‘More than a figment of scientific fancy’: Dreams and Visions in Victorian Psychology and Fantastic Literature, 1858-1900

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This thesis is dedicated to the memory of
Lieselotte Kohlt (1926-2017)
and
Rebecca Henderson (1994-2019),
the two most marvellous women I was ever likely to meet.

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Abstract: **'More than a figment of scientific fancy': Dreams and Visions in Victorian Psychology and Fantastic Literature, 1858-1900**

This thesis investigates the emergence of the Victorian fantastic dream vision and the discipline of psychology as sister phenomena. It explores the interconnections of the two fields through the work of author-scientists George MacDonald, Lewis Carroll, and Charles Kingsley and their literary portrayal of visions experienced in dream, illness and near death.

Through substantial archival research, this thesis reconstructs these authors' scientific biographies, particularly MacDonald's study of science at Aberdeen, Carroll's autodidactic study of physio-psychology, documented by his letters, diaries and library, and Kingsley's knowledge of evolutionary psychology and sociology.

There has been little historicist study of Victorian fantasy within its immediate scientific environment, and no extensive exploration of the fantastic in literature and science studies. Responding both to this absence, and to the claim of fantasy's escapism, especially from 'scientific possibility', this thesis establishes fantastic literature as a primary medium for the epistemological discussion of the nature of consciousness. Situated within the contested realm of the psyche it held a striking position as synthesising agent and problem solver, contributing to the development and establishing of psychological ideas, from the subconscious and to dream phases.

The thesis falls into three sections, examining respectively dream-narratives, morbid visions and death-visions. The first section examines dreams, introspective visions concerned with the individual, and the early works of MacDonald and Carroll in context of their nascent interest in early Victorian psychological theory. Its constituent chapters explore how *Phantastes* enacts the psychologically and intellectually curative function of the dream imagination, and how *Alice* adapts and mocks the dream-narrative to expose poor, and define ideal psychological development, through psychiatric imagery and performance science.

The second section scrutinises morbid visions, phenomenological visions concerned with intellectual discourse, and the little-understood *fin-de-siècle* works of Carroll and MacDonald through their readings of evolutionary psychology and degeneration theory. Its chapters examine Carroll's *Sylvie and Bruno* novels and their treatment of the possibility of free will and moral actions in the dynamic system of unconscious moral influences, and MacDonald's *Lilith*'s attempt to create a universal philosophy of mind through aligning paradigms of evolutionary psychology, geology, divine creation and an optical adaptation of the fourth dimension in response to *fin-de-siècle* epistemological anxieties, spiritualism and transcendentalism.

The third section explores death visions, with their external focus, concerned with society and the future of mankind, which, most akin to the utopian tradition, exercised the greatest formal influence on early science fiction narratives. It studies Kingsley's *The Water-Babies* and its radical scientific and sociological redefinitions of the soul and salvation in the context of the unnoted psychological thought of his natural history, theological and literary writings, and their commonalities with environmental socio-psychology.

The conclusion summarises the reflective, discursive and projective ways in which the fantastic participated in the scientific psychological discourse, and how through its respective introspective, phenomenological or societal foci, it catered to different traditions beyond the bifurcation of fantasy and science fiction, the common origin of which can offer a fresh perspective upon their functions, meanings and potential beyond the literary.

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This thesis will be submitted in the memory of my wonderful friends Gerald Whittle (1987-2014) and Becca Henderson (1994-2019), and my grandmother Lieselotte Kohlt (1926-2017) whose loss will never be less painfully felt.

Notes on Conventions

Formatting, References and Quotations

Emphasis in original unless indicated otherwise. Italicisation and capitalisation of foreign language terms (*Bildungsroman*, katabasis etc.) follows the *Oxford Style Guide*. Primary works with parenthetic references to pages after a full reference is given at the start of the chapter. List of abbreviations indicates shortened references to commo main titles and archives. This thesis relies on in parts on unpublished archival sources. If unpublished, inaccessible and central to the overall argument, these sources will be reproduced in the appendix.

Spelling and Punctuation

Victorian spelling conventions and variations (e.g.'Shakespere'/ 'Shakespeare') are maintained in titles and quotations, while punctuation (such as spaces before and after a comma, semicola, etc.) is adjusted. Concerning the hyphenation of such terms as 'free will' and 'fairy-tale', which differ from author to author – MacDonald uses an unhyphenated compound, Lewis Carroll an unhyphenated two words – and even within the same text or collection, the main text body adheres, for consistency, to the conventions of the OED and Oxford Style Guide, while quotation use may differ. MacDonald and Wells use the Victorian, and now American, spelling of 'polarization', which will be maintained only in quotations, whereas the text will use the now more common British spelling of 'polarisation', also used by Buckley, Spottiswoode and others. Variations in the quotations are, therefore, intentional.

Preferred Editions and Translations

Quotations from the Bible always refer to the King James Version, unless otherwise indicated, as all main authors treated in this thesis used this translation as their primary source. Translations from ancient Greek follow Scott and Liddell's *Lexicon*, although Carroll also owned other dictionaries. All other translations (from German, French, Latin and Hebrew) are my own, unless otherwise indicated.

