Universals: A Conceptualist Approach[1]

Bob Clarke – July 2017

1. Preliminary

Universals are _general_ terms or concepts like:

> red, redness, colour, sweet, wise, wisdom, Wisdom, English, language, music, species, name, natural kind, they, law, Law, quickly, obscurity, obscurely, walking, Christendom, The Good, Human, Society, Class (in politics), love, Love, etc.

They stand apart from _particular_ terms, things or concepts, like:

> Julius Caesar, The First World War, Kensington, Venus (either the planet or the goddess), my pal Fred, 3.00 pm on 23rd July 2017, The Big Bang, _this_ pen (pointing to it), _her_ name, etc.

The _relationship_ between Universals (U) and Particulars (P) is expressed in various ways:

> e.g. in terms of _Types_ (U) and _Tokens_ (P)
> _Wholes_ (U) and _Parts_ (P)
> _Groups_ or _Collectives_ (U) and _Members_ (P)
> _Particulars_ being _'examples of'_ their _Universal_
> _Particulars_ _'participating in'_ their _Universal_   ... etc.

As can be seen from the examples above, _Universals_ can be _substantives, things, nouns, adjectives, properties, pronouns, adverbs, abstractions, collectives, ..._ and maybe many other ... ... well, other **_what_**? ... other '_things_' or other '_properties_' or other '_actions'_, or other '_concepts_', or ... ?

The so-called philosophical **'Problem of Universals'** has been the problem of just **_what_**, ontologically, Universals **_are_**. What do they have in common?[2]

Expressed differently: just in what way, if at all, do they '_exist'_?

> Are they **'Real'**? Do they, or at least some of them, **_exist_** as a perfect Platonic _Ideal Form_ a Platonic _World of Forms_?[3] Whether or not such a World exists, do they, nevertheless, really **_exist_** _in themselves_, independently of our human understanding of them? Do they form an _Ontologically Real_ category that exists _in addition to_ the _Particulars_ that we perceive in the world? Medieval '**Realists**' claimed that indeed they **_do_** exist in such a way!

> Are they just our convenient **_names_** for _collectives_, _general terms_, etc? Medieval '**Nominalists**' claimed that that is all that they were.

> Are they **Human Concepts**? Philosophical **'Conceptualists'** claim that that is what they are.

1 As I did not have a written text for my talk at Piggotts on this occasion, Frank asked me to supply my notes. I felt it necessary to _'work them up'_ a bit & they rather transformed into this 'brain dump' on the topic of Universals! This is a series of notes, propositions, aphorisms, reflections and anecdotes aimed at getting my thoughts straight on the topic. Apologies for its length and the excessive use of **bold**, underlining and _Italics_, etc!!

2 _Ontology_ deals with philosophical claims about _existence_. Just what, _at root_, really _exists_ in the world, and in what _form_?

3 See Bob Stone's talk. I gather that Plato was very selective about just which Universals he would welcome into his _World of Forms_. As Peter pointed out, he was reluctant to include a _Perfect Form_ of _Mud_! I was taken to task in my philosophy class about 40 years ago for suggesting that there might be a _Perfect Form_ of _A Dog with a Wooden Leg_!

This presentation advocates the **Conceptualist** approach and claims that (with a little bit of help from Immanuel Kant), *Conceptualism* dissolves the *'Problem of Universals'*.[4] The main claims are:

(1) Universals are, first and foremost, *Human Concepts*

(2) Acceptance of (1) dissolves the *'Problem of Universals'*

(3) The direction of explanation of these *Concepts* is invariably from the *Natural* to the *Abstract* – <u>not</u>, as is claimed in Platonism, from the *Abstract* to the *Natural*. i.e. *Natural* terms have given rise to more *Abstract* terms as our thinking about the world has become more developed.

2. *Conceptualism – An Introduction*

When evaluating Universals, *Conceptualists* will promote the following principle:[5]

*A Universal is, first and foremost, a **human concept** that is predicated of many different subjects*.

Conceptualism is sometimes seen as an intermediate position between (Medieval) *Realism* and *Nominalism*. Here I'm taking the rather different line that *Conceptualism* and *Nominalism* are quite closely allied and both are best understood as <u>***Anti-Realist***</u> positions on Universals.[6] Nevertheless, *Conceptualism* is <u>not the same</u> as *Nominalism*: it is *more comprehensive,* I find it a much easier position to defend than simple *Nominalism*, and it is far more informative!

Human Engagement with The World

It is fruitful to examine just how the *Conceptualist* line fares in relation to three **Spheres of Human Engagement with our World: *The Transcendent*, *The Natural* and *The Public***

(1) With '***The Transcendent'*** sphere, I'm referring to the **Supernatural** and, more specifically in the present context, to *Western Medieval* (essentially *Roman Catholic*) religious doctrines about supernatural ontologies.[7]

(2) With '***The Natural'*** sphere, I'm referring to the **Natural World**: the world we wake up to every day: the world that even *Atheists* believe in![8]

(3) With ***'The Public'*** sphere, I'm referring to our **social**, **politica**l and **scientific affairs** and **activities**: they are areas of public interaction where we *invent* potential Universals, negotiate them and occasionally instantiate them, so that they <u>become</u> 'real'.

The performance of *Conceptualism* with respect to these three spheres of human engagement will be discussed respectively in Sections 4, 6 & 7 below.

Historical Contexts

4 i.e. 'dissolves' the problem in the Wittgensteinian way: you realise there was never a problem there in the first place!

5 Or some close variation of this principle.

6 See Hilary Stanisland, *Universals*, pp 26-27.

7 I'm making no commitment as to whether (or not) *'The Supernatural'* actually *'exists'* in any sense of the word. For *Conceptualists*, the <u>importan</u>t point is that many people (*religious, spiritualist, mystic*, etc) <u>conceive</u> that it exists and it is their c<u>onceived concepts</u> that work so powerfully for them, see Section 4 below.

8 It is unnecessary here to adopt a *materialist, physicalist* or, e.g., *idealist* dogma about the fundamental nature of the Natural World. We need only recognise that it is *here* for us (i.e. *'given'*), and that it contains both physical and mental phenomena. Worrying about the deep ontology behind these phenomena is a topic for another day.

We can benefit greatly by placing our appreciation of *Contemporary Conceptualism* into its own **Historical Context**, which is at the end of *two-and-a-half millennia* of debates on Universals! A number of leading philosophical and scientific thinkers have made very important contributions to *Conceptualism*: **Aristotle**, **William of Ockham**, **Immanuel Kant**, perhaps **Charles Darwin** (though he was probably not aware that he was making this contribution), and indeed, **Wittgenstein**.[9]

First, we should recall that it was Aristotle who brought Plato's *Ideals* and *Forms* down to Earth: he argued that they are constituents of *'what things are'* in a very worldly way.[10] In this context, we may care to remember Raphael's *'School of Athens'* fresco in the Vatican (1509-11) in which Plato is pointing to the Heavens above, where, *metaphorically*, the *World of Forms* (containing its *Universals*) resides, while Aristotle is holding his hand out level, palm down, saying (I suggest): *'Look to the Natural World'*! The *Conceptualist* approach advocated here very much follows this Aristotelian line.[11]

A **Second** very important historical thought is that, while Aristotle and William of Ockham (and his contemporaries) made extremely important contributions to *Conceptualism*, all of their ideas need to be **revised** in our **post-Kantian** world. The same may be said of our *post-Darwinian* and *post-Wittgensteinian* philosophical perspectives, but I will argue that Kant made the *greatest contribution* to the resolution of the so-called *'Problem of Universals'* and that he provided the strongest arguments as to why we should be *Conceptualists*. More of this below, see Section 5.

A **Third** important historical point is that while *Aristotle*, *William of Ockham* and *Kant* greatly *inform* and *inspire* the account of *Conceptualism* that is being promoted here, my account does not *correspond* with any one of their own doctrines regarding Universals. But, in all cases, it is *close in spirit* to them.

3. Conceptualism and *'The Problem of Universals'* – Visit 1.

One of the aims of this presentation is to *deflate* the *'Problem of Universals'*, hereinafter *'PoU'*! My basic claim is that there **is** no philosophical problem that is *specific to* and that *relates only to* Universals: i.e. there is no philosophical problem that *only* Universals present to us.

That is **not** to say that there are *'no problems'* associated with Universals!! There certainly *are*, but they are shared with other philosophical concepts.

And it is **certainly not** to say that Universals, *in themselves*, are unimportant! They are **extremely** important for human affairs, as argued in Section 7 below.

