The problem of universals

Universals & Particulars

-What are particulars?

-What are universals?

-Do we need them both?

-> If not, are all things particulars or are all things universals?

-> Can there be a mixture of both views?

Universals & Particulars

-> some things are the same in some respect.
(E.g. many walls are white, many pieces of paper are square, various pairs of people are pairs of father and son, etc.

-> What is it for many things to be the same in some respect?

-> What is it for many things to be red?
-it is for them to reflect light at a certain frequency.

-> but metaphysical question are general: But when we put the question in metaphysics, we seek a different answer: ‘What is it for many things to be the same in some respect?’

-> Some philosophers reply by talking about universals.

Universals & Particulars

-> How many words are there in the following line?

-chair chair chair chair

Universals & Particulars

-Types

-> How many words are there in the following line?

-chair chair chair chair

-In one sense, there are four words.

-In another sense, there is only one, but we wrote it four times.

-> This one word that is repeated is a ***type***; it is the **common type** of the four separate marks.

-> Those four marks on the specific paper are ***tokens*** of the type.

-> Likewise, we have types of car (e.g. Lamborghini), types of living beings (the whale, the olive tree), types of action (stealing, reading), etc.

-> Tokens are particulars.

Universals & Particulars

-Properties

Examples of properties: whiteness (the white colour), being composite, having electric charge, being a piece of furniture, wisdom, prudence, etc.

-*One-place predicates* express properties.

-Let’s take a simple sentence in which a name occurs once; e.g. ‘Socrates is wise’, ‘Object A is a piece of furniture’, ‘Everyone loves John’.

-> A one-place predicate is any linguistic expression that results from such a sentence when we abstract away from the name; e.g. ‘is wise’, ‘is a piece of furniture’, ‘everyone loves …’.

Universals & Particulars

-Relations

-*Two- or more-place predicates* express relations.

-‘Mary loves Peter’, ‘The Morning Star is identical with the Evening Star’, ‘Rome lies between Naples and Florence’.

-> A two- or more-place predicate is any linguistic expression that results from such a sentence when we abstract away from the names.

-> So, the expressions ‘… loves …’ and ‘… is identical with …’ are two-place predicates; the expression ‘… lies between … and …’ is a three-place predicate. Two-place predicates express **two-place relations**, three-place predicates express **three-place relations**, and so forth.

-> **Predicates express properties or relations, but are neither properties nor relations**. A predicate is **a word or series of words**. A property or relation is not a word or series of words.

Universals & Particulars

-> **Universals** are types, properties and relations.

-Some philosophers consider that there are types, properties and relations, but they are **sets**

-> e.g. a type is the set of its tokens.

-If this is correct, then there are no universals and, in the end, types, properties and relations are not universals (for sets do not count as universals).

-Some philosophers even consider that there are no types, properties or relations.

Universals & Particulars

-One may say that there are types, properties and relations, but they are **concepts**

-E.g. the species (type) olive tree is the concept of an olive tree, and the property of electric charge is the concept of electric charge.

-If that view is right, then there are no universals and, in the end, types, properties and relations are not universals.

-> Concepts are **psychological** entities; they are the constituents of our thoughts.

Universals & Particulars

-> **Particulars** are the things that are not universals.

-material objects (specific tables, cars, cells, clothes, etc.)
-specific events (car collisions, volcano explosions, etc.)
-immaterial souls ?
-numbers

-> Philosophers who believe that there are universals are called ***realists*** (about universals)

-> Those who believe that all entities are particular are called ***nominalists***.

-Realists accept that there are all the things recognised by nominalists, but consider that, **in addition**, there are universals. So nominalism is a theory that is **ontologically more economical.**

-> Realism, however, may have **advantages** that suffice to counterbalance its handicap in respect of ontological economy.

Why posit properties?

-Why not go straight for predicates which apply or don't apply to particulars?
(metaphysics = semantics / epistemology)

-Not all predicates characterise properties
(the problem of instantiation)

-Quine: (i) Properties & metaphysics
(ii) Properties & semantics (meaning/intensions)

Why posit properties?

Russell:

-Dualism

-Against resemblance nominalism

-Universals subsist (they don’t exist in time)

-Acquaintance with universals

Why posit properties?

Platitudes about properties:

-particular: an instantiation of the property F

-different particulars can have the same properties

-a particular can have many properties

-Identity conditions: F ≡ G.

1. one universal can be wholly present at two different places at the same time
2. two (or more) universals can occupy the same place at the same time

Nominalism & Realism

- Various nominalist answers to the question “What makes many things be the same in some respect?” (that is, “What is it for many things to be the same in some respect?”)

-Extreme Nominalism (Predicate Nominalism)

-Class Nominalism

-Natural Class Nominalism

-Resemblance Nominalism

Extreme Nominalism

-> What makes many things be the same in some respect is that **a predicate is true of all those things**.