List of Abbreviations

Alice's Adventures in Wonderland	*Wonderland*	*AAIW*
Through the Looking Glass	*Looking-Glass*	*TTLG*
Alice's Adventures Under Ground	*Under Ground*	*AAUG*
Sylvie and Bruno	*Sylvie and Bruno*	*SB*
Sylvie and Bruno Concluded	*Concluded*	*SBC*
At the Back of the North-Wind	*North-Wind*	*NW*
The Water-Babies	*Water-Babies*	*WB*
Madam How and Lady Why	*Madam How*	*MHLW*

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Lord Bacon tells us that a prudent question is the half of knowledge. Whence comes this prudent question? we repeat. And we answer, From the imagination.
It is the imagination that suggests in what direction to make the new inquiry—which, should it cast no immediate light on the answer sought, can yet hardly fail to be a step towards final discovery. Every experiment has its origin in hypothesis; without the scaffolding of hypothesis, the house of science could never arise. And the construction of any hypothesis whatever is the work of the imagination.
The man who cannot invent will never discover. The imagination often gets a glimpse of the law itself long before it is or can be ascertained to be a law.[1]

[1] George MacDonald, 'The Imagination, its Function and Culture', *A Dish of Orts, Chiefly Papers on the Imagination, and on Shakspere* (London: Sampson Low, 1895 [1867]), p.15.

0. ‘More than a figment of scientific fancy’: Introduction[1]

Rouse ye! Torpid daylight dreamers, cast your carking cares away
As calm air to troubled water, so my night is to your day;
All the dreary day you labour, groping after common sense,
And your eyes ye will not open on the night’s magnificence.
Ye would scow were I to tell you how a guiding radiance gleams
On the outer world of action from my inner world of dreams.
James Clerk Maxwell, ‘Recollections of Dreamland’[2]

‘Entering dreamland’[3]

The dream led a double-life in Victorian literature. It acted, on the one hand, as a mirror to contemporary convictions and theories about dreaming, as it did in Wilkie Collins’s sensation novel *Armadale* (1864-6), in which the fateful dream of the protagonist Allan is a deceptive focal point of the novel. While it predicts the course of the narrative with uncanny precision, the dream is also ambiguous. As much as its supernatural prophecy is relied upon by one, it is mistrusted by another, which accurately captures the dream’s uncertain status in the Victorian intellectual discourse. Collins draws out different theoretical approaches to dreaming in the scene in which Armadale’s vision is written down to be examined and interpreted in order to determine its true meaning and significance. Firstly, Allan’s mysterious *Doppelgänger,* Ozias Midwinter, a melancholy man of manic constitution and inclined towards the supernatural, expresses the belief that the dream was a ‘warning, supernaturally addressed to Mr Armadale’, because it appeared to confirm his own concerns about Armadale’s future.[4] Next, a doctor, Hawbury, dismisses this concept, stating that medical men like himself

> don’t believe that a *reasonable* man is justified in attaching a supernatural interpretation to any phenomenon which comes within the range of his senses, until

[1] John Tyndall, ‘The Scientific Use of the Imagination’, in *Scientific Use of the Imagination and Other Essays* (London: Longman, 1872), pp.9-10.
[2] James Clerk Maxwell, *The Scientific Letters and Papers of James Clerk Maxwell*, ed. by P.M. Harman, 3 vols (Cambridge: Cambridge University Press, 2009), I, p.443.
[3] James Sully, ‘The Dream as Revelation’, *Fortnightly Review*, New Series, 59 (1893), p.355.
[4] Wilkie Collins, *Armadale* (London: Penguin, 1995), p.143.

> he has certainly ascertained that there is no such thing as a natural explanation of it to be found in the first instance.[5]

Thus, Hawbury establishes an apparent fundamental opposition of the supernatural to reason, and offers what he considers a 'very complete and striking confirmation of the rational theory of dreams'. The prophecy, he asserts, was nothing but an accumulation of ultimately meaningless 'waking impression[s]', 'reproduced in the dream'.[6] And, lastly, the dreamer's own theory, that the dream was caused by 'indigestion' – a popular contemporary approach – is dismissed by both the doctor and Midwinter.[7]

The interpretation of Armadale's dream provides a snapshot of the actors and their various approaches within the field of dream study in mid-Victorian Britain and highlights the questions of authority within it. The perspectives of supernaturalist science-sceptics like Midwinter, dismissive of the views of 'medical men', as they do not range beyond 'the point of [their] dissection knife', and of materialist rationalists dismissing the 'habitual believer in dreams', regarding the human body as merely a complex machine, like Hawbury, seem irreconcilable.[8] But Collins complicates this neatly segregated picture, and with it the opposition of reason and supernatural. The doctor is not, in fact, motivated by the scientific search for truth and fact, but his arrogant and superficial dislike of Midwinter supersedes his professional scientific rigour: he interprets the dream to spite his perceived opponent. Midwinter's opinion of the dream is, in turn, revealed to the reader as based in facts, but is also undermined by his later-revealed insanity. The attempt at the dream's interpretation disintegrates into a cacophony when all present amateur dream-scientists join in, yielding no consensus other than the apt summary 'Many men, many opinions'.[9]

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[5] Collins, *Armadale*, p.143.
[6] Collins, *Armadale*, pp.148-9.
[7] Collins, *Armadale*, p.140.
[8] Collins, *Armadale*, p.143.
[9] Collins, *Armadale*, p.143.

