ABSTRACT. The paper explicates ‘unique events’ and investigates their epistemology. Explications of ‘unique events’ as individuated, different, and emergent are philosophically uninteresting. Unique events are topics of why-questions that radically underdetermine all their potential explanations. Uniqueness that is relative to a level of scientific development is differentiated from absolute uniqueness. Science eliminates relative uniqueness by discovery of recurrence of events and properties, falsification of assumptions of why-questions, and methodological simplification e.g. by explanatory methodological reduction. Finally, an overview of contemporary philosophical disputes that hinge on issues of uniqueness emphasizes its philosophical significance.

KEY WORDS: Events, Explanation, Unique, Underdetermination.

0. UNIQUE EVENTS: THE UNDERDETERMINATION OF EXPLANATION

Unique events raise five philosophical issues:

1. A philosophical explication of ‘unique events’.
2. The epistemology of unique events.
3. How can unique events be identified as such?
4. Which events are unique?
5. How can we know what can be known about unique events?

Previously philosophers debated whether unique events are in some sense beyond the purview of science. Most philosophers skipped over issues 1–4 to answer 5, offering or rejecting alternative methods to what philosophers considered to be the scientific method, e.g. ideographic methodologies, empathic understanding, colligation, narrative understanding & etc. This essay concentrates on the neglected 1–4 issues, postponing a discussion of 5. First, previous attempts to explicate ‘unique events’ as individuated, different, and emergent events are rejected as philosophically uninteresting: They do not raise issues that are of concern to philosophers such as the nature and limits of knowledge, the constitution of the universe, the content and limits of the scientific method etc. Second,
I explicate ‘unique events’ as explananda that underdetermine all their potential explanations. Then, relative uniqueness is differentiated from absolute uniqueness. Scientists eliminate relative uniqueness by discovering recurrent events and properties, falsifying background assumptions of why-questions, and utilizing simplifying methodologies such as explanatory methodological reduction. Finally, an overview of contemporary philosophical disputes that hinge on issues of uniqueness emphasizes its philosophical significance.

‘Unique events’ entered philosophic discourse at the later part of the nineteenth century following the establishment of psychology as a science. Psychology collapsed the traditional correspondences between scientific methods and the realm of nature, and non-scientific methods and human subject matter. Psychology seemed to share the methods of the natural sciences and yet have a human subject matter. Windelband suggested to reestablish the distinction among the sciences on their value-laden methodologies, on whether they are interested in describing events as unique or as following universal laws, rather than on the domains that constitute their subject matters. The problem that Windelband and his South-Western School of Neo-Kantianism were facing is just as contemporary today: Does science have any limits beyond the limits of our interest in applying the scientific method?

Within the context of analytical philosophy, the Neo-Kantian argument was revived, though the meanings of ‘unique’ evolved. The possible uniqueness of historical events was suggested as a prima-facie challenge to Hempel’s (1965) obsolete covering law model or to the possibility of scientific historiography. Recently, Murphey suggested that scientific knowledge of unique events is impossible or at least problematic.

... there are events that do appear to be unique in the sense that no presently imaginable classification could bring them under a law-like generalization. The Big Bang in which our universe began is a unique event, and certainly it is obvious that none of the Humean criteria [of causation] can be applied to the Big Bang, at least as it is currently understood. Whether there are other such events is not clear, ... (Murphey 1994, 106)

According to the general theory of relativity, when matter in space-time is compressed below a critical radius, the “Schwarzschild radius” \(2GM/C^2\), where M=mass, G=gravitational constant, C=speed of light), it becomes a singularity, a region of infinite space-time curvature, where the general theory of relativity does not hold. The surface of a Schwarzschild radius is an event horizon, defining the border between unobservable unique naked singularity from which neither mass nor radiation can escape, and the non-unique universe described by science. Two astrophysical regions are singularities: Black Holes and the Big Bang.