What is Prior to Time and Space?

by Mark Tracy

The physical notions of time and space—whether understood phenomenologically or theoretically—are ontologically posterior to the co-arising notions of demarcation and abstraction. By saying that one thing A is ontologically prior to another thing B, I mean that A is necessary for B to be intelligibly conceived at all. It is equivalent to say that B is ontologically posterior to A. For example, light is ontologically prior to a shadow.

Demarcation and abstraction are ontologically prior to time and space. To have demarcated something is to have differentiated—without dividing—what is otherwise a unity; demarcation is thus the holding of difference atop unity. Abstraction, on the other hand, is the association of differentiated instances with a common representation; abstraction, then, is the holding of unity atop difference.

One conception of time and space is as orthogonal axes of reality that index events. This conception presupposes the notion of extent (for example, Einsteinian spacetime presupposes a metric structure), which in turn presupposes demarcation insofar as something has extent if it may be demarcated. Carrying on the illustrative example, a metric structure presupposes a topology, with its attendant notions of closure and openness that formalize a notion of demarcation, since the very possibility of "open" subsets with "closed" complements presupposes the intelligibility of complementary distinction within a whole—that is, demarcation of what is held at once to be a unity.

Inherent in the sensibility of demarcation is the sensibility of abstraction. That is, the capability to hold unity at once as differentiated is identical to the capability to hold difference at once as unified. Demarcation and abstraction are therefore co-dependent concepts, each relying on the other for its own intelligibility. They are ontologically co-arising—neither being prior to the other—and may be understood as different orientations of the same primitive. If we dare give it a name, let us call this primitive "unity-in-difference."

The co-dependence of demarcation and abstraction is illustrated by our prior example: inherent in the definition of a topology is the abstractive capacity to associate "elements" into a common higher-order representation called a set; this, in turn, relies upon a notion of demarcation for the sensibility of differentiated "elements" at all.

Having traced this chain of dependency to its co-dependent generative concepts, we conclude that demarcation and abstraction ontologically precede both time and space. For example, the duality of "before" and "after" is not temporally primitive but demarcationally primitive: only with a commitment to difference held atop unity, and unity held atop difference, does a relational ordering of states become intelligible at all. In other words, "time" is ontologically posterior to demarcation in something that is nonetheless held to be one and the same object.

Similarly, the duality of “here” and “there” is not spatially primitive but abstractly primitive: only with a commitment to unity held atop difference, and difference held atop unity, can such relational objects as “here” and “there” be intelligibly conceived. In this view, “space” is ontologically posterior to demarcation and abstraction in the following sense: any distance is necessarily between differentiated relata, relative to a reference frame—that is, an observer, a third differentiated relatum. It is precisely the unity that contains all such relations and relata that we call “space.”

Taken together, these considerations suggest that time and space are not ontological primitives but rather rely for their intelligibility upon a more basic notion of unity and difference held together without collapse to either pole. Demarcation and abstraction—understood as co-arising orientations of this single primitive that we have called unity-in-difference—are necessary for the intelligibility of temporal ordering and spatial relation, just as light is necessary for the intelligibility of shadow. This is not to say that time and space are illusory or dispensable; they remain indispensable constructs within their proper domains. But they are posterior in the sense that they presuppose a prior structure of differentiation-without-division and unification-without-annihilation. To ask what is prior to time and space is thus not to ask what “came before” them, or what is “beyond” or “behind” them, but to ask what must exist in order for questions of time, space, ordering, locating, or relating to arise at all.