

## Indeterminacy and Logical Atoms

Douglas Colwell Owings, Ph.D.

University of Connecticut, 2011

This dissertation develops a novel many-valued logical semantics and adequate tableaux system. The first chapter focuses on the initial philosophical motivations from arguments concerning strange logical behavior of sense data. Chapter 2 develops the propositional system with remarks on formal features and their interpretation. The modal system in Chapter 3 examines applications to D. M. Armstrong's atomist combinatorialism. Chapter 4 presents a tableaux proof system and its adequacy results. Chapter 5 concludes with a survey of some outstanding issues as well as areas for future research. This includes a discussion of an extended 4-valued system and its application to 'atomless' metaphysical views.

Douglas Colwell Owings – University of Connecticut, 2011