Philosophy 203: History of Modern Western Philosophy Hamilton College
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Class 10 - February 18
Leibniz, *Monadology* and *Discourse on Metaphysics*

I. Leibniz, truth, and monads

In our last class, David and I introduced Leibniz's theory of monads, simple substances that, in some way, compose the world.
At the end of class, I mentioned two of Leibniz's arguments against the materialist's atoms.
These arguments distinguish Leibniz's simple substances from those of the Greek atomists or Gassendi.
According to the earlier atomists, the fundamental constituents of the world are unthinking, bodily substances.
According to Descartes, the extended world has infinite divisibility, since extension is describable by real numbers.

Leibniz denies both claims, arguing with the atomists that there must be simple substances, but against both the atomists and Descartes that the nature of those simple substances is active, rather than passive.
Leibniz's first argument for his active monads, as we saw, is that taking the ultimate constituents to be mere bodies would lead to the impossibility of thought.

> *Perception*, and what depends on it, *is inexplicable in terms of mechanical reasons*, that is, through shapes and motions (M17, 276b).

There must be some essentially active, essentially perceptive, component to the basic elements.

The second reason that Leibniz rejects the materialist's atomism relies on some basic, general principles.
We ended class in the middle of our discussion of those principles, which David had introduced.

> Our reasonings are based on *two great principles, that of contradiction*, in virtue of which we judge that which involves a contradiction to be false, and that which is opposed or contradictory to the false to be true...And *that of sufficient reason*, by virtue of which we consider that we can find no true or existent fact, no true assertion, without there being a sufficient reason why it is thus and not otherwise, although most of the time these reasons cannot be known to us... (M31-2, AW 278a).

I'll call the principle of contradiction PC and the principle of sufficient reason PSR.

II. PSR, PC and truth

Leibniz thinks of PSR as following from a more substantial thesis, his conception of truth as a claim in which a predicate is contained in a subject.
Leibniz discusses his theory of truth in the *Discourse*.

> All true predication has some basis in the nature of things and...when a proposition is not an identity, that is, when the predicate is not explicitly contained in the subject, it must be contained in it virtually (D8, AW 228).

Note that Leibniz is dividing all true propositions into basic ones, in which the predicate is explicitly contained in the subject, and derived ones, which follow by analysis.
Finite analysis leads us to necessary truths.
But infinite analysis is required for contingent truths, so can only be completed by God.

> There must also be a *sufficient reason* in *contingent truths*, or *truths of fact*, that is, in the series of things distributed throughout the universe of creatures, where the resolution into particular reasons could proceed into unlimited detail because of the immense variety of things in nature and because of the division of bodies to infinity. There is an infinity of past and present shapes and motions that enter into the efficient cause of my present writing, and there is an infinity of small inclinations and dispositions of my soul, present and past, that enter into its final cause (M36, AW 278b).

The difference between truths known by finite analysis and truths only knowable by infinite analysis will, as we will see next week, ground Leibniz's account of free will, which is central to his rejection of Spinoza's philosophy.
For now, we should pursue the method of analysis.
The basic truths are known according to PC, since their denial is an explicit contradiction.
The denial of complex claims will lead to a contradiction once we analyze the complex claim into its simpler components.
So, consider:

> M. David is a married bachelor.

There is no explicit contradiction, here.
Another way to put the point is that M is not logically false.
But, if we substitute 'unmarried man' for 'bachelor', we transform M into M'.

> M'. David is a married unmarried man.

In M', the contradiction is explicit.
The methodology of analysis, without Leibniz's heavy metaphysics, is the foundation of twentieth-century analytic philosophy, having been adopted by Frege, and later Russell, Wittgenstein, and the logical positivists.
Contemporary analytic philosophers have mainly abandoned the central claims of analysis, especially that the proper method of philosophy is analysis of complex expressions into their component parts.
But, they have held on to the idea of using formal logic as a support to rigorous thinking.

