

Problems

Abstract Entities

Being and Becoming

Chance

Coinciding Objects

Compo

Chapter 18

Constitu

Persistence

and Im

Identity

Individuation

Mind-Body

Modality

Necessity or Contingency

Possibility and Actuality

Space an

Universals

Vagueness

Wave

Can Information Philo



Persistence

Persistence is the metaphysical question of whether and how things persist over time. Things include concrete material objects from natural to artifactual to biological entities, as well as pure abstract objects like concepts and ideas that may be “universals.”

Persistence is related to the ancient Academic Skeptic argument about growth, that even the smallest material change destroys an entity and another entity appears. In this case, a change in the instant of time also destroys every material object, followed instantaneously by the creation of an almost “identical” object.

The Academic Skeptics argued that an individual cannot survive material change. When any material is subtracted or added, the entity ceases to exist and a new numerically distinct individual comes into existence. By contrast, the Stoics saw the identity of an individual as its immaterial bundle of properties or qualities that they called the “peculiarly qualified individual” or *ἰδίος ποιὸν*.

The Stoics were following ARISTOTLE. Like him, they called the material substance or substrate *ὑποκείμενον* (or “the underlying”). They believed the material substrate is “transformed” when matter is lost or gained. The Stoics suggested these changes should be called “generation (*γενέσεις*) and destruction (*φθοράς*).” They said it is wrong to call material changes “growth (*αὐξήσεις*) and decay (*φθίσεις*).” These terms were already present in Aristotle, who said that the form, as essence, is not generated. He said that generation and destruction are material changes that do not persist. The Stoics argued that the peculiarly qualified individual does persist. Aristotle had commented on his use of words about persistence:

“It is therefore obvious that the form (or whatever we should call the shape in the sensible thing) is not generated—generation does not apply to it—nor is the essence generated; for this is that which is induced in something else either by art or by nature or by potency. But we do cause a bronze sphere to be, for we produce it from bronze and a sphere; we induce the form into this particular matter, and the result is a bronze sphere...



For if we consider the matter carefully, we should not even say without qualification that a statue is generated from wood, or a house from bricks; because that from which a thing is generated should not persist, but be changed. This, then, is why we speak in this way.”¹

In his work *On Common Conceptions*, Plutarch describes CHRYSIPPUS’ “Growing Argument” as discovering what it is that persists.

“The argument about growth is an old one, for, as Chrysippus says, it is propounded by Epicharmus. Yet when the Academics hold that the puzzle is not altogether easy or straightforward, these people [sc. the Stoics] have laid many charges against them and denounced them as destroying our preconceptions and contravening our conceptions. Yet they themselves not only fail to save our conceptions but also pervert sense-perception. (2) For the argument is a simple one and these people grant its premises: a all particular substances are in flux and motion, releasing some things from themselves and receiving others which reach them from elsewhere; b the numbers or quantities which these are added to or subtracted from do not remain the same but become different as the aforementioned arrivals and departures cause the substance to be transformed; c the prevailing convention is wrong to call these processes of growth and decay: rather they should be called generation and destruction, since they transform the thing from what it is into something else, whereas growing and diminishing are affections of a body which serves as substrate and persists.”²

In one of his plays, EPICHARMUS introduced the “debtor’s paradox,” in which a lender trying to collect on his loan was told that his growth and change meant that he was no longer the person to whom the loan was made. The debtor at that earlier time had not persisted. When the lender strikes the debtor and the debtor threatens a lawsuit, the lender says the person who struck the debtor no longer exists, so he, the current version of the lender, is not responsible! Even the lender does not persist!

1 Aristotle, *Metaphysics*, Book VII, § vii & viii

2 Plutarch. *The Hellenistic Philosophers*, Long and Sedley, v.1, p.166



Perdurance

The basic definition of persistence is to show how and why an object is the same object at different times. Although this may seem trivially obvious for ordinary objects, information philosophy shows that there is strictly no such thing as perfect identity over time. The “same” object at two different times contains different information (minimally, its time coordinate in four-dimensional space-time has changed). Metaphysicians say it is better considered as two objects that are not absolutely identical.

The great Anglo-American philosopher ALFRED NORTH WHITEHEAD attributed the continued existence of objects from moment to moment to the intervention of God. Without a kind of continuous creation of every entity, things would fall apart. This notion can also be traced back to the American theologian Jonathan Edwards, who thought God creates every person anew from moment to moment, and is responsible for the way the world is at every instant.

