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**On reduction-based process semantics.** (English) Zbl 0871.68122  
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Summary: A formulation of semantic theories for processes which does not rely on the notion of observables or convergence is studied. The new construction is based solely on a reduction relation and equational reasoning, but can induce meaningful theories for processes, both in weak and strong settings. The resulting theories in many cases coincide with, and sometimes generalise, observation-based formulation of behavioural equivalence. The basic construction of reduction-based theories is studied, taking a simple name passing calculus (called  $\nu$ -calculus) and its extensions as an example. Results concerning the application of our construction to other calculi are also briefly discussed.

**MSC:**

**68Q55** Semantics in the theory of computing

Cited in **1** Review  
Cited in **79** Documents

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