As a small *concession*, I might admit that *it was formerly thought* that there was a **PoU**! But once philosophical problems have been *solved*, *resolved* or *dissolved*, they no longer exist! The *progress of philosophy* removes them. If such a problem ever existed, I would argue that Kant removed it (with a little help from others)!

Anti-PoU Arguments – Visit 1:

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9 There are almost certainly important contributions from others I've overlooked. I certainly recognise the arguments that Neil Webb put forward on Piggotts' Awayday regarding Wittgenstein's contribution to the philosophy of Universals.

10 Aristotle on *Forms* & *Universals*: see his *Categories*, *De Interpretatione*, *Physics* and *Metaphysics*, also *Stanford Encyclopedia of Philosophy* (online) entry on *'Form vs. Matter'* and Stanisland, pp. 9 – 27.

11 Note that '*Forms*' for a *Conceptualist*, whatever form they take (*Platonic* or *Aristotelian*), are a form of *Concept*!!

Starting with the _Conceptualist Principle_ that Universals are '_first and foremost Concepts that are predicated of many different subjects_' (or, more loosely, of many different '_objects_' or '_things_' or '_actions_', etc.), let us see if we can find a problem that _only_ arises with Universals.[12]

The basic argument I follow here is that:

> There are _certainly_ philosophical problems associated with Universals _by virtue of the fact that_ they are _concepts_, but _not_ by virtue of their _multiple predication_.

That claim is rather abstract, so I will illuminate it with examples:

(1) There are _certainly_ philosophical problems associated with Universals _by virtue of the fact that_ they are **_concepts_.**

Thus, we have the problem of _delimitation_ or _demarcation_ of _Universal_ concepts. Consider the Universal concepts '_green_' or '_greenness_' or, perhaps, of '_participating in the Platonic Form of Greenness_'. Even if we restrict ourselves to the _Electromagnetic Spectrum_, we have the problem of just where '_green_' turns to '_yellowy green_' or '_bluey green_' or perhaps '_turquoise_'. Does it even _make pragmatic sense_ to demand an exact boundary in terms of the frequency of the light waves involved? These are typical problems of _delimitation_ or _demarcation_ for '_green_' & its associated concepts.

But the same delimitation problems apply to _Particulars_! Consider the _particular_ concept of the _particular person_ **Julius Caesar** – born in 100 BCE, died on 15ᵗʰ March 44 BCE – on _The Ides of March_! But where does the _concept_ of Julius Caesar start and end? Does it start at _biological conception_ or at _birth_? There are some _Utilitarians_ who argue that a human child does not become a _person_ until the age of 5 or 6![13] At least we know when he died – i.e. when he stopped being a _living particular_ example of _homo sapiens_. But where _in time_ does the concept '_Julius Caesar_' end? His assassination immediately engendered a dreadful civil war in his name! German and Russian Emperors were named after him well into the 20ᵗʰ Century! Dreadfully, _controversially_, do some poor _persons_ who suffer from dementia cease to exist _as persons_ whilst still biologically alive as human beings? Or, as Derek Parfitt used to ask, is any one of us really the _same_ person that we were 50, or even 20, years ago?

The problem of _delimitation_ or _demarcation_, i.e of _defining conceptual boundaries_, is clearly not unique to Universals, so **_that_** cannot be the **PoU**!

(2) So, if Universals do not give rise to a **PoU** by virtue of their being _Concepts_, might they nevertheless give rise to a **PoU** via their _predication_?

The simple answer is '_No_'. Where problems arise with predication, they can generally be resolved pragmatically, ostensively: e.g. – by pointing: 'this', 'that' or 'that other' surface is _green_. To be sure, philosophers _delight_ in finding philosophical problems with predication! Thus, those folk in former ages who thought that the heavenly objects _Phosphorus_ and _Hesperus_ (respectively, the '_Morning_' and '_Evening_' _Stars_) were _different_ objects, were mistaken, as we now know. Their mistake can be

12 The justification for '_first and foremost_', is given in Section 6. Not much is really lost at this point of the argument by ignoring this qualification.

13 This is extremely controversial! See Alberto Giubilini & Francesca Minerva '_After-birth abortion: why should the baby live?_', _Journal of Medical Ethics_ (BMJ), http://jme.bmj.com/content/39/5/261 (2012),
also http://dx.doi.org/10.1136/medethics-2011-100411.

resolved by pointing out (to them, and *convincing* them, *and* ourselves) that *both* are the *same* heavenly object and that they are *both*, in fact, *the Planet Venus*! *Resolved* problems cease to be problems. But, <u>*far more importantly*</u>, *these are **not** problems associated with <u>Universals</u>* - they are <u>*problems associated with Particulars*</u> - they cannot be blamed on Universals.

(3) Perhaps the putative problem (the **PoU**) has not to do with *mere* predication, but with the **<u>multiple</u>** predication that is required of Universals?

The best way to deflate this particular proposition is to consider that there are some *grouping* terms that are predicated of just *a few* subjects. A '*particular*' term is predicated of just <u>one</u> subject, which is itself a *particular* (e.g. Julius Caesar). But we also have *'The Smiths'* (Mr & Mrs Smith) predicated of just <u>two</u> subjects. Perhaps we can invent a pseudo-Platonic Form of *'Day-of-the-Week-hood'*, which is predicated of just <u>seven</u> entities?! Well, these two examples are rather poor (not to say silly). But consider the concept **'Season'** (referring to a time of year): there are just <u>four</u> of them, but mythographers and artists have treated them in much the same way in which they have treated *bona-fide* Universals. One such Universal is **'Wisdom'**. It has been derived *conceptually* (as we *Conceptualists* would claim) from the adjective - '*wise*', via an *abstract noun* - '*wisdom*', and an *Ideal* - '*Wisdom*', to an *Attribute of God*. Thus, *Hagia Sophia*, Justinian's great church in Constantinople, is *The Church of the Holy Wisdom*, and, if we were pagans, *Sophia* (Greek for *Wisdom*) would be a goddess, and of course, we philosophers would form her fan club, as we are *Philo-Sophia*! Once personified into a tutelary deity or spirit, artists are readily able to *depict* Universal concepts. We can note that they have done much the same with the *Four Seasons* (which, however, are generally depicted as spirits, nymphs & the like, rather than deities).

The point of this (rather strange) argument is that there is no *deep* difference *in kind* between a *Universal* concept and a *Particular* concept: they merely lie at either end of a numerical *spectrum* of concepts that are predicated of just 1, or 2, or 3, ... 4 ... 7 ... 12 ... up to an *indefinite number* of subjects. A <u>very important</u> example of this type of numerical argument relating to the <u>Number 3</u> will be discussed in Section 4. In this context, i.e. thinking numerically, it's also worthwhile reflecting about the Universal species *'Swan'*. The sum total of swans in the world starting from a time, deep in the past, when the first swans evolved, and running forward to some point in the future where they cease to exist, is going to be <u>finite</u>. Universals do not have to refer to *infinite* sets of entities.[14]

(4) Perhaps the putative problem (**PoU**) has <u>not</u> to do with **<u>multiple</u>** predication but rather with **<u>indefinite</u>** predication? We don't know how many entities we wish to apply our Universal to.

Well, there is nothing unique to Universals about this situation! *Not knowing things* is the *human lot*! - endemic to human nature! So *that* can't be the **PoU**!

So - starting with the *Conceptualist Principle*, we have not yet identified any unique *'Problem of Universals'* (**PoU**). We consider the issue further in Sections 4 & 5.

4. *Conceptualism* and *The Transcendent Sphere*[15]

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14 Sadly, the very last *quagga* (a kind of zebra, q.v.) died in Amsterdam in 1883. Prior to its death, wasn't this *particular* quagga <u>*pragmatically, conceptually equivalent to*</u> the <u>Universal</u> *extant species* 'Quagga'? *Particulars* can <u>be</u> Universals!

15 *'Transcendent'* here just means *'Transcending the <u>Natural</u> World'* (i.e. *Super*-Natural - see Section 6 for 'Natural').
<u>Not</u> to be confused with '*The Kantian Transcendent**<u>al</u>**'* (see Section 5), which is something very different!