WILLARD VAN ORMAN QUINE proposed that we consider an object as existing in “stages.” Quine’s student, DAVID LEWIS argues that at every instant of time, every object disappears, ceases to exist, to be replaced by a very similar new entity.

Lewis proposes “temporal parts” as a solution to the problem of persistence. He calls his solution “perdurance,” which he distinguishes from “endurance,” in which the whole entity exists at all times. Lewis says:

“Our question of overlap of worlds parallels the this-worldly problem of identity through time; and our problem of accidental intrinsics parallels a problem of temporary intrinsics, which is the traditional problem of change. Let us say that something persists iff, somehow or other, it exists at various times; this is the neutral word. The road parts do not exactly persist. They are intrinsically different parts. The enduring entity does persist simpliciter.

Matter that disappears and reappears violates the conservation laws for matter and energy.. Something perdures iff it persists by having different temporal parts, or stages, at different times.



though no one part of it is wholly present at more than one time; whereas it endures iff it persists by being wholly present at more than one time. Perdurance corresponds to the way a road persists through space; part of it is here and part of it is there, and no part is wholly present at two different places. Endurance corresponds to the way a universal, if there are such things, would be wholly present wherever and whenever it is instantiated. Endurance involves overlap: the content of two different times has the enduring thing as a common part. Perdurance does not.”³

In their thinking about persistence, many metaphysicians have been inspired by ALBERT EINSTEIN’S theory of special relativity. The idea of a four-dimensional manifold of space and time supports the idea that the “temporal parts” of an object are as distinct from one another as its spatial parts. This raises questions about its continued identity as it moves in space and time.

“Presentists” believe that only present objects “exist,” or their existence is different in kind from their past “real” and any future merely possible existence. “Eternalists” think past, present, and future existence are all the same in an Einstein-Minkowski “block universe” of space-time.

JOHN MCTAGGART described a series of events in the ordinary presentist view as an A-series of events, privileging the present and called a “tensed” theory of time. In what he called a B-series, events are described only by their temporal relation to other events, “before” or “after” or “simultaneous”. In this “tenseless” view, all events are equally here and now, as is claimed for a “God’s eye” view. All future events are said to be actual, an idea called “actualism.”

There is no physical basis for the wild assumptions of past metaphysicians and theologians, from Jonathan Edwards to ALFRED NORTH WHITEHEAD’S idea of “continuous creation,” that the contents of the universe cease to exist and then reappear *de novo* at the next instant. Whitehead’s “process philosophy” argues that the reappearance could not happen without the intervention of God. This notion violates one of the most fundamental of physical laws, the conservation of matter and energy.

3 Lewis (1986) *On the Plurality of Worlds*, p. 202



More metaphysically significant, neither temporal nor spatial “slices” carve nature at the joints. They are arbitrary mental constructions imposed on the world by philosophers that have little to do with “natural” objects, their component parts, and their time evolution.

Endurance

It is metaphysically necessarily the case, both logically and in terms of an information analysis, that everything is identical to itself. Self-identity is a necessary truth. If you exist, you do not exist necessarily, as TIMOTHY WILLIAMSON claims, but you are necessarily self-identical at each instant of time.

Despite the absence of any absolute physical necessity about what there is (ontology), information philosophy can and does embrace SAUL KRIPKE’s metaphysical necessity. We take this to be his proof of the necessity of identity, first suggested by RUTH BARCAN MARCUS using Leibniz’s Law of the Identity of Indiscernibles and its tautological converse, the indiscernibility of identicals.

If you exist, you are very nearly identical to yourself a moment ago. But because your information content is a strong function of time, you $(t) \neq$ you $(t + 1)$. This will make the perdurantists happy, but the change in information is a tiny fraction of your total, so endurantists are closer to the truth in the problem of persistence.

Temporal Parts?

The claim that an entity ceases to exist at every instant and then is newly created at the next instant is often described as creating temporal parts analogous to spatial parts.

This analogy is severely flawed by an information analysis. Spatial parts have no essential (or accidental) properties in common. The information content can be arbitrarily different. The information content of successive “temporal parts.” on the other hand, will have a high degree of identical intrinsic information.

There will of course be some properties that change with time and others that persist.