Mid-Victorian dream discourse appears not as a productive, multifaceted dialogue, but as unproductive chaos in which truth is lost, preserving the mysterious nature of the dream. While Collins's use of the dream in his novel however also opens up a discursive space in which strands of its debate are disentangled, and examined individually, the reader is ultimately left to draw their own conclusions; with the literary dream acting as a *Doppelgänger* of its real-life equivalent, its epistemological slipperiness *is* its narrative function serving to scatter meaning.

Armadale stands in subtle contrast to the perhaps most famous dream vision of Victorian literature devised by his friend and editor, Charles Dickens, two decades earlier in *A Christmas Carol* (1843). The thematical scope is, at the first glance, similar – reflecting the same contemporary theories: its protagonist Ebenezer Scrooge responds to the spectre of his late business partner Jacob Marley, like Armadale believing it to be the result of a 'disorder of the stomach' affecting his senses. He dismisses the revenant as 'an undigested bit of beef, a blot of mustard, a crumb of cheese', more 'gravy' than 'grave'.[10] Further, as Catherine Bernard and Shane McCorristine argue, Dickens's fiction is a mirror of science as it reveals 'a considerable knowledge of contemporary dream theory'; and 'an awareness of the contemporary spectral illusions theory of hallucinations' which roots visions physiologically in the mind of the dreamer.[11] Dickens's scientific ideas, Bernard believed, developed ideas he encountered in his scientific reading. Thus, Dickens wrote in his periodical *Household Words*, '[I]t is to be remembered that during sleep the mind may not be fully under eclipse; for although some of its faculties […] may be suspended – others,

[10] Charles Dickens, *A Christmas Carol*, in *The Christmas Books* (London: Penguin, 1994), p.18.
[11] Catherine A. Bernard, 'Dickens and Victorian Dream Theory', in *Victorian Science and Victorian Values: Literary Perspectives*, ed. by James Paradis and Thomas Postlewait (New York: New York Academy of the Sciences, 1981), p.197; Shane McCorristine, *Spectres of the Self: Thinking about Ghosts and Ghost-Seeing in England, 1750-1920* (Cambridge: Cambridge University Press, 2010), p.62.

for example, Memory and Imagination are often more active than in the waking state'.[12] Visions were believed to act as projections of emotions, such as hope or fear, in Scrooge's case, suppressed bad conscience – fragments of memories, in absence of external sensory influences, evaluated by an unsuppressed flow of thought – haunting him.[13] Bernard notes how Dickens's theory followed theories of Dugald Stewart, a Scottish philosopher and early dream-scientist, that dreams not only reflected waking thoughts, but also followed 'the same laws of association as in waking life'.[14] The themes reflected in dreams, according to Stewart, were merely a continuation of the thoughts of the dreamer 'shortly before sleep', which, Bernard points out, in Dickens's text also 'firmly entrenched' the dream, typically for the century, 'in Victorian morality'.[15]

On this basis, Dickens enacts in the *Christmas Carol* a theory speculatively advancing such ideas as Stewart's, of the dream's individual character-changing and social problem-solving potential. This revised the dream's theological and mystic functions of revelation and conversion on a scientific basis, in dialogue with other contemporary epistemological domains. In order to advance scientific theory, Dickens, however, sidesteps the scientific method, picking up loose ends of scientific theory and threading them into the patterns of the supernatural dream tradition. Such an amalgamation was far from unusual: it still prevailed in early psychological works such as Macnish's popular *Philosophy of Sleep* (1830), which Dickens treasured. Macnish believed sleep to be the 'intermediate state between wakefulness and death', the dream, a result of a 'metaphysical death' which imbued it with the potential of mystic revelation.[16] As a disciple of the mesmerist John Elliotson, Dickens was an advocate of more openly spiritualist and occult conceptions of

[12] Charles Dickens, 'Dreams', *Household Words* (8 Mar 1851), p.566.
[13] McCorristine, *Spectres*, p.45.
[14] Bernard, 'Dream Theory', p.199.
[15] Bernard, 'Dream Theory', pp.198-9;200.
[16] Robert Macnish, *Philosophy of Sleep* (Glasgow: McPhun, 1836), p.1.

the dream, which, as Catherine Crowe wrote, saw dreams as a 'universal' experience', in which the human mind was free to receive 'the spirits of the dead and messages from the Deity'.[17] Linking the realm of the dead to the scientific realm of memory, and the dreams' access to a universal truth to Victorian morality as a universal concept, Scrooge's dream blurs the boundaries between the rational, scientific and supernatural, and plays with the ambiguity thus created. During his vision of Marley, Scrooge catches from his window a glimpse of the 'Invisible World' of which Crowe was convinced. But as the 'air was filled with phantoms', many 'known to Scrooge in their lives', it is memories of past reflections on these individuals' actions that haunt Scrooge.[18] The revelation produced by revision of memory fragments paired with dream imagination, uncannily embodied in spiritualist imagery is steered by Dickens towards the resolution of a moral and conversion. Scrooge exclaims upon awakening 'I will live in the Past, the Present, and the Future! [...] The Spirits of all Three shall strive within me', and the novel's ending expects this experience to be replicated in the reader: 'May that be truly said of us, and all of us!'[19] Dickens has, at this stage, imbued the dream with a scientific basis, and developed it by drawing on other fields of knowledge to possess both an intrinsic usefulness and, through its recreation in fiction, societal importance.