I'm referring here to the various *Supernatural* conceptions of Universals, and the arguments against them, that arose in Medieval times. I'm focussing on Western <u>*Latin*</u> Christianity, essentially Roman Catholicism, rather than Eastern Orthodoxy, as it was in the West of Europe that most of the debates took place. [16]

Early Western Medieval <u>*philosophical*</u> theological thought (7th – 11th centuries CE) was dominated by neo-Platonic philosophy via late Classical thinkers such as Plotinus, Porphyry, Augustine and Boethius. Vicissitudes of fate had removed significant access to Aristotelian writings. [17]

Medieval Christian thinkers were committed <u>*by their very Faith*</u> to an <u>*Ontology of Transcendent Entities*</u>. These included *God*, *Heaven*, the *Communion of Saints*, the *Souls of the Dead*, *Angels* (*Thrones, Dominations, Cherubim & Seraphim, etc.*) - perhaps also the *Devil & Hell*! [18]

But they were also '<u>*set-up*</u>' by Late Antiquity to have to deal with intellectual problems associated with *Wholes*, *Parts* and *Universals*. [19] For example:

> Explaining <u>***The Doctrine of the Trinity***</u> required the theologians to hone their intellectual skills on issues associated with <u>*Parts*</u> and <u>*Wholes*</u> (very relevant to *Universals*). How could an <u>*Integral Unity*</u> be <u>*Tripartite*</u>? [20]
>
> More explicitly associated with a ***Universal*** was the Augustinian Doctrine of <u>***The Fall of Man***</u>! [21] :-
>
> > How could one <u>*particular*</u> man, **Adam**, bring about ***The Fall of Man***, i.e. of ***Mankind*** – <u>***A Universal***</u> – and, how could another <u>*particular*</u> man, **Jesus of Nazareth**, come along and ***Redeem*** us from ***The Fall***?

Various intellectual answers to such puzzles associated with Universals (& their related concepts) were proffered. Some (depending upon one's religious sect) became *orthodox* doctrines, while others were declared *heretical*. But that is not the issue here: what interests us is that there were *very <u>prominent</u> philosophical problems associated with Universals* that <u>*needed to be solved*</u>!

In a Neo-Platonic atmosphere in which putative Platonist solutions were readily available, and in which there was <u>*already a religious **commitment** to an <u>infinitely large</u> Supernatural ontology*</u> (*God* & *Heaven* being infinitely large!), a <u>*Supernatural*</u> solution to the issues of *Universals* (and *Wholes* and *Parts*) hardly presented a huge intellectual overhead! The result was ***Early Medieval Realism***: Universals were <u>*Ontologically Real*</u>!
Of course, such a historical account is to some extent putting the cart before the horse: Platonism *preceded* Christianity by some 400 years! The very Idea of a *Christian Heaven* – a perfect Supernatural World - was very

16 See the *Stanford Encyclopedia of Philosophy* on '*The Medieval Problem of Universals*', (*online*) for details here: it was all very complicated. I've taken part of this summary from there.

17 Actually, only <u>*one*</u> of Plato's own books was accessible (i.e. translated into Latin) *throughout the whole Middle* Ages: Plato's *Timaeus* (hardly a *typical* text of his!), and, then, only a *portion* of this book had been translated into Latin! But *commentaries* on Plato and *neo-Platonic* writings, especially from Boethius & Augustine were widely available.

18 I want to make it clear here (speaking as an agnostic) that even Atheists should not *disparage* the intellectual efforts of these thinkers: they had very real problems to solve and their philosophical works are of relevance today!

19 E.g. Boethius formulated one dilemma over Universals: is a Universal *one single thing* or it is *many?* See Tweedale p. 9.

20 Tweedale, p. 10. See Section 3, above, on *'small-number'* predication: a <u>*Threefold*</u> entity is of the essence here! Another problem with *The Trinity* was the *'filioque'* issue (q.v.)! Yet, another *numerical* problem is that of *Apostolicity*! The RC Church claims to be '*Apostolic*' (as does the C of E), i.e. all priests have been ordained by a continuous legitimate serial exercise of *'laying on of hands'* (i.e. ordinations) all the way back to *The Apostles*. But how many of them were there? Presumably *Judas Iscariot* is excluded, but *St Paul* claimed to be an Apostle, even though he had never met Jesus … … !

21 ***The Fall*** was a Western, *Latin,* concept advocated by Augustine. Greek Orthodoxy could never make much sense of it!

much inspired by Plato's *World of Perfect Forms*. But what matters here is that *Medieval Realism* was a natural consequence of the Early Medieval Intellectual *Zeitgeist*.

From roughly the 12th Century CE, **Aristotelian texts** began to be available to Latin Scholarship.[22] Aristotle became **'The Philosopher'**.[23] Platonic thought became *'old-fashioned'*, and *Forms* and *Ideas* were *brought down to Earth* by Aristotelian scholarship. Arguments about Universals continued, of course - but the idea that opinions became *'polarised'* into a *'Via Antiqua'* **Realism** and a *'Via Nova'* **Nominalism** is totally wrong: there was a *whole spectrum of opinions* in between (and off to both sides as well!)![24] It is all very confusing, so it's best to take up the historical story again with **William of Ockham:** (1287-1347), who by taking Aristotelian notions as far as they could go (much further than Aristotle himself would have countenanced!) managed to define a position which was also just about as far from *Realism* as the Middle Ages could offer![25] His so-called *'Intellectio'* position was essentially a form of *Conceptualism*. A key quote from Ockham is:

> "no universal is a substance existing outside of the mind,"[26]

Ockham, like Aristotle, and just like Conceptualists in our own age, held that Universals are themselves *particulars*, but particulars *predicated of many things*. Tweedale argues that Ockham goes beyond Aristotle: *'He de-ontologised much of Aristotelian logic in favour of a theory of signification'*. [27]

Moving forward through the centuries, via *Renaissance Humanism*, we find that *Enlightenment anti-Scholasticism* rejected even Aristotelianism (actually, a mannered, *degenerate* form of Aristotelianism!) and ultimately engendered the *Scepticism*, *Agnosticism* and *Atheism* (not to say *Cynicism*) of our own Age. These

22 Translations from the Arabic came via Spain and from Greece itself after the *Fourth Crusade* and *The Fall of Constantinople* (1204 CE) to Latin Western warlords – *"Crusaders"!* They were followed by Latin scholars who researched Aristotelian texts in Greek Orthodox monasteries. Aristotle's thought became increasingly available to Latin Christianity.

23 Referred to as such by Thomas Aquinas & his followers and by Arab philosophers before him.

24 See Stanford, *'The Medieval Problem of Universals'* again. Spade, *'Five Texts on the Medieval Problem of Universals'*, p. viii, makes some very interesting observations here: *' ...the realists have always had the most explaining to do in metaphysics ... the nominalists have always had the most explaining to do in epistemology. ... Nominalists have no special difficulty with metaphysics, their ontology is lean and trim. Their problem is in explaining how we can know the world is the way they say it is. By contrast, the realists have no special difficulty with epistemology; if universals are real, they are available to provide a basis for general knowledge. Their problem is in explaining how the world can be the way they say they know it is ... '*. I argue in Section 5 that Kant resolved these issues.

25 Tweedale's book (in two volumes) appears to be the most comprehensive available for anyone interested in Ockham's position on Universals. It's as much about *Duns Scotus* (a weak Realist and Ockham's Franciscan mentor) as about Ockham. It translates the Medieval texts for us but it has as much elucidatory commentary as it has source text! And it is *specifically* written as much for modern philosophical scholars as it is for Medievalists. The books by Klima *et al* and Spade also add useful information and perspective.

26 Ockham's *Intellectio*-theory is explained in Klima *et al.* p. 229 ff. He also quotes Ockham (in translation): *'... any universal, even, a most general genus, is truly a singular thing existing as a thing in a determinate genus. Yet it is universal through predication, not for itself but for the thing it signifies'*

27 Tweedale, p. 10. It's worthwhile noting, with the *Stanford Encyclopedia* entry on *William of Ockham*, p. 4, that Ockham, famous for <u>using</u>, but certainly not <u>inventing</u>, the so-called **Ockham's Razor**, did **<u>not</u>** use his Razor to argue against Medieval Realism! **<u>We</u>** might want to use it thus: why invent a new category – that of *'Real Universals'*, when we can get by without it? Keep things simple! This seems like quite a good argument! But Ockham <u>did not</u> use it! Why not? Because he knew, *better than anyone else*, that *'Ockham's Razor'* is merely a *heuristic, rhetorical* tool: it can occasionally go wrong and lead one onto a false track (e.g. *'planetary orbits, being heavenly, must be <u>simple</u> & so must be circular'* – sadly wrong). Ockham did not use *'Ockham's Razor'* against *Realism* because he thought he had <u>much better</u>, <u>definitive</u>, <u>clinching</u> arguments against it! See Stanford, Section 4.2. He thought (to use an anachronistic metaphor) that *Realism* was *'Nonsense on Stilts'*!!! Incidentally, anyone *really* interested in *'Ockham's Razor'* *should* read William M Thornburn:
 'The Myth of Occam's Razor', *Mind*, New Series, **27**, No. 107 (Jul 1918), pp 345-353, available online:
http://en.wikisource.org/wiki/The_Myth_of_Occam's_Razor.

latter positions have *no pre-commitment* to Transcendent, Supernatural worlds. *Huge intellectual overheads* are required these days if one is to posit a *Platonic World of Forms*, and/or the *Reality of Universal Forms*. *Conceptualism*, based in the every-day *Natural World*, is a much more plausible position – even for Believers.

