

Mark Thomas Young

Mark Thomas Young
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AOS	Early Modern Science and Technology, History of Scientific Instruments, Phenomenology, Craft History, Philosophy of Engineering
AOC	Philosophy of Science, Philosophy of Technology, History of Science, History of Technology, History of Philosophy
EDUCATION	<p>University of Bergen PHD in Philosophy <i>In progress</i> Focus: History and Philosophy of Technology</p> <p>University of Bergen MA in Philosophy <i>June 2011</i> Thesis: <i>Heidegger & Aristotle: The Unification of Metaphysics</i> θ</p> <p>University of Otago BA in Religious Studies <i>December 2011</i> Focus: East Asian Religions</p> <p>University of Bergen BA in Philosophy <i>June 2009</i></p>
AWARDS AND GRANTS	<p>Charles Schmitt Prize 2017 (International Society for Intellectual History) awarded for the article “Enchanting Automata: Wilkins and the Wonder of Workmanship”</p> <p>Meltzer Research Fund 2016 Grant awarded for research stay</p> <p>Meltzer Research Fund 2015 Grant awarded for conference and travel</p>

PUBLICATIONS

- “Heuristics and Human Judgment: What we can learn about Science from the Study of Engineering Design”, *Topoi* (forthcoming)
- “Nature as Spectacle: Experience and Empiricism in Early Modern Science”
Centaurus, (forthcoming)
- “Intuition and Ineffability: Tacit Knowledge and Engineering Design”
forthcoming in Fritzsche and Oks (eds) *The Future of Engineering: Philosophical Foundations, Ethical Problems and Application Cases* (Springer, 2017)
- “Enchanting Automata: Wilkins and the Wonder of Workmanship”
Intellectual History Review, 27(4), 2017
- “Manual Labour and ‘Mean Mechanics’: Bacon’s Mechanical History and the Deprecation of Craft Skills in Early Modern Science”
Perspectives on Science, 25(4), 2017
- “Technology and Technique: The Role of Skill in the Practice of Scientific Observation”
Perspectives on Science, 24(4), 2016
- “Relevance and Relationalism”
Metaphysica:12, 2011

WORK IN PROGRESS

- “Artifacts as Rules: Wittgenstein and the Sociology of Technology”
invited contribution for a forthcoming special issue of *Techne*
- “Experimentalist as Spectator: The Phenomenology of Early Modern Empiricism”
invited contribution for a forthcoming collected volume *The Past, Present and Future of Integrated History and Philosophy of Science* (Routledge)
- “Beyond Making and Using: The Geiger Counter and Early Cosmic Ray Research”
- “Maintenance: Technology in Process”
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SELECTED PRESENTATIONS

“Making or Using? The Geiger Counter and Early Cosmic Ray Research”
Nordic Network for Philosophy of Science
University of Copenhagen (20/4/17)

“Artefacts as Rules: Wittgenstein and the Sociology of Technology”
Wittgenstein and the Philosophy of Technology Workshop
University of Vienna (13/3/17)

“Experimentalist as Spectator: The Phenomenology of Early Modern
Empiricism”
Past, Present and Future of Integrated Philosophy of Science Conference
University of Leeds, U.K (13/01/17)

“Nature as Spectacle: Experience and Empiricism in Early Modern Science”
Bucharest Colloquium in Early Modern Science
University of Bucharest (26/10/16)

“Production or Emergence? The Phenomenology of Technical Artifact
Functions”
Society for the Study of New and Emerging Technologies (Snet 2016)
University of Bergen (14/10/16)

“Transcending the Distinction between Making and Using: The
Phenomenology of Technical Artifact Functions”
Society for Philosophy of Science in Practice (SPSP 2016)
Rowan University, N.J, U.S.A (18/6/16)

“Skills and Ineffability: Tacit Knowledge from an Engineering Perspective”
Forum for Philosophy and Engineerin (fPet 2016)
Nuremburg, Germany (20/5/16)