Dickens's fiction thus not only reflected upon, but also participated in a public discussion of scientific theory, something that was in his age not uncommon, as Jenny Bourne Taylor and Sally Shuttleworth highlight. Psychological ideas were disseminated through non-specialist publications in periodicals and 'aimed at a wider readership'; vice versa, 'well-

[17] Bernard, 'Dream Theory', p.198; The subject of Dickens's interest in mesmerism has been explored in more detail, for instance by Fred Kaplan in *Dickens and Mesmerism: The Hidden Springs of Fiction* (Princeton, NJ: Princeton University Press, 1975), and Alison Winter, *Mesmerised: Powers of the Mind in Victorian Britain* (Chicago, IL: Chicago University Press, 1998).
[18] Dickens, *Christmas Carol*, p.22.
[19] Dickens, *Christmas Carol*, p.70.

established writers aimed to reach an audience of well-informed contemporaries'.[20] But the problem-solving capacity of the dream which Dickens outlines resolves inconclusive epistemologies *drawing upon* science, being resolved, ultimately, however, according to Dickens's own moral convictions on a narrative, rather than a scientific basis. The two novels illustrate how fiction dealt with the scientific phenomenon of the dream, and how this expands their narrative possibilities. The Victorian literary dream soon after rapidly evolved from a passive mirror and moral vehicle, with fantasists elevating it to a major narrative form. Not only informed by current science and its breakthroughs, it used their language to negotiate complex epistemological crisis arising from them. In the psychological space in which these narratives were situated this meant no less than navigating the discourse of the (re-)definition of the soul, and participating in shaping the science that emerged to study it: the science of psychology, with which the fantastic literary visions of the Victorians thus became intimately entwined.

'When monarch Reason sleeps, this mimic wakes'?: Defining the dream[21]

These two examples of popular fiction illustrate that the dream was a prominent subject of mid-Victorian culture, a time of nascent scientific interest in the unconscious in which its study was still a novelty. A decade after Scrooge's dream-journey, the first line of a review of psychological literature in the *North British Review* in 1854 stated that there 'is no department of knowledge in which so little progress has been made as in that of Mental Philosophy'.[22] In one of the reviewed works, Henry Holland, a pioneer of psychology and dream-study, highlighted that, among 'all the subjects of Mental Philosophy', sleep was

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[20] *Embodied Selves: An Anthology of Psychological Texts, 1830-1890*, ed. by Jenny Bourne Taylor and Sally Shuttleworth (Oxford: Clarendon Press, 1998), p.xv.
[21] John Dryden, 'The Cock and the Fox', *The Poetical Works of John Dryden in Five Volumes* (London: Bell and Daldy, 1866), III, p.303.
[22] Anon., 'Works on Mental Philosophy, Mesmerism, Electro-Biology &c', *North British Review,* 43 (November 1854), p.95.

that 'remarkable' sub-category that has not nearly received 'all the notice it deserves', and dreaming one of the 'great mines of mental discovery still open to us'.[23] This evaluation is striking juxtaposed with the status quo of the end of the century, when 'the best known of all dream investigators', Sigmund Freud, 'set out to *base* his theory of the mind in *brain science*', a discipline that had half a century earlier appeared only at its beginnings.[24] Freud's theory, however, did not come out of nowhere. Despite Freud's name being synonymous with 'heralding a new era of dream theory' Lusty and Groth 'query the neat epistemic break between nineteenth- and twentieth-century approaches to dreaming', and explain Freud's theories evoked such public interest *because* of the '*existing* interest in dream research' and its popularity.[25] It was the works of such Victorians as Robert Macnish and James Sully which Freud drew on, following an 'explosion of writing on dreams' in the preceding half-century of thriving conversations on the mind, the unconscious and the dream.[26]

The ways in which Collins's and Dickens's dreams reflect and revise theoretical concepts of dreaming reflect how these works participated in what Groth and Lusty characterise as the 'open, dynamic and wide ranging' mid-Victorian psychological discourse, which, Rick Rylance adds, was 'more spaciously framed in its address to common issues, and with an audience crossing wide disciplinary interests'. 'Economists, imaginative writers, philosophers, clerics, literary critics, policy-makers, as well as biomedical scientists', Rylance adds, 'contributed to its formation'.[27] Bourne Taylor and Shuttleworth explain

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[23] Henry Holland, *Chapter on Mental Physiology* (London: Longman, 1852), pp.109;79.
[24] Allan Hobson, *Dreaming: A Very Short Introduction* (Oxford: Oxford University Press, 2002), p.2 [my emphasis].
[25] Natalya Lusty and Helen Groth, *Dreams and Modernity: A Cultural History* (Abingdon: Routledge, 2013), pp.7;10 [my emphasis].
[26] Bourne Taylor and Shuttleworth, *Embodied Selves*, p.102; Lusty and Groth, *Dreams and Modernity*, pp.3;2.
[27] Lusty and Groth, *Dreams and Modernity*, p.40; Rick Rylance, *Victorian Psychology and British Culture 1850-1880* (Oxford: Oxford University Press, 2000), p.7.

that the issues Victorian psychologists debated ‘formed a crucial aspect of the cultural landscape, permeating the work of contemporary novelists, poets and cultural critics’ in a society that ‘did not share our sense of disciplinary divisions between “arts” and “science”’.[28] This multiformity can pose a challenge to scholars, and Rylance cautions that, as a non-unified scientific field, Victorian psychology ‘hides round corners’, especially before its ‘rapid professionalization at the end of the nineteenth century’.[29] But Rylance foregrounds the importance of the contributions from those who would not in a contemporary sense be seen as scientists – their contributions accordingly not as ‘scientific’ – to the development of the discipline, in which context the importance of the literary dream comes to bear, as it shadowed this diverse debate, and reflected upon it, navigated and furthered it.