And yet, ... can Ockham *really* be right when he says, *"no universal is a substance existing outside of the mind"*? In the **Natural World**, don't we encounter *'real' Biological Species* and *Natural Kinds*? Don't they exist outside of our thoughts? After all, many living species on Earth came into being long before *Homo Sapiens*!

I will leave a discussion on these issues to Section 6. First, we revisit *'The Problem of Universals'* (**PoU**) and consider deeper metaphysical issues.

5. *Conceptualism* and *'The Problem of Universals'* – Visit 2.

Two Problems: I want to raise two, <u>very different</u>, potential problems for Conceptualism at this point:

(1) Moving forward from Ockham up to the late 17th Century, we find **John Locke** asking the question:

   "Since all things that exist are merely particulars, how come we by general terms?" [28]

   <u>**Ahah!!**</u> ... Maybe **that** is the *'The Problem of Universals'* (**PoU**)! Locke, as an *Empiricist*, with a *tabula rasa* view of the infant mind, wants to know how we come by *Universal* concepts, if all we ever see is *Particulars*.

(2) A *metaphysical* question: can *'Concepts'* really be **Primitive** enough to form the basis for a <u>valid</u> theory of *Universals*? Can they <u>qualify</u>? We have already noted in Section 2 that *Concepts* can be *ill-defined* and *problem-laden* - in fact we can say that *most* of them are! Don't we really want to *explain* <u>complex</u> things (*Universals* in this case) in terms of <u>simple</u> things (sometimes called *Simples*')?

Moving on roughly another 100 years from Locke, I would argue that the answer to <u>both</u> of these problems was provided by **Immanuel Kant** in his **Critique of Pure Reason** ('**CPR'** or *'The First Critique'*).[29]

Kant:

The *CPR* covers many different philosophical topics but we are most concerned here with the issue: *'How <u>can</u> Human Beings know about Nature?'*, or, as he put it, *'How is Nature Possible?'*.[30] His solution, which he metaphorically called his own *'Copernican Revolution'*, was that the *Objects of Nature*, for us, must <u>conform</u> to our own *'Understanding'*.[31] *The Understanding* can *'know'* only <u>its own Conceptual Creatures</u>! To be sure, we receive *'sense data'* from the outside world - Kant (roughly) called these *'Intuitions'* - but the *Intuitions* must be assimilated with the *Concepts* that our *Understanding* <u>projects out</u> onto the World.[32] Perception of

28 Locke, *'An Essay Concerning Human Understanding'*, (1689). Ch 6. See also Stanisland, p. 28.

29 Immanuel Kant, '*Critique of Pure Reason'*, ('*CPR'* - 1781 & 1787). I tend to use the translation by Norman Kemp Smith, (Basingstoke: *Macmillan*, 1929, reprinted many times), but the *Cambridge University Press* and Pluhar (*Hackett*) editions are more recent, have later scholarship, & are very good.

30 See Daniel N Robinson, *'How is Nature Possible? - Kant's Project in the First Critique'*, (Continuum, 2011) for an intro.

31 See e.g. Kant, *CPR* Bxvii

32 *CPR* B75, A51. One major problem with recounting even <u>a part</u> of Kant's philosophy is **Kantian Terminology**!!!! To stick with Kantian terms here would require a lot of explanation!! I'm avoiding most of them & using roughly similar terms that we are more familiar with instead. Kantian *'Intuition'* does not *quite* equate to *'sense data'*, and Kant's term *'Transcendental'* has *a <u>very different</u>* meaning to the word *'Transcendent'* as used in Section 3! *Transcendental* philosophy *à la Kant* is concerned with the metaphysical <u>**pre-requisites**</u> for our *'Understanding'* to engage with the

the Natural World is not (as some Empiricists might have argued) a _passive_ reception of data, it is a _proactive_ putting together of _our_ Concepts with incoming _Intuitions_. As Kant famously said:

> _"Thoughts without intuitions are empty, intuitions without concepts are blind."_
>
> Kant: _Critique of Pure Reason_, A51, B 75.

The most basic concepts that we apply to the world – we can think of them as _meta-concepts_ - are **Kant's Categories**, _without which we could have no rational relationship with the world at all_**!** Kant's _Categories_ are our basic way (as rational creatures) of _engaging_ in the World, they are _endemic_ to our very Being![33]

To illustrate: among Kant's _Categories_ we find _Causality_. _'Cause'_ and _'Effect'_, according to Kant, are not wholly _"Out There"_. **No**! Rather, _we_ - as rational creatures - _impose_ them upon the World.[34]

On Universals: Among Kant's _Categories_ are those of **Unity, Plurality** and **Totality**[35]

> _Totalities_ are _Pluralities_ of _Unities_. This, I submit, is Kant's way of saying that _Parts_ and _Wholes_, _Particulars_ and _Universals_ **are** _Primitives_, and, in fact, **_a priori_** for any rational creature.[36]

> Kant claims that, by virtue of their being _Categories_, these _meta-concepts just are_ Primitive - in fact, more than that: they are _a priori_. Essentially _Part/Whole_, _Type/Token_, **Particular/Universal** distinctions are _Primitive to our Very Being in the World!_ Without them we can have no rational relationship with the World _at all_! Without them – _Nothing_![37]

> They, along with other _Categories_ are **'Transcendental'**: Kant's way of saying that _Universals_, along with _Particulars_, are _primitive pre-requisites_ for our making any sense of the World at all!

So, it is not, as the Empiricists thought, that we need to derive our _Universal_ concepts from instances of observation of _Particulars_. No - we _start_ with the _Concepts_ of **_both_** _Particulars_ and _Universals_ _already_ in our Understanding: _they are _endemic_ to our way of being in the world_. **Without our Categorical Concepts we could have no Relationship with the World at all!**

Another perspective on Kant's _Categories_ is this: that, _as _meta_-concepts_, they provide us with a _generating template_ for all of the more day-to-day concepts that we use to order our life in the world. They also enable us to generate those _far more formal_ concepts that we use in our _philosophies_ and _logical systems_.

_So_!: - No conceptual _Tabula Rasa_ for human beings: we _don't_ each have to invent (discover?) the _meta-concept 'Universal'_ for ourselves during our own lifetimes, as might be implied from Empiricist philosophies:

World **_at all_**_!_ They include Kant's _'Categories'_. Also, by _'The Understanding'_ Kant means something closer to what other philosophers call _'Reason'_. But Kant uses the word _'Reason'_ to mean something else, see _CPR_ (_passim_) & Warnock, _Imagination_, p. 42 ff _!!_

33 Kant, _CPR_ A76, B102 ff

34 Of course, many scientists (those who are not _'into'_ philosophy, I would suggest) would disagree _vehemently_ with this proposition! But I am prepared to defend Kant here - though that is a topic for another day!

35 Kant, _CPR_ A80, B106 & B114 ff.

36 I must come clean: Kant himself may not have seen it quite like this! His own _Conceptualist_ view of _Universals_ was rather more complex & compromised. But _Great Revolutionaries_, like Kant, being in _the thick of things_, cannot always see the consequences of their own brilliant revolutionary ideas! Perhaps their followers, once things have settled down, can appreciate the consequences all the more clearly!

37 See Warnock, _Imagination_, p. 27: _'the aim of his whole critical philosophy is to lay bare the features which our experience must have, if it is to be the experience of the world as we know it'._

the concept *'Universal'* is <u>already there</u> for us when we find ourselves in the world. *Locke's problem never existed!*

A couple of extra Kantian points which will be relevant below:

> According to Kant, the human capacity that we use to couple our *Intuitions* (~ *'sense-data'*) to our *Categories* to provide understanding of the world, is our **Imagination**.[38] *Imagination* is thus, <u>also</u>, a **<u>fundamental</u>** capability required for our very existence in the world - another <u>*sine qua non*</u>. It is very far from being an *'add-on'* to our lives, an *'optional extra'* that we call on when we want to be creative or invent fictions![39] Among the *Concepts* that we *imagine* are *Universals*!

> The fact that we couple our *Intuitions* (sense-data) to our *Categories* to provide understanding of the world, means that the **Natural World** is, for us, a **<u>Phenomenal World</u>**. *Phenomena* are *perceived by the Senses* and are *enabled* by our *Concepts* and *Categories*.[40]

But ...