I mention Leibniz's theory of truth, not merely because it is useful for understanding all of Leibniz's work, but also because from the theory of truth as conceptual containment, Leibniz argues, we can derive PSR.
For, if some effect did not have a cause, if some truth had no reason, then there would be a claim whose subject did not contain its predicate.
That claim is a little obscure, but I won't pursue it here.

III. The identity of indiscernibles and the second argument against atomism

We are still looking at Leibniz's second argument against atomism, as a way of understanding the nature of monads.
The second argument requires appeal to a further general principle, the identity of indiscernibles (II), which we have already seen.
Leibniz argues to II from PSR:

> II1. If there were two indiscernible individuals, a and b, in our world, W, then there must also be another possible world, W*, in which a and b are "switched".
> II.2. But then God could have had no reason for choosing W over W*.
> II3. God must have a reason for acting as he does, by PSR.
> IIC. Therefore, there are not two indiscernible (identical) individuals in our world (Adapted from SEP entry on Leibniz, §3.5).

IIC is just the principle of the identity of indiscernibles.

Here's a contemporary (second-order) logical version of the identity of indiscernibles, for the sake of clarity among those who speak the language:

> II. $(\forall x)(\forall y)(\forall F)[(Fx \equiv Fy) \supset x=y]$

The claim is that if any two objects share every property, they must be the same object.

(Be careful not to confuse the controversial II with its almost incontrovertible converse, known as Leibniz's law:

> LL. $(\forall x)(\forall y)(\forall F)[x=y \supset (Fx \equiv Fy)]$

LL just says that if two names refer to the same object, then the same properties hold of the referent under each name.)

Given the identity of indiscernibles, simple substances must have distinct properties.
Since atoms are all alike, monads must not be atoms.

IV. Monads and perception

Among the properties of monads, the most essential is their ability to perceive, or express, the world.
Monads are representative in character; they express the way the world is.
And, they do not just express the way they are in the world.
They express the nature of the entire universe.

> Since every present state of a simple substance is a natural consequence of its preceding states, the present is pregnant with the future (M22, AW 277a).

We will return to the way in which monads represent the universe below.
For now, it is important to get clear on the concept of perception, and how these active, simple monads perceive.

Notice that monads are mind-like.

> One can call all simple substances or created monads entelechies, for they have in themselves a certain perfection...; they have a sufficiency...that makes them the sources of their internal actions, and, so to speak, incorporeal automata (M18, AW 276b-277a).

Of course, only some monads have sense perception and memory; these we can call minds, or souls.
But all monads, being simple substances, have internal causes, independence from other monads.
That is, they are the causes of their own activity; they are not merely passive receptors.
Leibniz likens them to substantial forms.
Since monads are like minds, their changes are representations, or perceptions.
These perceptions are pre-arranged by God, in harmony with the perceptions of all other monads, about which more below.

Descartes argued that the essential characteristic of a mind is consciousness.
Leibniz mainly adopts Descartes's claim.
But since Leibniz's class of entelechies is wider than Descartes's class of minds, Leibniz's characterization of the essential characteristic of substance will have to be correspondingly broader.
All monads perceive.
The perception of a monad consists in its ability to represent, from its internal state, the entire history of the universe.

> The passing state which involves and represents a multitude in the unity or in the simple substance is nothing other than what one calls *perception*, which should be distinguished from apperception, or consciousness...This is where the Cartesians have failed badly, since they took no account of the perceptions that we do not apperceive. This is also what made them believe that minds alone are monads and that there are no animal souls or other entelechies (M14, AW 276a).

Of course, one person's modus ponens is another person's modus tollens.

> Can you really believe that a drop of urine is an infinity of monads, and that each of these has ideas, however obscure, of the universe as a whole? (Voltaire, *Oeuvres complètes*, Vol. 22, p. 434)

V. The Complete-World View of Substance

We have seen that Leibniz claims that true statements are ones in which the predicate is contained in the subject.
This claim has profound ramifications for the nature of a substance.
It means, in particular, that the concept of any substance has to contain all the properties that might be predicated of it.

