The problem of disenchantment: scientific naturalism and esoteric discourse, 1900-1939
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Citation for published version (APA):

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Introduction:
The Limits of Reason

Nature is false; but I’m a bit of a liar myself.

Aleister Crowley, The Book of Lies, ch. 79.

This is a book about people who have walked the outer limits of reason. Some of them were eminent natural scientists, some were philosophers, while others were steeped in the currents of occultism. They all shared an opposition to certain epistemological presuppositions that had been dominant since the Age of the Enlightenment. They revisited fundamental questions concerning the possibility of metaphysics, freedom of will, and the explicability of the natural world. They redrew the relations between facts and values, mechanism and purpose, and science and religion. The solutions our protagonists came up with often appear heterodox when judged against the received view of Enlightenment thought. Yet, their ostensibly deviant responses were all formulated in the middle of one of the most extraordinary periods of scientific development in recorded human history. Indeed, some of our protagonists contributed directly to that very development.

The core argument of this book concerns the famous thesis attributed to Max Weber that a process of intellectualisation and rationalisation has led to the disenchantment of the world. A close reading of the passages that Weber’s interpreters have used to extract a thesis on the “process of disenchantment” show that disenchantment (Entzauberung) concerned much more than simply the disappearance of “magic” and “sorcery” (Zauber). For Weber, the disenchantment of the world meant above all that people's epistemic attitudes towards the world had changed: they did not anymore expect to encounter genuinely capricious forces in nature, thinking instead that everything could in principle be explained. But the explicability of the natural world came at a price, according to Weber, for it also meant that there could be no natural, factual, this-worldly foundation for answering questions of meaning, value, or how to live one’s life. The disenchanted mentality was optimistic about acquiring knowledge of nature, but pessimistic about knowledge of values and metaphysics. Moreover, religion now had to rely on the strictest transcendence in order to be valid: any numinous,
divine presence in the world had to go, together with the spirits and occult powers of the sorcerers. Those who still wanted religion had to undergo an intellectual sacrifice, admitting that they could never justify their beliefs and practices with appeal to reason, evidence, or fact. These were the consequences of the disenchantment process: the natural world could be explained perfectly, but nothing could be known for certain about those questions that concerned “worldviews”. Anyone who claimed to know, appealing to reason and evidence in places where they do not to apply, were either charlatans or victims of self-deceit.¹

The people we are about to meet did not share these views. We find scientists who did not believe that the natural world could be fully explained, and others who found the basis for theological arguments in new scientific discoveries. We find people straddling the boundaries of the occult and the scientific, stubbornly bent on creating new methods for the empirical study of the “supernatural”. Some of these would-be “charlatans” walked in the shadows of the modern academy, publishing their work in obscure occultist journals and carrying out their “research” in occult lodges and societies – no doubt confirming Weber’s intuitions. But among the dissidents we also count university professors and Nobel laureates, in fields as diverse as physics, chemistry, physiology, and literature. The modern academy and especially the natural sciences were supposed to have been the very engine of the disenchantment process, so what happened?

My starting point is that the disenchantment thesis grasps something important about modern Western intellectual history, but that it has been poorly theorised and much overstated. A blind spot has been created by the disenchantment thesis, covering a vast and significant set of tendencies that do not fit the narrative that the process implies. The main problem is that the thesis does not sufficiently acknowledge or account for the plurality of epistemological positions available within post-Enlightenment intellectual culture. An understanding of the complexity of the modern academy and its role in modern societies has been sacrificed for a view that prioritises certain intellectual identities. The “disenchantment process” gives priority to a specific set of cultural impulses, above all Protestant theology and Kantian philosophy. Both

have no doubt been extremely important in forming the mental life of high modernity, but they should not be assumed to have been uniformly victorious.

In this book I propose to abandon the notion of disenchantment as a socio-historical process, and instead reconceptualise it as a specific intellectual and cultural problem faced by historical actors. This move may in fact make “disenchantment” more consistent with Weber’s broader methodological project: it prioritises the agency of individuals above the machinations of nebulous structural processes (i.e., “methodological individualism”), and it implies an approach to history along the lines of Problemgeschichte. The historian does not merely describe “the facts”, or even generalise from such facts, in order to find out “wie es eigentlich gewesen”; instead, he selects, builds, and orders history in terms of specific “problems” that are constructed by the scholar. Following this approach, disenchantment is not a “fact”, or a historical process that can be generalised from “facts”, but a “problem” in terms of which we can approach the intellectual production of historical actors. The problem is, moreover, not an “emic” concept encountered as such in historical sources, but a construct invented by the historian for the sake of problematising the sources.