<u>*Is Kant right here*</u>? Does his *'Copernican Revolution'* *solve* or *dissolve* many previously conceived philosophical problems, including the **PoU**? Well, <u>clearly</u>, I think **'<u>Yes</u>'**! To argue otherwise, one must take on the **CPR!** <u>*Clearly*</u>, *again*, this is not the place to do so - it would take months to get anywhere! So, instead, we can take on another, <u>distinct</u>, but *corroborating* argument. We can move forward another 80 years or so from Kant to the time of Darwin and adopt an <u>*Evolutionary*</u> *Argument* to the effect that *Universals* <u>*are indeed Primitive*</u> to our way of being in the World.

An Evolutionary Argument.

If we are walking through a field in the English countryside, communing with Nature, what do we see? A field! *Very attractive, maybe & it may revitalise our souls, etc. ... but ...* it remains a field![41] Not so, for the Hawk hovering 300 metres above the field: it sees the *mouse* in one corner of the field, swoops down and nabs it! For the Hawk *'mouse'* is a very important *Universal Category*! *'Mouse'* is *'Food'*! The Hawk sees a <u>*'mouse pattern'*</u> that we are insensitive to. **<u>Pattern Recognition</u>** is a *primitive*, *essential* part of *Being* for all animals. It **<u>parses</u>** the World into <u>*Universals*</u> and <u>*Particulars*</u>.[42] As animals, we are most sensitive to those patterns that are most <u>*salient*</u> for our way of life.[43]

Likewise, go back a few million years to our hunter-gatherer ancestors. For them to confuse, e.g., <u>*Deadly Nightshade berries*</u> with *Blackcurrents* would have had *dire* consequences![44] Whilst out hunting, the sighting of a *tiger* would give rise to a shout **<u>*'Tiger!!'*</u>** - and not to any laid-back philosophical discussion as to whether that imposing stripy creature with alarming fangs might, or might not, *perhaps*?, be a *token* of some

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38 Kant, *CPR* A115 ff, esp. A120, and *passim*! See also Warnock, *Imagination*, p. 26 ff.

39 *Counterfactual* accounts of *Causality* demonstrate that *Imagination* is also central to claims <u>*re 'Cause and Effect'*</u>.

40 See *CPR* A149 for Kant's *phenomena-noumena* distinction.

41 ... at least to city dwellers like me!

42 At Piggotts, Peter Gibson also declared that *Pattern Recognition* was fundamental to our being in the world!

43 Note, we are so prone to pattern recognition that our overactive imaginations sometimes project patterns where there is little empirical evidence for them: false patterns, arising perhaps from *coincidence* or *wishful thinking* & giving rise to false hypotheses and conspiracy theories! Francis Bacon: *'The human understanding is of its own nature prone to suppose the existence of more order and regularity in the world than it finds'*.

44 To be sure, there must be an element of *education* here: the kids have to learn from their elders about the <u>*particular*</u> *types* and *tokens* <u>*relevant*</u> for their way of living! But they could not learn <u>*at all*</u> were it not for their human *a priori* propensity to learn these things. Such learning arises out of the pro-generative capacity of the Kantian *Categories* and the templates for *Types* & *Tokens* that they offer!

Universal Species!! A tiger-sighting would require a *rapid* gathering-together of the hunters into a protective band for defence!! One just *had* to distinguish harmful from harmless animal species - as we still do. Recognition of *Universal Types* was, and remains, a requirement essential to survival: a primitive *sine-qua-non* <u>**Instinct**</u> for one's *continuing to* exist in the World <u>**at all**</u>!

Another example: walk down the road with a dog on a lead. It walks along nonchalantly, until it sees another dog! Then it becomes *excited*, pulls on the lead, & tries to have a sniff (or worse)! It's clear from their behaviour that the class of entities that *dogs* take to be *dogs*, corresponds pretty closely to <u>our *Universal*</u> *Concept*: *The Species 'Dog'*. More generally, all animals must recognise their own kind in order to procreate! The point here is <u>not</u> to claim that animals *'have' Universal 'Concepts'* of Natural Kinds and Species, *it is rather to say that they* have <u>*instinctual recognition*</u> of what <u>*we*</u> take to be Natural Kinds and Species. Some Species, including *Homo Sapiens* and, possibly, primates, killer whales & dolphins, have the *additional* mental ability to turn these *instincts* into <u>*concepts*</u>.

The fact that we, as a species, have taken the path from *Instincts* to *Concepts* requires us to acknowledge that, once we acquired the *Intellectual Wherewithal* to start asking *'What are Universals?'*, we must <u>already</u> have developed philosophical *Conceptualism*!

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The two arguments above: the Kantian *Transcendental* argument and the *Evolutionary* argument are <u>*formally distinct*</u>, but they are *complementary* and perhaps they form part of a *'Virtuous Circle'* or a *Coherence Theory* about Universals.[45] Their point is that the *Empiricist* question of how we can derive *Universals* from *Particulars* never comes into play. They come <u>*together*</u>, as a package as part of<u> *our way of being in the world*</u>.

With all this under our belt, we can now return to the issue of how *Conceptualism* fares in the *Natural World*.

6. *Conceptualism* and *The Natural World*

Natural Substantives (Species, Natural Kinds, etc.)

I have already been talking about *Species* as if they are in some sense *'Real'* – i.e. *instantiated* in the *Natural World*. Certainly, **scientists** appear to take them as 'Real'! They have a whole hierarchical **taxonomy** of biological types ('*taxons*'):

Species – Genus – Family – Order – Class - Phylum – Kingdom – Domain – Life.

So, surely, Species and Natural Kinds actually <u>exist</u>!

Well yes, indeed! The account I'm giving here is <u>*Realist*</u> account of the *Natural World*. There is plenty of *jolly good evidence* that our Universe existed for ~13.7 billion years *before* any *Concepts* arose in the Biosphere of Planet Earth!! *What price, then, Conceptualism?*

If <u>*Biological*</u> types did not exist ten billion years ago, then surely, at least, <u>*Physical*</u> types did: *electrons*, *protons*, *quarks*, *gluons*, *photons*, etc! Again, scientists have pretty good evidence that indeed they did! But there was no-one around then to have concepts of them! W*hat price Conceptualism?*

Well, the answer to these questions again comes from **Kant**. There is a <u>*world*</u> of difference (*literally!*) between claims about '*Reality*' in the <u>*Transcendent*</u>, *Supernatural* World and claims about '*Reality*' in the

45 Kant's argument is metaphysical (part of his own *Transcendental* metaphysics), it does *not* make use of evolutionary arguments (&, indeed, it preceded Darwin's publications by some 80 years). Evolutionary arguments are <u>*scientific*</u> and therefore deal with the *phenomenal* world. The two arguments work on two different philosophical levels.

Natural World. The Supernatural Ontologies discussed in Section 4 are meant, by their believers, to be _'Really Real'_: God and Heaven _really do_ exist, though, as is often recognised, in ways we cannot understand.[46] They are somehow (Platonically!) meant to be _More Real_ as '_Beings'_ in a _World of Being_ than the _creatures_ we see in our _Natural World_: i.e. in our world of imperfect, incessant _Becoming_! They are meant to be, in Kantian terms _'Things-in-Themselves'_ (_'Dinge an sich'_ in German).[47] We cannot _know_ them, but we can have _faith_ in them.[48] But the ontology of our _Natural World_ is wholly **_Phenomenal_** and as explained in Section 5, all _Phenomena_, for us, are an admixture of _Intuitions_ (~ _'Sense Data'_) and the _Concepts_ that _we_ impose upon the world. The _'Reality'_ of entities in the _Natural World_, whether _Particulars_ or _Universals_, is _essentially Conceptual_. _Concepts_ are a _sine qua non_ of their _phenomenal_ reality.

When we _Conceptualists_ say that Universals are _'first and foremost'_ concepts, we are keeping the door open to the possibility that they may also be _instantiated_ in the World in some way - _'Species'_ may well be such a case. But, there are plenty of historical examples to show that our _conceived entities_ are _not always_ instantiated in the Natural World (e.g. _phlogiston, unicorns_). But, in all cases, it is the _Concepts_ that we _engage in_ and _commit ourselves to_ that _work for us_: if we believe in them, we pursue the consequences of that belief.

