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## Being and Becoming

Information philosophy greatly simplifies the classic dichotomy between Being and Becoming that has bothered metaphysicians from Heraclitus and Parmenides, PLATO and ARISTOTLE down to MARTIN HEIDEGGER.

Heraclitus argued that the only constants are change and the laws (logos) governing change. Plato said of his ideas:

“Heraclitus, I believe, says that all things pass and nothing stays, and comparing existing things to the flow of a river, he says you could not step twice into the same river.”<sup>1</sup>

By contrast, Parmenides argued that reality is a unity and that any change is merely an illusion.

Being is part of the essential nature of some abstract entities. They are ideas that exist in the immaterial realm of pure information and do not change.

Becoming is the essential nature of concrete material objects, which are always changing, at a minimum changing their positions relative to other objects.

Change in space and time is a characteristic of all concrete material objects.

Some abstract immaterial entities also change, like the time of day. Only those abstract entities that do not change in time are those with metaphysical “Being.”

Information philosophy establishes that there is new information being created in the universe at all times, even as the second law of thermodynamics is destroying some information, sadly much more than is being created.

We can therefore limit the realm of “Being” to ideas and other abstract entities. Even the most elementary material particles are not resistant to a change in their “identity” when interacting with other particles. An isolated proton is thought to have an infinite lifetime in principle, but isolation is not possible in practice.

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1 Plato, *Cratylus* 402a



Now metaphysicians, from Aristotle's original definitions to Heidegger's claim that we have forgotten the original pre-Socratic sense of "being," have talked about "being *qua* being." Even medieval scholars like THOMAS AQUINAS took "being" to be the fundamental ground of metaphysics.

Today's metaphysicians tend to describe fundamental questions about being as ontological and "being *qua* being" as a kind of "meta-ontology" or even "metametaphysics." Are these just verbal quibbles? Typical is the quibble between DAVID LEWIS and PETER VAN INWAGEN when counting existents in a room with two simples. Van Inwagen says that only the two things exist. Lewis sees three things, the simples and their composite.

Consider the statue made from that lump of clay in the metaphysical problem of colocation. It certainly looks to be unchanging as it sits on its pedestal. But with the earth's rapid rotation, its revolutionary travel around the sun, and our Milky Way flying around the Andromeda galaxy, the statue is dramatically moving in space and time, apart from the barely observable deterioration of its surface and the microscopic motions of its atomic constituents.

One could argue that if the statue could be positioned in the inertial frame of the cosmos, that average position of all the galaxies, surely it would sit still in space, but according to special relativity this too is wrong. In the infinitely many inertial frames in relative motion, the statue's space coordinates are changing, and its time coordinate changes inexorably in all frames.

### Being and Becoming in Modern Physics

The special theory of relativity has encouraged many physicists and philosophers to think that time does not flow (there is no becoming), that the time dimension from past to future is "already there" in some sense. The physicist Hermann Minkowski described this as a "block universe." The philosopher John McTaggart and other idealists such as J.J.C. SMART described this as an atemporal "B" theory of time. All these theories are like Parmenides' denying the obvious evidence of change.



There is a strong correlation between “Being” and determinism, which is the idea that all the information in the future is already here at the present time, that information is a conserved quantity like matter and energy.

If everything that happens was certain to happen, as determinist philosophers claim, no new information would ever enter the universe. Information would be a universal constant. There would be “nothing new under the sun.” Every past and future event could in principle be known by a god-like super-intelligence with access to the fixed totality of information (Laplace’s Demon).

The strongest evidence that new information is entering the universe and that change (“Becoming”) is real comes from the cosmological evidence that the universe itself came into existence 13.74 billion years ago in a state of maximal chaos and minimal information. There were not yet any “information structures,” no atoms for nearly 400 thousand years and no galaxies, star, and planets for over 400 million years.

Now that we have planets, the history of biological evolution on our planet is local evidence for “Becoming,” from the first appearance of life over four billion years ago to the creation “from so simple a beginning endless forms most beautiful and most wonderful ...”<sup>2</sup>

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2 last sentence of Darwin, *On the Origin of Species*.

