

Spacetime Substantivalism and Einstein's Cosmological Constant

Baker, David (2004) Spacetime Substantivalism and Einstein's Cosmological Constant. In *[2004] Philosophy of Science Assoc. 19th Biennial Meeting - PSA2004: Contributed Papers (Austin, TX; 2004): PSA 2004 Contributed Papers*.

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Abstract

I offer a novel argument for spacetime substantivalism: we should take the spacetime of general relativity to be a substance because of its active role in gravitational causation. As a clear example of this causal behavior I offer the cosmological constant, a term in the most general form of the Einstein field equations which causes free-floating objects to accelerate apart. This acceleration cannot, I claim, be causally explained except by reference to spacetime itself.

Keywords: cosmological constant
substantivalism
relationism

Subjects: [Specific Sciences: Physics: Cosmology](#)
[Specific Sciences: Physics: Relativity Theory](#)
[Specific Sciences: Physics](#)

Conferences and Volumes: [\[2004\] Philosophy of Science Assoc. 19th Biennial Meeting - PSA2004: Contributed Papers \(Austin, TX; 2004\): PSA 2004 Contributed Papers](#)

ID Code: 1610

Deposited By: [Baker, David](#)

Deposited On: 24 April 2005

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