Rylance also flags that the psychological discourse’s multi-disciplinarity poses a challenge to ordering the developments and mapping the dynamics within a field in which new avenues opened up constantly and concurrently. Even when a dominant avenue in psychological science seemed to have emerged, discarded others could continue to deal with the same *psychological* subject in a different epistemological setting. Three dominant strands of critical narratives have emerged over the past four decades to theorise these developments. They propose, firstly, as Bernard suggests, a narrative of teleological progression from ‘spiritual and speculative toward the scientific and mechanistic’, or, secondly, as James Sully had noted already at the turn of the nineteenth century, one of ‘modern scientific theory’ reconciling ‘*opposite* views of the nature and significance of dreaming’.[30] In this narrative, both poles existed at the beginning of the debate but were synthesised *by science*. A third approach maintains that the various paths coexisted

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[28] Bourne Taylor and Shuttleworth, *Embodied Selves*, p.xv.
[29] Rylance, *Victorian Psychology*, p.7.
[30] Bernard, ‘Dream Theory’, p.198; Sully, ‘Dream as Revelation’, p.354.

throughout the century, as Alexander Bain had suggested already in the 1860s: a succession of ideas 'on the nature and mind or soul' can be determined, ideas cross-fertilised in a rich, potential but not necessarily conclusive discourse.[31]

More than a century and a half later, the latter perspective is, crucially, that which acknowledges what historians of science such as Arnold Thackray, Steven Shapin, Simon Schaffer and others still single out as the most problematic implication of the often-cited 'scientific revolution' of the nineteenth century as the 'moment when "modern science" originated, when everything changed, and from which there was no return'.[32] Especially within the Victorian discourses of psychology and dream-science, what appeared as scientific progress was often neither linear nor irreversible. While distinctions between these three approaches to the history of psychology cannot always be drawn with absolute clarity, they must be acknowledged separately, as their underlying narratives often reflect subtly different motivations which attach different significance to the same discoveries.

It must equally be noted that, as Thomas Dixon stresses, these motivations do not always correspond to traditionally assumed partisan lines of conservatism and progress. The 'history of science was not always the story of a heroic and open-minded scientist clashing with a reactionary and bigoted church' or deluded and backwards-looking spiritualists; the 'bigotry, like the open-mindedness, is shared around on all sides – as are the quest for understanding, the love of truth, the use of rhetoric, and the compromising entanglement with the power of the state'.[33] This is also the case in the history of psychology, in which

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[31] Alexander Bain, 'A Historical View of the Theories of the Soul', *Fortnightly Review,* New Series, 5 (1866), p.47.
[32] Arnold Thackray, 'History of Science', in *Guide to the Culture of Science, Technology, and Medicine*, ed. by Paul Durbin (New York: Free Press, 1980), p.28; Simon Schaffer and Steven Shapin, 'Up for Air: Leviathan and the Air-Pump a Generation On', in *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton and Oxford: Princeton University Press, 2011), p.xxix.
[33] Thomas Dixon, *Science and Religion: A Very Short Introduction*(Oxford: Oxford University Press, 2008), p.3.

the most significant writings were those that 'combined existing philosophical, theological and literary traditions […] with the findings of the new science of mind', Lusty and Groth observe: in its ideal outcome, an 'enlightened marriage of theological and scientific concepts of mind' – an ideal for which the fantastic literary visions this thesis will examine provided a stage.[34] This aspect is crucial in the study of the work of such men as MacDonald, Carroll and Kingsley, to whom several of these labels and affiliations have been applied: a versatility which biographers have struggled to integrate or even attempted to obscure.

The lines between progressive and regressive as drawn by Victorian pioneers of psychology themselves underline Dixon's point. Looking back upon the nearly-past century in 1893, James Sully names the opposite poles between which he felt modern dream science had to mediate as that of the dream as 'supernatural revelation' of insight 'vastly superior to that of waking cognition' and that of dreams being an 'intellectual fooling'.[35] This differentiation derived from ancient Greek mythology through the 'gate of ivory and the gate of horn' from which dreams were believed to originate, and its binaries have often been intuitively associated with disciplines involved in the Victorian psychological discourse: ivory, the deceiving dream, similar to Collins's Hawbury, and horn, the fulfilling dream, as in Midwinter.[36] Expectations, however, clash with reality, for instance, when the idea of the dream's meaninglessness, which often appears synonymous with scientific materialism, as it does in *Armadale*, is attributed by Sully to literary men. He claims that to literary authors, such as Chaucer, Shakespeare and Milton the dream was apparently 'utter nonsense'.[37] Henry Holland, similarly, cited Dryden as an example for

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[34] Lusty and Groth, *Dreams and Modernity*, p.5.
[35] Sully, 'Dream as Revelation', p.358.
[36] Jennifer Ford, *Coleridge on Dreaming: Romanticism, Dreams, and the Medical Imagination* (Cambridge: Cambridge University Press, 1998), p.10.
[37] Sully, 'Dream as Revelation', p.358.

