ is satisfied only if the instantiations of ‘x’ and ‘y’ each refer to an entity with bare individuator g.

5 J. Gracia’s objections against an interpretation of individuality in terms of distinctness incorporate this traditional association; they do not apply to the characterization of individuality as transcendent feature as presented here (cf. J. Gracia, *Individuals: An Essay on the Foundations of Metaphysics* (Albany: SUNY Press, 1988), pp. 33-37.)
Non-countable Individuals

Among other characteristics, Aristotelian 'ousia' is persistent (Metaph. 1042a34), the locus of change (Phys. 200b33), countable or one of its kind (Metaph. 1038b35f), particular (Metaphys. 1017b16ff), non-instantiable (Cat. 2a13ff), independent (Metaph. 1037b1ff), discrete (Cat. 3b33), simple (Metaph. 1041a4f), unified (Metaph. 1041b11ff).

Quine [1940] p. 208.


The expression 'thing' occurring in the first quotation does not carry any categorial restrictions here.


Lucy (1992), p. 201, n. 32.

Ibid. p. 74.

This feature is not idiosyncratic to classifier languages. For example, while in English count nouns and mass nouns govern different types of quantifiers (cf. 'many tables', 'few tables', 'at least one table' vs. 'much wood', 'a bit wood'), in Bantu languages the same quantifiers may be used for both count and mass nouns. In Bubungo, a language spoken in Cameroon, where genders reflect a sorting principle, there is a common gender for expressions referring to stuff, liquids and small countable items like plants, animals, body-parts (W. Schaub, Bubungo (London: Croom Helm, 1985), p. 181). I am indebted to Jan Rijkhoff for this and the preceding references.


Black [1952], p. 283f.

Let X be a set of points. A metric is a real-valued function d : X × X → ℜ, which obeys the following axioms:

(i) d(x, y) = d(y, x), for all x, y ∈ X; (ii) 0 ≤ d(x, y) < ∞, for all x, y ∈ X, x ≠ y;
(iii) d(x, x) = 0, for all x ∈ X; (iv) d(x, y) ≤ d(x, z) + d(z, y), for all x, y, z ∈ X. In order to receive the radial-symmetric space B from a normal Euclidean 3-space a metric must be chosen which projects the x₂ and x₃ onto the x₁ axis.
Johanna Seibt

\[ d(x,y)^2 = |x_1 - y_1|^2 + 1 \cos \gamma - \cos \eta|^2 \]

where \( \phi \) is the angle between \( x \), origin \( O \), and \( \langle x, x' \rangle \), \( \gamma \) is the angle between \( y \), origin \( O \), and \( \langle y, y' \rangle \), \( \xi \) is the angle between \( y \), origin \( O \), and \( \langle y, y' \rangle \), and \( \eta \) is the angle between \( y \), origin \( O \), and \( \langle y, y' \rangle \), respectively.

Because the metric is a function which is defined on pairs of points but does not require that the members of these pairs to be different individuals, there is a plurality of models for (BMW). A sphere is any closed region \( s \) in \( B \) such that all boundary points of \( s \) are equidistant from some point \( c \) in \( s \).

21 As stated (BMW) contains redundant conjuncts. The minimal version is \( \exists x, y \) (occurs-in \( x, B \) and occurs-in \( y, B \)) and \( \forall (f(x) \leftrightarrow f(y)) \); the last conjunct warrants Black’s requirement that the universe contain nothing besides the spheres.

22 That is, regions that are stipulated to be disconnected but do not appear disconnected relative to the metric of \( B \).

23 I would like to thank A.P. D. Mourelatos and Jim Swindler, the paper’s commentator, for many helpful comments and criticisms.