Note, in this context, that there are _ongoing scientific conceptual debates_ about _Biological Taxonomy_. Do _Bacteria_ form a _Domain_ or a _Kingdom_? This is not agreed, there remains much argument about the exact relationships.[49] Again, some scientists argue that it is not useful to classify _Bacteria_, with their ready exchange of DNA, into _Species_ because they can take on a whole _spectrum_ of properties.[50]

Thus, _'Species'_ are not _'present'_ in a _simplistic_ way in the world. They arise, first, in animal instincts and, once we come to discuss them philosophically, our instinctual predilections for _Species become_ Concepts. They may have _Natural Correlates_, and so be _instantiated_ in the Natural Word, but the correlation can never be _'exact'_.[51]

The Holon

While discussing _Substantives_ in the _Natural World_, we should not pass up a further opportunity to deflate the supposed 'special' status of _Universals_, at least in relation to _Parts_ and _Wholes_, by drawing attention to Arthur Koestler's concept of **_The Holon_**.[52] Koestler noted that in the _Natural World_ very few entities are _solely_ _Particulars_ (_Parts_) or _solely_ _Collectives_ (_Wholes_): most of them are **_both_**. Thus, in the _Hierarchy of Life_ we have many **holons**: _organelles_ in cells, _biological cells, bodily organs, human bodies, human groups, society, culture, the biosphere ... perhaps, Gaia!_ (James Lovelock). They are each _functionally_ whole (_semi-autonomous_), but each play a _role_ in a larger organic _whole_.[53] Each is made up of _smaller_ **holons**, and each forms part of a _larger_ **holon**. Think of social insects. Ants are _particular_ holons but their ant-hill is a _social_ holon. Likewise, for _bees & beehives_. Likewise, for _humans_ and _our societies_! There is no need here to elevate

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46 See, e.g., the writings of Nicolas of Cusa, or _The Cloud of Unknowing, etc_.

47 See e.g. _CPR_ [Bxxvi], but _passim_ throughout the _CPR_.

48 Some might want to say that they are (again to use a Kantian term) '_Noumenal'_- but this classification is not particularly helpful. _Noumenal_ is a term coined by Kant which actually gives away his essential _Conceptualism_! _Noumenal_ things are _implied by the Mind_ (_Nous_ in Greek) as opposed to _Phenomenal_ things that are _perceived by the senses_, see Kant _CPR_ A149! As I say, there is a world of difference - but not the one that is implied by those who take the word _'Noumenal'_ to mean '_really real'_, it's best to use the term _'Dinge an sich'_ for supposed _'really real'_ entities.

49 See Wikipedia on biological taxonomy.

50 Evan Thompson, _Mind in Life,_ (Harvard U P, 2007), p. 118

51 One cannot align a _phenomenon_ (= concept + intuitions) with just a _concept_.

52 The term '_holon'_ was coined in Arthur Koestler's 1967 book _The Ghost in the Machine,_ (1967).

53 Except at the very top & bottom of the hierarchy.

any one of these *holonic collectives* to a higher plane as some kind of *Ideal Universal*! All are perfectly at home in the *Natural World*.

Natural Qualities, Properties and Adjectives:

We can move on from *Substantives* in the Natural World to *Properties* in the Natural World.

One of the positions that I am defending here is that our Universal concepts <u>start</u> from our experiences in the Natural World but may <u>become</u> more abstract over time as we choose to make them more *precise*, *better defined* and more *'perfect'*, as we hone them into forms that we can **<u>do more with</u>**. <u>The direction of explanation is from the Natural to the Abstract</u>, not (as in Platonism) from the (*perfect*) *Abstract* to the (*imperfect*) *Natural*.

This is well illustrated by the historical treatment we have given to our **words** for *Qualities*, *Properties* and *Adjectives*. The history of the *coining*, *development* and *usage* of words is covered by the science of **Etymology**, and, of course, the *history of <u>words</u>* is a <u>guide</u> to the *history of human <u>concepts</u>*. Etymologists these days have access to over 4000 years of written language, starting with the earliest Mesopotamian clay tablets and inscriptions. What they have found, essentially, is that *words* (and hence their *concepts*) <u>start</u> in the *Natural World* but may be *worked-up* over time to find more *abstract* uses.[54]

> Thus, we only need consider a few <u>colour</u> words to understand their *Natural* origin: *orange, olive, violet, silver ...* (fruit, flowers, metal ...) - even *claret & burgundy* (wine) are very close to *Nature*.[55]

> In many languages, the word for **'red'** is etymologically connected with the word for '*blood*' ... as in the Semitic languages where <u>dam</u>, '*blood*', is the source for A<u>dam</u> because he was fashioned by God from of the <u>red</u> earth.[56]

> In English, the word **'green'** is etymologically connected with the verb '**to grow'**. *Green* is the colour of *growing* things and of *grown* vegetable matter.[57] The application of the word to imply *immaturity* and *lack of experience* has always been associated with '*green*' because *mature* fruits (e.g. tomatoes) often take on another colour.[58]

We should also remember in this context that *George Lakoff* and *Mark Johnson* wrote two books which argued that much of our language starts from <u>Bodily Metaphor</u>: '*Philosophy in the Flesh'* and '*Metaphors We Live By'*: we are <u>embodied</u> creatures and we have *embodied* minds.[59] So, Lakoff & Johnson are also arguing that the direction of *Linguistic* (and so *Conceptual*) development is from the *Natural* to the *Abstract*.

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54 One example, in addition to the *colour words* given here, is the use of the phrase *'going to'* to indicate a *future* activity – essentially as an *auxiliary* to denote a *future tense*. Historically, this started when people would say something like *'I'm going to find out for myself'*, where there is a *literal 'going'* followed (hopefully) by a future *'finding out'*. With repeated uses of such linguistic forms, we've ended up with sentences such as: *'I'm going to stay here'*, which makes no <u>literal</u> sense *at all!*, but in which *'going to'* has become an auxiliary for a future tense. See Deutscher, *The Unfolding of Language*, (2005) (pp. 146-156). He points out that this terminology is gradually becoming *'gonna'* – a single word auxiliary.
55 Deutscher, p. 236
56 Deutscher p. 237
57 *Ibid.* See also the *Oxford English Dictionary* on '*green*'. Note also '*grün*' in German, whose pronunciation is ~ half-way between our *'grown'* and *'green'*!
58 We may also note that the *scientific* understanding of colour, embedded in the *Natural World*, as it is, has been far more <u>fruitful</u> than the Notion of the *Platonic Ideal* of *'Redness'*! Through it, we can now understand *colour-blindness* and can make dynamic *colour displays* (computer screens, TVs, etc). Wow!
59 Lakoff & Johnson, '*Philosophy in the Flesh'* (1999) and '*Metaphors We Live By'* (2003). See also Deutscher, p. 138, and contemporary philosophical works on the *'Embodied Mind'*.

7. *Conceptualism* and *The Public Sphere*:

In the sphere of public engagement, I'll argue that our *Universal Concepts* are explicitly **invented** by us to solve our problems. We use our *Imagination* to do this. We then *negotiate* them, *modify* them ... as a result of which, *some* of them become *inter-subjectively accepted*, and so become socially *instantiated,* and so, in a sense, *become 'real'*.

To illustrate these claims, I'll look at two very different areas of *public* conceptual creativity: (1) The generation of *Axiomatic Systems* and *Scientific Theories*, and (2) *Politics*.

Axiomatic Systems and Scientific Theories

My assertion that *Axiomatic Systems and Scientific Theories* originate in the *Public Domain* may well be challenged! After all, one must be something of an expert to make original contributions in these fields! On the other hand, copious publications in these fields are in the public domain and even amateur philosophers can have access to them! Their concepts are negotiated openly in ways that are far from 'secret' and new *Systems* and *Theories* become accepted, or rejected, via *Intersubjective Consensus*. Even as outsiders, looking in, we can still appreciate these processes and the import of what the experts are doing.

Axiomatic Systems are sophisticated *Conceptual* Systems which contain not just **concepts** but also **rules of implication** (e.g. *modus ponens*, *modus tolens* in classical logic) that enable us to generate **new** *legitimate* concepts ('*legitimate*' within each System, that is). The **Axioms** for each system are its *basic* **Assumptions**, *which themselves cannot be proved,* but are just *taken to be "The Case"*.[60] The first fully-fledged axiomatic system that we know of was that devised by **Euclid** for *Geometry* in ~300 BCE. It then took the human species until the 19th Century CE to come up with new axiomatic systems for *logic* and *arithmetic*.[61] However, *having discovered how to do it*, many more axiomatic systems have since been invented! They are being generated by logicians, mathematicians and scientists *all of the time* these days. All of these systems have been *invented* by our fellow humans to improve our understanding of the World – i.e. with the *intention* of clarifying our *Concepts* and what we can derive from them – so as to be *useful* in our world.