Reconsidering the disenchantment thesis has consequences for a number of fields, which means that the scope of this work must be interdisciplinary. It aims to make a general contribution to the ambitious “history of knowledge” that has been conceptualised in recent years by Peter Burke, but also to each of the three particular specialisations that the book engages with: the history of science, the history of religion, the history of knowledge.

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3 Oexle, ‘Max Weber – Geschichte als Problemgeschichte’, 15

4 See especially Peter Burke, A Social History of Knowledge; idem, ‘A Social History of Knowledge Revisited’; idem, A Social History of Knowledge II. The roots of such a history are found precisely among the German social analysts of the early 20th century, including Weber, Karl Mannheim, and Georg Simmel. I will also draw on more recent improvements on constructionist approaches to the production of knowledge, especially in the form of the “historical epistemology” developed in recent decades at the Max Planck Institute for the History of Science in Berlin, and the related approach of Ian Hacking. For key references, see Lorraine Daston and Peter Galison, Objectivity; Daston (ed.), Biographies of Scientific Objects; Mary Poovey, A History of the Modern Fact; Hacking, Historical Ontology.
The material that the book focuses on may be conceptualised as a set of responses to the problem of disenchantment arising in an epistemological field stretched out between the contexts of scientific naturalism and Western esotericism at the end of the 19th century. Scientific naturalism was a dominant epistemological current at the turn of the century, but it was also a flexible one: self-identifying “naturalists” would define the domain of “nature” in conflicting ways, thus allowing a broad space of possibilities for how to answer the problem of disenchantment. In practice this means that scientists, occultists, and religious spokespersons were able to share a flexible epistemological foundation that allowed them to speculate on questions such as the possibilities and limitations of science and the relation between science and religion in roughly comparable terms. As I will show throughout the chapters of this book, an “open-ended” understanding of scientific naturalism became the framework for establishing new natural theologies, research programmes focused on “naturalising the supernatural”, and attempts by occultists to recreate their practices in line with “legitimate” science.

**A PLAN OF THE BOOK**

The book is divided into four parts, arranged thematically in order to cover the contexts of “(mainstream) science”, “parapsychology”, and “esotericism”. The first part, however, lays out my argument concerning the disenchantment thesis in some detail. The field of speculation that is opened up in between science and esoteric discourse is represented by the three separate parts that follow: part two concerns developments and debates about interpretations in the natural sciences; part three discusses the development of the discipline of parapsychology, understood as a genuine border area between the “esoteric” and the “scientific”. The final part concerns “esoteric epistemologies”. By employing an analytical focus on responses to the problem of disenchantment, patterns emerge and links are drawn between these three contexts, providing a complex picture of overlapping modern knowledge cultures.

The first two chapters spell out my argument for reconceptualising disenchantment by moving from process to problem. The first chapter revisits Weber’s

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5 This field has previously been discussed in works such as Frank Miller Turner, *Between Science and Religion*; Janet Oppenheim, *The Other World*; Alex Owen, *The Place of Enchantment*. 
original thesis and present my problem-oriented alternative, while the second focuses on its implications for how we conceptualise the relation between “science” and “worldviews”. I also take the opportunity to discuss (and dismiss) the “re-enchantment paradigm” – a heavily politicised historical approach to questions about science and disenchantment that developed during the last decades of the Cold War, often with explicit links to “New Age science” and “counterculture” movements as well as broadly “postmodern“ academic trends. Together, the two chapters of part one present the major theoretical and methodological implications of my approach to the disenchantment thesis.

Part two concerns itself with the problem of disenchantment in the special sciences during the first four decades of the 20th century. Chapter three gives a short introduction to the questions at hand. Chapter four discusses the revolutionary developments in the physical sciences (physics and chemistry), particularly looking at the relation between the interpretation of revolutionary science, and the broader cultural context in which these have been formulated. It revisits the (in)famous “Forman thesis” on the cultural contingency of the development of quantum mechanics between the world wars, arguing in favour of a revised version. Chapter five moves on to the sciences of biology and psychology, focusing on fundamental debates concerning the definition of “life”, the relation between the parts and wholes of organisms, the place of the mind in nature, and questions concerning mechanism versus teleology in accounting for the evolution of species and the psychology of individual human beings. Emphasis is placed on the vitalism controversy in biology and the behaviourism controversy in psychology – both, it is suggested, related by an engagement with the problem of disenchantment. These discussions culminate in chapter six, where I turn attention to the creation of five distinct “new natural theologies”, developed and expounded by academics, scientists, and other intellectuals of the early 20th century. These theologies, basing themselves variously on research into radioactivity, quantum mechanics, the fringes of psychology, ether physics, and the philosophy of biological evolution, are all examples of responses to the problem of disenchantment that do not fit the process-oriented thesis. Some of these natural-theological schools have had an

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6 The primary examples of this approach are Morris Berman, *The Reenchantment of the World*; David Ray Griffin (ed.), *The Reenchantment of Science*.