“Manual Labour and Mean Mechanics: Bacon and the Deprecation of Craft
Skills in Early Modern Science”
Conference: Thinking Through the Ages
University of Bergen (15/10/15)

“Tacit Skill: Temporal Emergence and Knowledge ‘on the fly’”
Post-Normal Science Workshop
Hamburg (10/9/15)

“The Genealogy of Scientific Morality”
Post-Normal Science Workshop
Hamburg (31/10/14)

“Understanding Alchemy” (Presentation)
Borealis Music Festival
Bergen (12/3/14)

TEACHING

Seminar Leader

Ex Phil (Introductory Course in the Philosophy of Science)

Conducted in Norwegian

Aug – Dec 2013

Aug – Dec 2016

Jan – Jun 2017

Jan – Jun 2018

Guest Lecturer

“Sociology of Science and Feminist Epistemology”

PHIL 220 (Philosophy of Science)

Conducted in English

October 3, 2016

PHD DISSERTATION

Technology and Practice in Early English Experimentalism

This dissertation aims to explore the role of technology in the emergence of experimental culture in seventeenth century England. Whereas scholarship in HPS has traditionally emphasized the more scientific aspects of the epistemology of early experimentalism, this project attends directly to technology; understood here not only in terms of mechanical devices but also forms of practice and practical knowledge. By focusing on the way in which the goals promoted by experimental societies, such as the Royal Society of London, were often concerned primarily with technology and innovation, my project aims to elucidate aspects of the relationship between science and technology in early modern England that have been overlooked by traditional forms of scholarship.

A central focus of this study is the relationship between craft practices and the development of an experimental scientific methodology; a theme which has long formed a dominant concern in the historiography of the scientific revolution. Beginning with the work of Edgar Zilsel in the early twentieth century, it has been common to claim that artisanal culture influenced the development of experimentalism by providing a template for empirical methods and values. Yet despite the enduring popularity of the idea that various aspects of the methodology of modern science find their origin in craft traditions, this study seeks to outline the limitations of this notion by exploring the intersections between epistemology and social history. For taking technology, rather than science, as the central focus of this study underscores the extent to which epistemic and social concerns underlying the new experimental philosophy were often deeply intertwined.

In the western tradition, philosophical discourse surrounding technology has long been informed by social issues. Even as far back as classical antiquity, the low social status that was ascribed to artisans was reflected in the accounts of technology proposed by Plato and Aristotle, both of which emphasized the moral and epistemological inferiority of technical practices. Accounts of technology in classical society also reflect anxieties stemming from the recognition that the knowledge and skill of the craftsman possessed an autonomy that prevented its control by the ruling elite. The fact that craft knowledge resisted codification and was acquired exclusively through extended periods of practice meant that members of the lowest social classes were commonly understood to possess exclusive forms of expertise that could not be submitted to external assessment or verification. For this reason, the skills of the craftsman were often considered both as threatening established forms of social order and subverting traditional notions of knowledge and rationality.

This project aims to detail how conceptions of technology in early modern England can be understood as continuous with those of classical antiquity in various ways. For not only did craftwork continue to be regarded as socially and epistemologically inferior to competing forms of natural inquiry, but the anxieties which

had surrounded the moral status of craft knowledge and the forms of knowledge upon which it depended in classical antiquity also continued to persist. These social tensions surrounding technology created a host of problems for experimental philosophers of the seventeenth century, who practised and promoted forms of technological practice, such as experimentation, which had previously been considered the exclusive purview of the artisan. Eager to preserve differences in social status between the gentleman and the artisan, experimental philosophers drew upon existing cultural resources, in particular classical philosophical ideas, to argue for the intellectual and moral superiority of their practices over that of the artisan.

The overall goal of this project is to demonstrate how social tensions surrounding technological practice can be understood to have influenced the way in which experimentalism was both practised and conceived by early modern natural philosophers. Together, the various papers in this project identify a number of historiographical and philosophical misunderstandings concerning the relation between science and technology in the early modern period that I argue can be traced back to an underlying tendency to understand experimentalism in isolation of the social contexts from which it emerged.