Rule-following is an activity of *major* philosophical significance - it excited Wittgenstein's interest.[62] But much empirical evidence shows that, *pragmatically*, we can actually do it quite well (as in games like chess, as well as in axiomatic systems) and we can also teach machines (e.g. computers) to follow our invented rules![63] Rule following is tremendously important in *cooking* and *computer programming*, where a rational *series of instructions* is set up to achieve our ends. They are referred to as *recipes* and as *algorithms*, respectively.[64]

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60 Originally, in Ancient Greek times, the term *'axiom'* implied that these assumptions were in some sense *'obvious'*. These days, we think that the word *'obvious'* should not be used in philosophical discourses, as so many *'obvious'* principles have been found to be wrong! An *'Axiom'* these days is, therefore, just an *'assumed'* principle.
61 By people like Frege, Peirce, Dedekind, Peano, *q.v.*
62 E.g. Wittgenstein, *Philosophical Investigations*, 201a.
63 A quote from a contemporary scientist, referring to Alan Turing and logic, which makes a related point (and an anti-Platonic point to boot!): *'Turing's great contribution to logic can be thought of as the rejection of logic as a Platonic ideal, and the redefinition of logic as a process. Turing's famous paper of 1936, 'On Computable Numbers with an application to the Entscheidungsproblem' showed that the process of performing Boolean logic could be implemented by an abstract machine'*, Seth Lloyd, *'The Universe as a Quantum Computer'*, *arXiv*:1312.4455v1 [quant-ph], 16 Dec 2013, p. 5.
64 The *rigidity* of rule-following differs from one discipline to another: in *cooking*: *loose*; in *logic*: *determinative*.

Scientific Theories are a form of axiomatic system. Their 'axioms' are usually called *'postulates'*, and, as they are somewhat more loosely framed than *formal* logical and mathematical systems, they are often referred to as '*hypotheses*', or just '*formulations*', as well as '*theories*'. As they are <u>scientific</u> conceptual systems, the predictions made through them must be rigorously tested *empirically* to discover if the theory can be useful for us, whereas many invented axiomatic systems in philosophy, logic and maths are just created for the fun and excitement of doing it![65]

*Having said all that, what does any of this have to do with **Universals**??*

Here are a few observations about *Axiomatic Systems* that demonstrate their relevance for understanding the philosophy of *Universals*.

(1) First, a point that counts against *General Platonism* (i.e. extends beyond *Universals*, but *includes* them). These axiomatic systems are *'tidied up'* systems which have had the *imprecisions* of ordinary everyday speech removed from them. Foundation Students in *Logic* are taught to *strip away* the *irrelevances* of *everyday language* and reveal the *basic concepts* and *processes of implication* that underlie a good argument. The structure of the argument is rendered <u>symbolically</u> and made <u>context free</u> and therefore <u>more general</u>. Such stripped-down systems **appear** <u>more perfect</u> than the *Natural World* because we <u>make</u> them as *simple* as possible (following *Ockham's Razor*), only retaining what is <u>necessary</u> for *correct* general understanding. Similar points can be made <u>in all cases</u> where we *abstract* from the Natural World. For example, we abstract from *natural triangles* to the *general concept of 'Ideal' triangle*, which thereby becomes a <u>rudimentary scientific model,</u> which (we think) tells us what <u>all</u> triangles are like.[66] Likewise, when walking in unfamiliar terrain, an *abstracted* map, which records only <u>salient</u> features, is often more useful for our finding our way than just being there! Without the map, we can get lost because we *'can't see the wood for the trees'*! The *simplified* map is far more pragmatically useful for us. The *map is pragmatically better than the terrain* and therefore can come across as being more *'perfect'*. But **we** made it. The *Idealised Map* did not produce the 'imperfect' terrain!! The point is that the <u>appearance</u> of *perfection* or *simplicity* here is something that <u>we</u> have to <u>work at</u> conceptually to <u>create</u>, as we *abstract* from the world. The direction of explanation is, as ever, from the *Natural World* to the *Abstract Ideal Concept*, not the other way around. So it is with *Universals*!

(2) ***First Order Predicate Logic*** is an axiomatic system that was created to *capture* (as far as possible) how we reason logically in the world and *also to enable us* and *to teach us how* to make our (often) faulty day-to-day reasoning more *formally correct*. It does this by the processes mentioned in (1): *formalisation*, *abstraction*, use of *symbolism* to provide *context-freedom* and rigorous compliance with *fixed rules of implication*. But, in so doing, it provides us with yet another demonstration that the *Universals are* <u>Primitive</u> to our way of being in the world. The ***'Universal Quantifier'***, '∀': *'For all ... '*, has to be <u>provided</u> as a <u>Primitive</u> of the logical formalism, it is not *derived* as a theorem.[67] Insofar as *First Order Predicate Logic* aims to capture our *intuitive* logic (albeit in a partially perfected form) the *primitive (Categorical)* nature of our Universal concepts is again demonstrated.

65 In Section 6, above, in speaking of scientific theories on *Species* and *Biological Taxonomy* we have already been discussing examples of how these theories work for us conceptually.

66 Note that the *Platonic* and *Euclidean* model of an '*Ideal*' Triangle, was, in the late 19th Century, found to be wanting: it is only valid for triangles in *Flat Euclidean Space*, <u>not</u> in *Curved Spaces!*

67 E.g. In the statement *"For all x [∀ x], if x is a man, x is mortal"*, we recognize that there is a <u>Universal</u>, *'man'*, of which there are probably (at least) a few *particular* instances. Only *Universals* can be preceded by the primitive *Universal Quantifier*, **∀**! Note, also, the symbol '**ϵ**' – <u>*'belongs to'*</u> is also common in symbolic logic and is also an irreducible concept which demonstrates the primitivity of Universals. We can learn much more about our ways of thinking from this kind of formalism. For example, the primitivity of the <u>*Existential Quantifier*</u>, '**Ǝ**', is also central to the formalism: it demonstrates that *'existence'* is <u>not</u> a *predicate* (thereby undermining the *Ontological Argument* for God's existence!!).

(3) In some respects, *First Order Predicate Logic* _fails_ to capture some of our intuitive understanding of the world.[68] Logicians have therefore proceeded to develop _many other_ logics as axiomatic systems: *paraconsistent* logics, *quantum* logics, *fuzzy* logics, not to mention *modal* logics. Likewise, we have many *axiomatic systems* that provide different formal _Mathematical_ systems. Some people wish to situate *Mathematics* in a Platonic World. They are called *Mathematical Platonists*. _My question is this_: just **_which_** mathematics, based on just **_which_** axiomatic system does one wish to elevate in this way? *All of them?* There are potentially an infinite number of such systems (though, so far, only a finite number of them have been invented)!!!

(4) A similar point relates to **Science**. Theoretical physicists who are trying to solve the problem of *Quantum Gravity* invent many *speculative* conceptual ontologies: some based on *String Theory*, some on *Loop Quantum Gravity*, some on *Causal Set Theory, etc., etc. ...* . There are so many bright young physicists these days working in this area that *Quantum Ontologies* are nowadays _two a penny_! Even in the case of 'elementary' Quantum Mechanics (as taught to undergraduates), which *Quantum Ontology* are we going to elevate to be the '*really real' 'Dinge-an-sich' ontology?*[69] We literally cannot tell, because they are meant to make _exactly the same_ phenomenological predictions, so that we cannot distinguish between them empirically![70] So **_why_** elevate any of them to a different *Platonic Plane*, when they are so clearly our own invented *conceptual* systems?

(5) **Karl Popper** came up with the concept of '**_World 3_**' which does a better job of accounting for the facts when it comes to *Abstractions* (whether they are *Systems, Universals, Concepts* or whatever ...) than does Platonism.[71] For Popper, *World 1* is the physical world, *World 2* is the mental world, but *World 3* is a world of creations and inventions that, once we have created them, become in a sense, *autonomous*. A good example is the game of chess. Humans invented it, but, once invented, all possible *individual* games of chess are, in a conceptual sense, *implied* or *defined* by the rules - they have become autonomous: there's nothing we can do to get rid of them, so to speak. We might change the rules of chess, but then it would no longer be the chess we started with! The main distinction between the *Platonic Ideal World of Forms* and *Popper's World 3* is that the former is meant to be *Fundamental* and **_Prior_** to the *Natural World* ('_prior_' both *logically* and *temporally* because Ideal Platonic entities have '*always been there*', or, rather, they exist *eternally*), whereas *World 3* entities emerge from the *Natural World* and have a starting point in time.

Politics:

Politics demonstrates just how _important_ Universals can be for us.