the same assertion, who called the dream a 'mimicry of reason'.[38] Alexander Bain, the founder of *Mind*, and often cited as the 'father of psychology', locates the direct predecessor of the 'most advanced view of our present time' in Aristotle's 'De Anima', and the writings of Origen and St Augustine, before criticising and even dismissing swathes of modern theories from such prominent contemporary scientists as Ferrier, Priestly and Liebig.[39] Bain's and Sully's comments illustrate, as Dickens and Collins did, the diversity of the discipline, the richness of its sources and the resulting difficulty to situate its developments, which Rick Rylance, Helen Small and Janet Oppenheim have stressed. Small notes the 'elasticity' of such terms, as 'psychology' and 'psychiatry' were continuously 'revised and re-revised in the Victorian period': an 'indication of the insecure status' of these disciplines, and not only their subjects, before the end of the century.[40]

But this eclectic richness also provides precisely the fertile ground in which progress could thrive, and progressive theory, in turn, bore the mark of Victorian multi-disciplinarity in its language and imagery. Sully's landmark theory that the dream was a revelatory experience reclaimed a term firmly associated with theological and mythological literature, as well as medieval texts that heavily drew on both, to redefine its meaning. He proposed that what was perceived when dreaming was an indication of its conscious and unconscious evolutionary and social history: not a super-addition of external, divine knowledge, but a revelation of the compound nature, the 'stratified', 'hidden' layers of the 'palimpsest' of the mind. Sully further concluded that dreams were the 'complete development of a vague

[38] Holland, *Chapters*, p.86.
[39] Bain, 'Historical View', pp.47;60-62.
[40] Helen Small, '"In the guise of science": literature and the rhetoric of 19th-century English psychiatry', *History of the Human Sciences*, 7 (1994), p.32.

fugitive wish of the waking-mind' through a mixture of geological and literary metaphors as an 'unveiling' of the 'organic substrate of our conscious personality'.[41]

Such linguistic imagery of presenting a scientific idea in a framework alluding to literary dreams and spiritualism is one of the primary reasons for the broad impact of Sully's theory, as it thus catered to dream-theorists across the breadth of the discursive spectrum. Freud cited Sully at length in the *Interpretation of Dreams* and latched on to this terminology throughout his works. But while Freud's work was being subsequently hailed as 'a novel thesis about the scientific potential of dreams', others, as Pick and Roper note, found it severely deficient in its 'incomplete' *scientific* understanding of the mind.[42] Hobson still sees the beginning of modernity, the advent of 'brain-based genesis of dreams', in Sully's work, but echoes wide criticism of linguistic imagery as obscuring science that accompanied the Victorian psychological discourse.[43] Through such language, the lines between history, theology, literature and science blur continuously. For this reason, Roger Smith problematises 'conventional' accounts of the history of psychology presenting a story in which 'modern knowledge grows on the back of earlier beliefs and supplants them by confronting them with facts of nature'.[44] As this juxtaposition has shown, the development of psychological science, as Thackray, Shapin and Schaffer indicated for science in general, is more kaleidoscopic than straightforward, and, in the case of dream study especially continues to be so.

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[41] Sully, 'Dream as Revelation', pp.359;358; In a footnote in the fourth chapter of his *Interpretation of Dreams* (1899), Freud cites a lengthy passage from Sully's 'The Dream as Revelation'.
[42] Daniel Pick and Lyndal Roper, 'Introduction', in *Dreams and History: The Interpretation of Dreams from Ancient Greece to Modern Psychoanalysis*, ed. by Daniel Pick and Lyndal Roper (Hove: Brunner-Routledge, 2004), p.1; Hobson, *Dreaming*, p.i.
[43] Allan Hobson, *The Dreaming Brain: How the Brain Creates both the Sense and the Nonsense of Dreams* (New York: Basic Books, 1988), pp.34;42.
[44] Roger Smith, *Between Mind and Nature* (London: Reaktion, 2013), p.11.

These developments explain to some degree why Sully's turn-of-the-century perception of the revelatory dream as a reconciliation of transcendental and scientific ideas seems to sit oddly against Bernard's hypothesis of mid-Victorian psychology heading towards a mechanistic-scientific framework. Untangling the distinct strands of theories emerging at the beginnings of psychological science reveals that woven into the multi-disciplinary history of psychology are the histories of other emerging and developing, as well as past disciplines, illuminating why both Bernard's and Sully's histories of dream-science hold true. Materialism, for instance, already prevailed among such early theorists as Dugald Steward or Thomas Reid, referred to by Coleridge as the 'Scotch metapothecaries' to distinguish their approach from metaphysicians. These were concerned with physiological aspects of sleep and dream, such issues as the 'law of association in determining the train of events', 'the effect of recent impressions and ideas', and 'the state of the body during sleep'.[45] Dream, Stewart concluded, was merely a *less perfect* version of waking thought, which was also evident in the distorted perception of 'external sensory impressions': the dream, he believed was a *faulty* interpretation of nervous signals. This was, as Bernard herself notes, a popular strand of enquiry that cited often the same anecdotal evidence of dreamers dreaming of walking Mount Etna sleeping with hot water under his feet, as John Gregory, or being scalped by natives as Thomas Reid.[46] The interest in dream as being rooted in the physical was the beginning of an identifiable neurological strand in psychological research, which, complemented, rather than contradicted the more synthetic strands, but emerged periodically as most valued by those seeking to elevate the study of the mind to the same empirical standing as other physical sciences.