> We can say that the nature of an individual substance or of a complete being is to have a notion so complete that it is sufficient to contain and to allow us to deduce from it all the predicates of the subject to which this notion is attributed (D8, AW 228a)

Leibniz continues to consider the subject and concept of Alexander the Great.

The substance must correspond to a complete concept, in order for Alexander to be a substance.
These complete concepts will differentiate individual substances.
The individual substances contains all of the attributes of Alexander.
The concepts may be analyzed down to true predications.

> When we consider carefully the connection of things, we can say that from all time in Alexander's soul there are vestiges of everything that has happened to him and marks of everything that will happen to him and even traces of everything that happens in the universe, even though God alone could recognize them all (D8, AW 228b).

The history of the universe, past and future, can be seen in every individual substance.
We can call this claim the complete-world view of substance

Leibniz draws a remarkable series of consequences from the complete-world view:

> A substance can begin only by creation and end only by annihilation...
> A substance is not divisible into two...
> One substance cannot be constructed from two...
> The number of substances does not naturally increase and decrease...
> Every substance is like a complete world and like a mirror of God or of the whole universe, which each one expresses in its own way (D9, AW 229a).

Leibniz does not argue for each of these claims, though we can see a bit how they can hang together.
Since monads reflect the entire history of the universe, they must exist from creation to destruction, for all eternity.
We have seen that Leibniz's arguments for monads rely on his rejection of Descartes's doctrine of infinite divisibility, so their indivisibility is apparent.
Similarly, monads are simple substances, so can not have parts, can not be composites.

VI. The plenum

Leibniz's complete-world view is further explained by the interaction between the inter-connectedness of the universe and the independence of individual monads.

> Everything is a plenum, which makes all matter interconnected. In a plenum, every motion has some effect on distant bodies, in proportion to their distance. For each body is affected, not only by those in contact with it, and in some way feels the effects of everything that happens to them, but also, through them, it feels the effects of those in contact with the bodies with which it is itself immediately in contact. From this it follows that this communication extends to any distance whatsoever (M61, AW 280b).

The interconnectedness of all bodies continues today in physical theories, such as universal gravitation, which extend the force of one body on others to infinity.
In practice, this force is negligible, though.
It is not clear that Leibniz thinks that the effects of one thing on another is ever quite that small.
Moreover, there is a problem interpreting Leibniz's statements about the plenum, since, strictly speaking, he believes that there are no bodies.

VII. Minds and bodies

Minds are a sub-class of souls, or, more broadly, entelechies, as we have seen.
So, we are monads of a particular sort.
And each monad has a body.

We have been talking about bodies, and interactions.
For instance, Leibniz writes that organized bodies are divine machines.

> A machine constructed by man's art is not a machine in each of its parts. For example, the tooth of a brass wheel has parts or fragments which, for us, are no longer artificial things, and no longer have any marks to indicate the machine for whose use the wheel was intended. But natural machines, that is living bodies, are still machines in their least parts, to infinity (M64, AW 281a).

But, this is casual talk, and we should be know how to speak most seriously.
Strictly speaking, for Leibniz, there are no bodies.
Bodies are just the appearances of monads.
That is why monads are, as David and Haley each said, not in space.

A materialist thinks that everything is bodies.
A dualist thinks that there are both minds and bodies.
An idealist thinks that everything is minds.
Leibniz, like Berkeley who we will read after break, is really an idealist.
For Leibniz, there is a real world (monads), a phenomenal world (bodies), and an ideal world (space and time).

Still, unlike Berkeley, Leibniz talks about bodies in a way that he does not think is illegitimate.
As we have seen, he argues that minds and bodies are subsumed by distinct laws.
Minds obey laws of final causes; bodies are governed by efficient causes.
Thus, Leibniz has still to resolve the problem of interaction between mind and body.
If bodies really were *just* the appearances of monads, then Leibniz wouldn't have much of a problem of interaction.
But, given that they obey different laws, the question of why minds and bodies seem to be so finely attuned arises: why are the laws governing final causes just the same as the laws governing efficient causes?

We will attempt to answer this question on Tuesday.