We can illustrate this via Mrs Thatcher's apocryphal statement that '*There is no such thing as Society*'. i.e. she denies the existence of a *particular Universal*. This position (even if the statement were only meant to be *metaphorical* hyperbole – not to be taken too literally) is not too surprising coming from a *Right-Wing* politician. The *Right-Wing* has always preferred to work at the level of the human *Individual*, whereas the *Left-Wing* is prone to analyse politics at the level of *Universals*: *Society, Class*, etc. In a philosophical tradition

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68 E.g. it fails to meet a *'relevance'* criterion. We may be sufficiently confused in one portion of our mind to adopt a species of doublethink, believing both that *'Mrs Thatcher is Prime Minister'* and that *'Mrs Thatcher is _not_ Prime Minister'*. This is _inconsistent_ thinking. But we don't believe that our confusion in this *one* respect implies that the *'The Moon is made of green cheese'*. But in *Predicate Logic*, the presence of **_any_** two mutually inconsistent axioms means that **_any and every_** declarative statement *(and its opposite!) is true*! This does not capture our intuitive notions of the way the world is!

69 We are speaking here of *'Interpretations'* of Quantum Mechanics. See, e.g. *Wikipedia* on that topic.

70 *Ibid.*

71 See Popper's Autobiography *'Unended Quest'*, pp. 180-196 and his *Objective Knowledge* (Oxford, 1972), *passim.*

stemming from Hegel and Marx, one can find statements from the *Left* that actually <u>deny</u> personal initiative in favour of explanations *at the level of Human Collectives*.[72] On the other hand, the '*Right*' may praise '*The Nation*', while the '*Left*' may praise '*The State*'. We see that important debates in politics relate to the *prioritisation* and *denigration* of particular *Universals*. One would like to think that such debates proceed *honestly, morally* and *rationally* (and there is certainly a role for philosophers to advise here), but in the hands of unscrupulous politicians they can proceed *eristically* to promote cynical self-interest!

Moving to contemporary political issues: do those of us who live in *England* in 2017 owe our allegiance to *England*, *Britain* or to *Europe* or any combination of these three Universals?[73] Since last year we find that we are required (by some politicians and political groups in our society) to relinquish allegiance to *Europe*! Attitudes to such Universals can be very *changeable* and *fickle*!! This is captured in the *joke* that for an *English* tennis fan, *Andy Murray* is *British* when he is winning, but *Scottish* when he is losing! We use <u>The Law</u> - <u>another Universal</u> - to try to tie these issues down and settle debates.

But <u>note</u> that <u>England</u>, <u>Britain</u> and <u>the Europe of the EU</u> are all <u>invented</u> *Universal Concepts*: invented to solve particular problems. The concept of *England* was invented as a concept by *Alfred the Great* and his ministers to counter the Danish (Viking) threat in the 9th Century CE, but not actually instantiated for another two generations (under his grandson Athelstan). The concept of *Great Britain* was invented by *James VIth & 1st* at the start of the 17th Century to unify his two kingdoms, but was not fully instantiated until the start of the 18th Century. The Concept of the *European Union* was invented after World War II, partly as a way of preventing the perennial – ceaseless - wars that had scarred people's lives in the European continent ever since Roman times … … .[74]

Within a given polity we invent *Universals* in the form of *Human Collectives*, e.g. *Limited Companies*, *Corporations*, *Societies*, *Clubs*, *Political Parties*, etc., again, so as to solve problems. We negotiate their existence and some of them become *instantiated* and so become '*real*': we embody their reality through *The Law*. One last example: scholars and their students who first settled in towns like Oxford in Medieval times needed peace and quiet and autonomy from local power brokers and politics so as to progress with their studies. They were able to set up legal self-governing Corporations (Latin: *Universitas*) of Masters and Students in order to achieve this. Universities are *Universals* (the clue is in the name).

Note the ***direction of explanation*** here: from a *political* or *social problem* in the *Natural World* to an invented *Universal* as a putative solution. There is no doubt that William of Ockham recognised this kind of Universal-formation. Here is a fuller version of the Ockham quote from page 7:

> *I do hold this: No universal – <u>unless perhaps it is a universal through voluntary institution</u> – is anything existing in any way outside the soul. Rather everything that is a universal predicable from its nature to several is in the mind, either subjectively or objectively. No universal belongs to the essence or quiddity of any substance.*[75] [My underlining]

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72 See, for example, John Pickard, *Behind the Myths*, (Bloomington, Indiana: AuthorHouse, 2013), p. 36: a Marxist historian speaks of the early Israelites and their religion: '*It doesn't matter what the early Israelites themselves thought were their motives or their driving ideology … their ideology reflected a material social force.*' See also this statement by Hegel: '*A history which aspires to traverse long periods of time, or to be universal, must indeed forgo the attempt to give individual representations of the past as it actually existed. It must foreshorten its pictures by abstractions; and this includes not merely the omission of events and deeds, but whatever is involved in the fact that Thought is, after all, the most trenchant epitomist*': quote from *Hegel's Science of Logic*, trans. A V Miller (London: Routledge, 2002), p. 82, taken from Peter Charles Hoffer, *Clio among the Muses* (New York University Press), 2013, p. 28.
73 '<u>Universals</u>' because *Englishness*, *Britishness* or *European-ness* can be predicated of many particular people.
74 Given that the problems that the Universals '*England*' and '*Great Britain*' were meant to solve are no longer with us, one might ask, philosophically, whether these two Universals continue to serve a purpose! Perhaps we can come up with better options these days, like, e.g. a *European Union*! But perhaps that is getting a little too political!

8. Summary

Do we base our philosophies on *Abstractions* or on *Nature?* – i.e. on our given *Natural World*? A few years ago, on returning from a philosophy weekend in Oxford on the topic of *Hegel,* I told a friend of mine, Sarah Reilly, *'Hey, Hegel says that the fundamental category is <u>Being</u>'.* She replied *'No -The fundamental category is <u>Food</u>'*![76]

I've been arguing here that, *historically, conceptually*, we have always *started* with Nature and that it is from <u>our</u> Nature that we derive our ability to conceive *Universals*. Human concepts come to us naturally and *Universals* are human concepts. Let us accept the empirical evidence (some of which is described above) which shows, overwhelmingly, that our human ability to conceive *Universals* originates in the *Natural World*, and proceeds therefrom. To be sure, we find it important in our lives to <u>move towards</u> abstractions to sharpen up fuzzy concepts and to *test* them: this is the job of philosophy and science – we benefit from doing so. We are pretty adept at doing this! So good, in fact, that that our abstractions (*axiomatic systems, right-angled triangles*, etc.) look more *perfect* than the Natural World they are derived from. They are so good, in fact, that they deceived Plato into thinking that they are more 'Real' than our Natural World. There is no empirical evidence for this.[77] This is my reason for adopting an Aristotelian rather than a Platonic approach.

We can summarise our observations with respect to our three *'Spheres'* of human engagement in the world as follows:

> In the <u>Natural Sphere</u> we can, perhaps, find 'real' instantiated <u>phenomenal</u> correlates of our *Universal Concepts*, though the correlation is never exact.

> In the <u>Public Sphere</u>, we set up *Universal Concepts* to solve our problems and with any luck they become 'real'. We invent them and negotiate them through social, public and political activities.

> Regarding the <u>Transcendent, Supernatural Sphere</u>: the atheist, the sceptic, the humanist, or even an agnostic may entertain the daring notion that there *are* no 'real' correlates of our *Universal Concepts* in this domain - no *instantiation* of them – and that we have *only* the *Universal Concepts* supplied by our own minds. But it is those concepts that *matter* for us and that <u>work for us</u> in this domain.

Lastly, our historical perspective has shown that what once appeared to be a philosophical problem, specifically the so-called *'Problem of Universals'* (**PoU**, if it ever existed), has been <u>dissolved</u> by the progress of philosophy. We have given three <u>independent</u> arguments to this effect, though, in each case, precisely via the argument that *Universals* are *conceptually* endemic to our way of being the World: (1), The *Kantian Transcendental Argument* (pp. 8-9), (2) *The Evolutionary Argument* (pp. 10-11), and (3), the *Argument from First Order Predicate Logic* (p. 15)!!

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75 Klima, p. 230. Note that this is a different translation into English from the original Latin. Klima translates *'anima'* as *'soul'* rather than *'mind'*

76 The largest economic sector in the UK is Food! I must point out here that I draw a clear distinction between **Kant's Categorie**s, that literally <u>**tie us into**</u> the *Natural World*, and 'Categories' as ultra-abstractions, whether they be from Plato or Hegel or other *Idealist* philosophers, that work to found our thought in something more ethereal.

77 Of course, there is no *clinching* evidence either way (how could there be?), only huge amounts of circumstantial evidence in favour of Naturalism.

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