-E.g. what makes many things red is that the predicate ‘is red’ is true of all of them.

-> There are **no properties** (only particulars). Predicates apply to particulars, but they are just words which group together certain particulars.

-> The things to which a predicate applies **have nothing more in common** except the fact that this predicate applies to them.

Extreme Nominalism

-Negative Argument: **predication** doesn't require the existence of properties; predicates are not **proper names**

-> Quine: **ontic commitment** doesn't come with naming

-Positive Argument: conceptual economy; empiricism

Extreme Nominalism

-Chief Objections:

(i) Predicates are **universals** (a predicate is a type, since we can write it many times), and nominalists shouldn't accept that there are universals. Here predicate nominalists may reply that a predicate is the set of its tokens and not a universal. But if they offer that reply, they have made a step towards the next nominalist theory, **class nominalism**.

(ii) **Explanatory inadequacy** – what do all these things share in common in virtue of which the predicate applies?

Predicate nominalism seems to **reverse the right order of explanation**: it seems that the predicate 'is red' is true of various objects **because those objects are red**, and not that the objects are red **because the predicate is true of them**.

(iii) If there were no people and no languages, **there would be no predicates**. Yet some objects (e.g. planets) that are the same in some respect **would be the same in that respect then too**. Since then what made them the same would not be a matter of predicates, why say that now what makes them the same is a matter of predicates?

(iv) Causation & laws

Class Nominalism

-> What makes many things be the same in some respect is that they are the **members of a set** (in the sense we talk about sets in mathematics).

-E.g. what makes many things red is that they are the members of a certain set (class). Types, properties and relations are sets; e.g. **the property of being a book is the set of all books**.

-> Properties are classes of particulars. Properties apply to particulars of the same class. Application is the class-membership relation. **No further issue of why** a certain particular belongs to a certain class.

Class Nominalism

-> Negative Argument:

-predication requires an **extension** of the predicate, but this is just a class

-**no semantic need** to commit to universals

-> Positive Argument:

-clear identity conditions of properties capture platitudes about properties

-> different particulars same property

-> same particular different properties

-> transparent predication (class membership)

Class Nominalism

<u>Chief Objections</u>:

1. **more** classes than properties

2. **same** extension **different** properties

-It sometimes happens that **distinct** properties correspond to the **same** set of objects.

-E.g. the property of having a heart and the property of having kidneys correspond to the same set, since the creatures that have a heart are just those that have kidneys.

-> So according to class nominalism, the property of having a heart is identical with the property of having kidneys. Intuitively, that is wrong, given that the properties are two and not one.

Class Nominalism

3. unexplained class membership

4. change of extension -> change of property?

5. meanings of predicates cannot be acquired by acquiring access to the extension of a predicate, i.e. to a class (QUINTON)

-> How do we identify further members of a given class? How do we reapply to predicate?

-If we take any things, there is a set whose members are just those things.
-E.g. there is a set whose members are the number 4, our lesson today, and the Andromeda galaxy.
-Surely, those things **are not the same in any respect**.
-> So if the fact that they are the members of that set is not sufficient to make them the same in some respect, why should e.g. the fact that red objects are the members of a certain set be what makes them the same in some respect?

6. causation & laws (why does it matter to the causal powers of a particular that it belongs to a certain class – i.e. why that there are other members of the class is relevant to x's causal powers?)

-> Classes aren't universals – they are not repeatables.

Natural Class Nominalism

-Properties are <u>natural classes</u> of particulars (not independently existing as universals)

-> Natural class – based on some notion of resemblance identifiable a posteriori.

-**not a sharp distinction** between naturalness and unnaturalness
-admits of **degrees**
-joint product of man & nature.

<u>Negative Argument:</u>
-predication doesn't need universals and their awareness – just a natural class of its extension

<u>Positive Argument:</u>

-too many classes to which a particular belongs – but not equally many properties that a particular has. So some **distinction** is needed (natural classes)

-Explanation of why a certain predicate has a certain extension/identification of its extension/reapplication of the predicate. "the existence of natural classes is a necessary precondition of our ability to think and speak about the world" (Quinton)

-a role in induction, projectability, etc. and <u>causation</u>

<u>Chief Objections:</u>
-Isn't naturalness a property?
-Reply: perhaps a super-natural class: the class of all natural classes

Resemblance Nominalism

-What makes many things be the same in some respect is **the fact that they resemble** one another, and there is **nothing more** to say about that.

-> What makes many objects red is that they resemble one another in a certain respect.

-Properties are classes of <u>resembling</u> particulars.
-**Resemblance** is **not an additional fact** over particulars a and b and their particularised natures.