[45] Bernard, 'Dream Theory', p.198.
[46] Bernard, 'Dream Theory', p.199.

But different approaches to dreaming maintained equally prominent defenders. Alexander Bain, writing half a century before Sully, and half a century after Stewart, believed it was 'less tenable now than perhaps ever' to regard physiological and mental phenomena separately, or to consider the latter merely as a side-effect of the former, or vice versa.[47] The separate strand of the mechanistic study of the biology of mental function which Bernard identifies is the beginning of the bifurcating neurological strand of psychology, which William James highlights as the foundation of psychology as a natural science his *Principles of Psychology* (1890).[48] But Bain emphasises that despite such an emerging bifurcation, the study of the physical mechanism underlying mental functions remained integral to psychology, highlighting the origins of the 'bewildering range' of psychology, and thus of dream study.[49] Owen Flanagan, another century on from Sully, similarly links the origins of dream study in its current nature, which still prominently depends on different disciplinary fields, which borrow and interdepend on each other. Even in a late twentieth-century context Flanagan still believes that a 'robust theory of the nature and function of dreams will need to bring into equilibrium insights from psychology, psychiatry, evolutionary sociology and anthropology', as all these disciplines had different motivations and interests in defining the dreaming.[50]

Thus, the synthetic narrative not only persisted relatively unwaveringly throughout the century, but, as its echoes in the works of James, another father of psychology, highlight, crystallised as of particularly distinct value in relation to more materialistic approaches. Although James wished his *Principles* to be *entirely scientific* in character, science must not always be so: 'Men must keep thinking; and the data assumed by psychology, just like

[47] Bain, 'Historical View', p.62.
[48] William James, *The Principles of Psychology* (London: Trübner, 1890), p.vii.
[49] Smith, *Between Mind and Nature*, p.12.
[50] Owen Flanagan, *Dreaming Souls: Sleep, Dream and the Evolution of the Conscious Mind* (Oxford: Oxford University Press, 2000), p.17.

those assumed by physics and the other natural sciences, must some time be overhauled. The effort to overhaul them clearly and thoroughly is metaphysics', and so James calls for a continued involvement of philosophical disciplines in order to advance science.[51] Neurology progressed rapidly alongside psychology as a science in its own right, and throughout the century attracted some of the more physiologically minded away from the multidisciplinarity of psychology. But the progress of Victorian psychology depended on both; the separate progress of one discipline is not a contradiction, but in fact, a major catalyst, in which the study of dreams acts as a barometer for changing trends in the history of the sciences of the mind.

Fathoming the mind's action in the dream and unconscious was thus not alone a question of disciplinary boundaries and chronology, but had much wider implications for the primary subject of the 'science of the *soul*': the soul itself. Now understood as a fundamentally spiritual term, this was not wholly the case in the Victorian age. It remained an immensely charged concept, and philosophers of the mind had for centuries pondered the question, modern scientists now joined in asking – What *was* the soul? – and in the course of the nineteenth century, increasingly – Was there such a thing as the soul? Psychologists had to grapple constantly with the conundrum whether 'soul' was equivalent to 'mind', whether it was separate from the body, pre-existing, super-added or persisting after physiological death of the individual. Similar questions arose when it came to the things *seen* by it. The etymologies of 'ghosts', 'phantoms', 'goblins', 'fairies', 'spirits', 'visions', 'spectres', 'illusions', 'dreams', 'delusions' indicate distinct epistemologies – theological, occult, folkloric or superstitious–whose respective narrative possibilities authors of both fiction and scientific texts consciously exploited. Seemingly minor

[51] James, *Principles*, p.vii.

digressions or variations in terminology were rarely coincidental, as they had potentially massive epistemological ramifications.

The nature of responses in the 'discourse of the soul', as Rylance helpfully delineates this parallel debate, mirrors the triptych of approaches in the history of dream-studies: the rationalist, synthetic and kaleidoscopic.[52] The, first, a complete reduction to biological, even mechanical processes of the mind, and rejection of any such concept as the soul stands out in this context, and crops up periodically in the nineteenth century, however, mostly as counter-reaction to other models. Most frequently cited was René Descartes' hypothesis that all animal life, and thus, by extension, the human mind were nothing more than intricate automata – a theory amplified by Thomas Henry Huxley.[53] As absolute as this narrative appears, Huxley and Descartes both acknowledged its binaries were necessarily reductive. It is essential to highlight that while the terms 'soul' and 'mind' are sometimes treated in the same binary fashion, they only gradually acquired their distinctly different connotations, and were for much of the early debate used interchangeably, as above by Bain.

