William Stafford

Logic & Philosophy of Science
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Nationality: British

Education

2015-20 (expt.) PhD in Philosophy, University of California, Irvine

Advisors: Sean Walsh and Kai Wehmeier Committee: Toby Meadows

Title: Philosophy and Proof Theory: Four Studies

Abstract: I work with alternative logics and semantics to investigate the foundations of logic and mathematics, the primary technical tools being those of proof-theory, a branch of mathematical logic. The two principle philosophical themes which animate my work are the non-empirical justification of mathematical and logical knowledge, and logical regimentations of the meaning as use hypothesis. My dissertation consists of four chapters. My first chapter investigates what principles are analytic under various notions of proof-theoretic validity. My second chapter looks at whether the potential infinite can answer an importaint objection to Neo-Fregeanism: that it makes the existence of an actual infinity of objects analytic. My third chapter documents the difficulties with using Property Theory with Currying Types, as proposed by Fox and Lappin (2008), to explicate meaning as use. A fourth chapter, containing joint work with Andy Arana, argues that the genus of a proof's graph is not a successful measure of how complex a proof is to discover.

2013-15 MPhil in Philosophy, University of Warwick

Thesis: *Logicism and Internal Categoricity*

Advisor: Walter Dean Examiners: Guy Longworth, Sean Walsh

Topics: Mathematical Logic (Dean), Philosophy of Language (Longworth), Kant (Cassam)

2009-13 BA (Hons) in Philosophy, University of Stirling (First class)

Grants, honors & awards

Spring 2019 *Associate Dean Fellowship*

Winter 2018 *Associate Dean Fellowship*

2015-21 *School of Social Sciences Merit Fellowship*

2013-15 *Arts and Humanities Research Council Research preparation masters studentship*

2013 *Murray MacBeath Prize-* Awarded for achieving the best First Class Honours performance in Philosophy

Works in Progress

Frege's Theorem and the Potential Infinite (under review)

An Analysis of Property Theory with Currying Types as an Intensional Semantics (under review)

Proof-Theoretic Semantics and Inquisitive Logic (in preparation)

Genus as a Measure of Complexity of Proof with Andy Arana (in preparation)

Talks

Apr 2020 APA Pacific Division: San Francisco, *Frege's Theorem and the Potential Infinite*

Mar 2019 Third Tübingen Conference on Proof-Theoretic Semantics: Tübingen, *An Inquisitive Proof-Theoretic Semantics*

July 2018 Association of Symbolic Logic European Summer Meeting (Logic Colloquium): Udine, *An Analysis of Property Theory with Currying Types as an Intensional Semantics*

Aug 2017 Association of Symbolic Logic European Summer Meeting (Logic Colloquium): Stockholm, *Genus as a Measure of Complexity of Proof*

July 2016 Association of Symbolic Logic European Summer Meeting (Logic Colloquium): Leeds, *The Modal Analogue of Frege's Theorem*

Teaching

Lead Instructor, UCI: Critical Reasoning, Making of Modern Science (Fall 2019)

Teaching Assistant, UCI: Metalogic, Making of Modern Science, Naturalised Epistemology, Introduction to Symbolic Logic, Introduction to Linguistics (within Language Sciences), Introduction to Psychology (within Psychology)

Teaching Assistant, Warwick: Introduction to Logic

Professional Service

2018-19 Graduate Representative for the Department of Logic and Philosophy of Science, UCI

Public Outreach

2014-15 Philosophy in Schools, The Philosophy Foundation - guided discussions with primary school children on philosophical topics

2019 Ask a Philosopher - booths in public places where anyone can discuss philosophical questions

Graduate courses taken

Logic:	Proof Theory: S. Walsh
	Martin-Löf Type Theory: S. Walsh
	Intensional Logic: S. Walsh
	Formal Theories of Truth: S. Walsh
	Logic Seminar 2016-9: J. Heis, R. Mendelsohn, S. Walsh, K. Wehmeier, T. Meadows
	Logic III: Incompleteness: W. Dean
	Logic II: Metalogic: W. Dean
Mathematics:	Mathematical Logic A,B,C: M. Zeman and N. Trang
	Set Theory A, B: M. Zeman
Philosophy of Maths:	Philosophy of Set Theory: P. Maddy
	Philosophy of Mathematics: P. Maddy
	Probability and Randomness: J. Barrett, S. Huttegger, S. Walsh
History:	History of Analytic Philosophy: J. Heis
	Vision Theory: P. Maddy
	Kant: J. Heis
	Wittgenstein: P. Maddy
	Descartes' Meditations: G. Longworth, M. Soteriou
Philosophy of Science:	Probability and Determinism: J. Manchek
	Game Theory: S. Huttegger, J. Barrett
	Signalling Games: B. Skyrms
Other:	Topics in the Philosophy of Mind *&* Language: N. Eilan J. Roessler
	Self-knowledge: Q. Cassam

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