7 E.g. Forman, ‘Weimar culture, causality, and quantum theory’.
important impact on modern Western religious thought, taking it, I suggest, in
directions that break with religious orthodoxy and have instead fuelled various post-
war forms of deinstitutionalised, “alternative” religion/spirituality.

Part three leaves the commonly recognised and institutionalised sciences and
focuses on the struggles to create a new scientific discipline around the study of
“supernormal phenomena”. The development from “psychical research” to “modern
parapsychology” is explored in three chapters with different thematic and chronological
focus. Chapter seven discusses the epistemological context of psychical research in light
of the “agnosticism controversy” in Britain in the 1890s, and the wider discussion about
the reach of scientific naturalism. I will show that psychical research, and later also the
discipline of parapsychology, has based itself on an “anti-agnostic” discourse, which
challenges the limitations put on the scope of science and rationality by certain
spokespersons of Victorian naturalism. I suggest that the agnosticism controversy was
itself a struggle with the problem of disenchantment, based as it was on a reflection on
the limitations of knowledge and certainty. The psychical researchers who attacked
agnosticism, however, wanted to open up scientific naturalism, and hence remain
within the purview of what I term an “open-ended naturalism”. Chapter eight changes
focus to look at the specific research programmes that were formulated in psychical
research communities during the first three decades of the 20th century. This is largely a
history of failure: researchers could not agree between themselves on experimental
protocols, fundamental hypotheses, or even whether or not one should seek acceptance
from the scientific establishment in the first place. A number of “paradigms” for
research were proposed, but none of them won general acceptance, and none of them
managed to produce results that were convincing to outsiders. Thus, chapter nine sets
out to explain the sudden and surprising success in professionalising parapsychology in
the 1930s. I argue that the event can only be explained by reinforcing the largely
“internalist” analysis provided in chapter eight with an “externalist” analysis focusing
on the broader cultural, political, and social circumstances in which parapsychology was
formed, networked and institutionalised in interwar America. This is another highlight
of the book’s argument: parapsychology, it seems, was able to create a space for itself
within American academia in part by mobilising the most dominant counter-
disenchantment discourses that existed in the sciences at the moment, especially the
vitalism and organicism debate in the philosophy of biology, and the opposition to the rising tide of behaviourism in American psychology.

The final part of this book delves into the obscure esoteric context of modern occultism. In chapter ten I discuss the current state of research in the still adolescent field of Western esotericism, focusing on the theorisation of “esoteric epistemologies”. Esoteric discourse typically focuses on the possibilities of achieving extraordinary forms of knowledge, considered as part of a path to “salvation”. In modern times, esoteric spokespersons are often found trading on the authority of the natural sciences. By presenting their knowledge practices as participating in both religious and scientific fields of discourse, modern esotericism provides an important context for discussing the problem of disenchantment. In these final three chapters I explore esoteric responses to disenchantment with the aim of demonstrating the necessity of taking up a problem-focused approach in order to grasp the complexity of modern esoteric knowledge practices. In chapter eleven I introduce the case of the Theosophical Society’s rather unsuccessful struggle to harmonise an essentially static view of perennial, higher knowledge, with rapidly changing conceptual structures in the sciences. Special attention is given to the Theosophical programme of “occult chemistry”, which was an attempt to clairvoyantly describe the atomic and subatomic world, and by this making a valuable methodological contribution to scientific chemistry. Instead of securing scientific legitimacy, however, the conflict between claims to perennial knowledge and the always uncertain and revisable knowledge produced in scientific practice only became too evident when Theosophists spoke with a self-asserted infallibility about the latter.

In the final chapter I present a comparative approach to esoteric “higher knowledge” by juxtaposing the systems of two highly influential early-20th century occultists: Rudolf Steiner and Aleister Crowley. This final comparison gives an opportunity to highlight the diversity of responses to the problem of disenchantment, and not least, the diversity of intellectual contexts that have been co-opted by esoteric spokespersons. This brings the underlying argument of the book to focus: views about the limits of reason, science, and knowledge in Western intellectual culture since the Enlightenment have been much more diverse, full of internal contrasts and conflicts, than is commonly recognised by narratives of a progressive, irreversible “disenchantment of the world”. Reconceptualising disenchantment as an analytical tool
for a history of problems gives attention to the conflicting ways in which individual spokespersons have attempted to solve fundamental questions. It uncovers contested fields of knowledge where competing voices square off for authority to define what counts as "knowledge". As a result we can explore surprising links between discourses on science, religion, and esotericism, suggesting that modern Western knowledge cultures have been much more complex and pluralistic than has typically been assumed.