Resemblance Nominalism

Negative Argument: as in class nominalism

Positive Argument:

-exemplars and relations of resemblance to them, since resemblance admits of degrees, there needn't be exactly the same universal shared by all members of the class

-resemblance need not be strict / not exact resemblance

-exact resemblance as an equivalence relation / equivalence classes: it behaves like a universal without being one

Resemblance Nominalism

<u>Chief Objections:</u>

1. There could be **just one red object**. It seems that what would then make that object red is what now makes various things red.

-> But what would then make that object red is **not a matter of resemblance**, since the object would not resemble anything else in colour.

2. Russell's – one universal (similarity), but is it compelling? A nominalist may go for a regress. But it seems that a realist is also committed to a regress (instantiation)

Resemblance Nominalism

<u>Chief Objections:</u>

-Since red things resemble one another, each pair of red things is a pair of things that resemble each other. What makes all those pairs be that way (i.e. be pairs of resembling entities)? Here one might say that what makes them that way is **a universal, the relation of resemblance**:
in the case of each pair, that relation connects the two items in the pair and so renders it a pair of resembling objects.

-Alternatively, a nominalist may say that what makes all those pairs be that way is that they resemble one another in a certain respect. But then each pair of such pairs is a pair of entities (pairs) that resemble each other. Whence the question arises what makes all those pairs (the more composite ones) be that way (i.e. pairs of resembling entities). And so forth.

-Thus resemblance nominalists will **either eventually accept that the universal of resemblance exists or be involved in an infinite regress,** that is, in a situation in which the answer they give to a question engenders essentially the same question again, only at a more composite level, with the consequence that their answer is never satisfactory.

-The infinite regress will consist in the following: resemblance nominalists will answer the question 'What makes these pairs be pairs of resembling entities?' in a way that will engender the question 'What makes those pairs be pairs of resembling entities?' where those pairs are more composite than these.

-On the other hand, if one concedes that the universal of resemblance exists, why not also concede that the universals of other relations and properties exist too?

Resemblance Nominalism

Chief Objections:

3. resemblance is partial identity – so there is something in common (a property)

4. resemblance comes in degrees and respects: but what are they?

5. axioms of resemblance (explained by partial or exact identity)

6. resemblance is an internal relation. So what is it in the nature of particulars that dictates / determines resemblances to other? BUT: particularised natures

7. causation

Realism about universals

-> The realist answer to the question ‘What is it for many things to be the same in some respect?’ is

‘It is for there to be a universal that characterises them’.

-> We say that the various things ***instantiate*** the universal.

-> According to realism, types, properties and relations are universals and not sets. So every white object instantiates the universal that is the property of whiteness, and every pair of equal quantities instantiates the universal that is the relation of equality.

-> But if there are universals, where are they? The main answers to that question are **two**:

Realism about universals

-> The **ante rem** theory.

-Universals are **outside** of the entities that instantiate them. In fact, they are located in neither space nor time and are **not part of the empirical world**.

-If e.g. a piece of paper is square, the paper instantiates the square shape, and so something that is part of the empirical world (the paper) is related to something beyond that world (the square shape).

-> This theory comes from Plato's philosophy and at some time was preferred, among other people, by B. Russell.

-Many philosophers believe that everything there is has spatiotemporal location and is part of the world that we get in touch with by means of our senses. Such philosophers of course reject the ante rem theory in principle.

-Another problem for the theory is to set out how entities that belong in so different sides of reality relate to each other.

-Note that the ante rem theory can accept the existence of universals **instantiated by nothing**. It is a controversial issue whether that is an advantage. Prima facie, it seems that there are properties which are borne by nothing (e.g. the property of being a unicorn).

Realism about universals

The **in re** theory.

-Universals are in the entities that instantiate them. So universals instantiated by material objects **are located in space and tim**e and are part of the empirical world.

-In most cases, a universal doesn't have only one position in space; at every moment, it has the position of every object that instantiates it.

-> This theory comes from Aristotle's philosophy and is adopted by the main recent realist about universals, e.g. the Australian philosopher D. Armstrong.

-Many find that the consequences of the in re theory about how universals are located in space are odd:

-> It often happens that a universal is in many **separate places simultaneously**; e.g. whiteness is in the place of each white object. It also often happens that **many universals are in the same place simultaneously**; if e.g. a thing is white and square, the two universals occupy the same place.

-> Moreover, when an object is white, whiteness occupies the full extent of that object, but (since universals are thought to have no parts) it doesn't have parts each of which occupies part of that extent.

-> Finally, when some universal that is a relation connects two separate objects (e.g. Naples and Florence), the universal is located in a divided area of space (the sum of the areas of the two objects) without being divided itself (since it has no parts).

Realism about universals

-Once we say that universals are in the entities that instantiate them, it is a small step to say, in addition, that the universals instantiated by a particular are *parts* of that entity.
-And it is yet another small step to say that the particular is simply **a bundle of universals** (many universals together).

-> Here there emerges a difficulty. It appears that there are particulars instantiating the same universals, e.g. two entirely similar particles. But it isn't possible for each particle to be the bundle of those universals, as then the particles would be identical.

-Here are some ways of tackling this difficulty:

(i) We may say that, for each thing x, there is the property of being identical with x. This property is a universal instantiated by only one thing, x. So there are no two particulars instantiating the same universals.

(ii) Alternatively, we may say that a particular that instantiates various universals does not consist of only those universals: it also includes another particular, which differentiates the initial particular from other similar ones (We can call the first '**thick** particular' and the second '**thin**'.)

But if we don't want to end up with an infinite sequence of particulars, one inside the other, we must say that the thin particular instantiates no universal and hence (according to realism) **has no property** (bare particular). But in this way we shall have endorsed the existence of a very strange being.

-> According to the in re theory, there are no universals that are not instantiated by anything, since such a universal would not be anywhere.

Realism about universals

-> An argument that concerns instantiation has been used against realism about universals:

-According to realism, whenever many things are the same in some respect, there is a universal instantiated by all of them.

-So let's take some objects instantiating the same universal, and let's examine the pairs in which the first item is one of those objects and the second is the universal in question.

-All these pairs are the same in an important respect: in all of them, the first item instantiates the second.

-Consequently, realists must say that there is universal (an instantiation relation, let's call it **I**) which is instantiated by each pair and which connects, as a relation, the two items of the pair.

-Let's now examine the (more composite) pairs in which the first item is one of those pairs and the second is the relation **I**. These pairs, too, are the same in an important respect, like before.

-Consequently, realists must say that there is another universal (the instantiation relation **I**') which is instantiated by all these pairs.

-> Thus realists end up having infinitely many instantiation relations, and this amounts to ontological extravagance.

-> 'Bradley's regress'

Tropes

-> Quite a few philosophers consider that, between the bearers of properties and relations and the properties and relations themselves, there is another category of entities, **tropes**.

-For example, let's take some objects that are white and, indeed, have just the same hue of white. The idea is that, for each object, there is something that is the whiteness of that object and is not identical with the whiteness of any other object.

-Those entities are tropes of whiteness (whiteness in general).

-> For each property and each bearer of that property, there is supposed to be a trope of the property which concerns the specific bearer. Likewise, for each relation and each pair (or triple, quadruple, etc.) of objects connected by that relation, there is supposed to be a trope of the relation which concerns the specific pair (triple, etc.).

-> Tropes, if they exist, are particulars. Tropes are what 17th century philosophers called 'modes'.

-Philosophers who believe that there are tropes usually consider that properties and relations are just the **sets of their tropes** and that the objects bearing the properties and relations are just **bundles of tropes**.

E.g. whiteness is a set of tropes, and a table is a sum or bundle of tropes.

-> According to that theory, the property of having a heart and the property of having kidneys are not the same set, since they do not have the same tropes, although they have the same bearers. Also, the theory allows there to be two entirely similar particles (they will not consist of the same tropes).

Tropes

-As for the question “Where are the tropes?”, we can answer that e.g. each trope of whiteness is in the place where the corresponding white object is located, and each trope of a relation occupies the area (which is usually divided) that is occupied by the corresponding related objects.

-This answer of course has consequences analogous to the consequences that, as we saw, follow from the in re theory regarding the position of universals in space. The difference is that, in the case of tropes, **we need not (and must not)** accept that a trope is located in many places simultaneously.

-The theory that there are tropes seems to be **ontologically extravagant**. Its supporters, however, believe that it avoids most of the problems that are faced by the various nominalist and realist theories we discussed previously.

Armstrong

-> Why all the members of a given set are members of the given set?

-We need commonality of properties to account for this.

-Too many sets – too few properties

-> The natural class reaction leaves basic notion unanalysed

-> Realism (I): At least some properties are intrinsic to objects, but natural classes – classes objects belong to (in terms of the extension of the class) are extrinsic.

-> Realism (II): properties explain resemblances & the formal properties of resemblance

-> Realism (III): explains role of properties in causation & laws.

-> Realism (IV): against uninstantiated properties– a posteriori identification of natural properties

- substance - primary substances
- Lowe - four category ontology

- science of being qua being
- ontological commitments To be is to be the value of a variable
- ontology
- Ney,
- One over Many
- semantics
- universals - particular

- furniture of the world
- realism / conceptualism / nominalism
- sets are not repeatable
- David Lewis - abundant - sparse
- monadic properties - relational properties - relations
- kinds - gold