More intricate were the capabilities and the moral character ascribed to the soul, the vital principle, or one of the wide variety of amalgamations of the two. This point is, again crucial to fantasists, who made visible the realm of the soul, in which, as MacDonald wrote, the writer may 'employ his imagination freely' but 'in moral things he must obey – and take their laws with him into his invented world as well', and 'must invent nothing'.[54] Examining the theories of those who, like Sully, believed that what was revealed in dream

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[52] Rylance, *Victorian Psychology*, p.21.
[53] Thomas Henry Huxley, 'On the Hypothesis that Animals are Automata, and Its History', *Fortnightly Review,* New Series, 45 (1874), p.555.
[54] George MacDonald, The Fantastic Imagination', in *A Dish of Orts: Chiefly Papers on the Imagination, and on Shakspere* (London: Sampson Low, 1895), p.316.

was a revelation of the unconscious mind and its constitution, often reveals traces of older discourses. Sully himself regarded the unconscious mind, or, as he terms it, the 'subconscious', as the revelation of a '*nobler* impulse', a better choice not made in life, the dream as a *childish*, *regressive* activity revealing its *purer* nature.[55] But the same insight, of the brain as a 'double organ' and its workings 'double consciousness', as Holland or Arthur Ladbroke Wigan wrote, lead them to see the unconscious as a threat. Each cerebrum was, according to Wigan, 'capable of a distinct and separate volition', one *rational*, and in the '*healthy* brain', dominant; the other, inhabited by the '*passions'*, the creative mind, which, if it took over, rendered the mind '*morbid*'.[56] Holland even states that prolonged states of dreaming were 'scarcely to be distinguished from many forms of mental derangement'.[57]

The same point is made, but in different terms by Frances Power Cobbe, who seems to echo the words of Dryden that dreams were a sign of 'the reasonable soul run mad'.[58] She opposes Stewart's view that dream continued the waking mind's functions, just less perfectly so, and that dreams were to the waking mind, as 'reflexes' were to actions. Instead, she argues that a 'great proportion of the passions of our dreams seem often not reflexes of those experienced in former hours of consciousness, but altogether foreign to *our natures past and present*': 'Passions which never for a moment sullied our consciousness'. In dreams, the 'man who would go to the stake rather than do a dishonourable act', would cheat at cards, 'the woman who never yet voluntarily hurt a fly, chops a baby into mincemeat'.[59] What is worse, one could 'commit in dreams acts for

[55] Sully, 'Dream', p.364 [my emphasis].
[56] Arthur Ladbroke Wigan, *A New View of Insanity: The Duality of Mind: Proved By The Structure, Functions, And Diseases of The Brain And By The Phenomena Of Mental Derangement, And Shown To Be Essential To Moral Responsibility* (London: Longman, 1844), pp.26;30 [my emphasis].
[57] Holland, *Chapters*, p.124.
[58] Frances Power Cobbe, 'Dreams as Illustrations of Unconscious Cerebration', *Macmillan's Magazine* (April 1871), p.523.
[59] Cobbe, 'Dreams', p.522 [my emphasis].

which we should weep tears of blood were they real' without 'the slightest remorse'.[60] She therefore concludes, contrary to Sully, that if the will, 'the noblest element of our nature', 'were awake, it must inevitably rebel against acts so repugnant to it'; therefore 'the *true self* is not merely impotent but dormant'.[61] Not the unconscious, but the conscious self was the true self, the soul of man.

Cobbe, a Christian writer, imbued with theory what Dryden had expressed in verse, that the 'monstrous forms in sleep we see […] That neither were, nor are, nor e'er can be'.[62] Detecting in the immoral dream an absence of the '*Homo Noumenon*', the essence which Kant defined as the true 'Self of man' ("Mensch an sich"), she believes 'it is obvious that the true phenomena of Conscience cannot be developed in them', which apparently contradicts the possibility of such moral development of dreamers in and through their visions as in the *Christmas Carol*.[63] Through the *homo noumenon* Cobbe touches upon a discourse of the relation between the 'real self' whose origins, were, as Bain stated, to be found, well before the Victorian age, in pre-Socratic and thus pre-Christian writings about the soul. Bain, in fact, dedicates the majority of his history of psychology to these philosophies of the soul, to the sources of this dichotomy of either the moral or immoral nature of the 'real self', to illuminate the ways in which they still shaped Victorian psychological theory, despite their theological antecedents having become blurred, remoulded, or even deliberately obscured.

Bain distinguishes historical approaches to show how their concepts remained implicitly pertinent, outlining a succession of ideas from the two substances of the 'nature of the mind *or* soul', to that of only one substance. He subdivides the first category into 'Both

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[60] Cobbe, 'Unconscious Cerebration', p.28.
[61] Cobbe, 'Dreams', pp.522;523 [my emphasis].
[62] Dryden, 'Cock and Fox', p.303.
[63] Cobbe, 'Unconscious Cerebration', p.28.

Material', as understood by 'most of the ancients' and 'the early Fathers', and 'an Immaterial and a Material', as described by 'Plato and Aristotle, the later Fathers, the Schoolmen; Descartes; *prevalent opinion'*, and the second into 'Mind and Matter the same' presented by cruder materialism and Fichte's idealism, and, finally, 'Contrast of Mind and Matter saved' which he attributes to 'guarded Materialism' and the '*growing opinion*'.[64] It is noteworthy that the conventionally drawn divide between the soul as immaterial and the body as material was preceded by a variety of alternative configurations. Pre-Socratic philosophers understood soul and body to be made from the 'same elements as the rest of nature', a 'double materialism' found also in the early Fathers Tertullian and Origen, who pointed out, that, according to scripture, 'spirit strictly means body'.[65] The revelation of the soul was also a revelation of nature. A corresponding notion pervades Plato and Aristotle, the latter however believed there were *three* principles, which were aspects of the soul. These were, firstly, the 'lowest soul', the vegetative principle, or vitality, secondly, 'above' it, the 'Sensitive' soul ('phantasma') which was 'common to animals and men'; these two, Bain notes, would 'rise and perish with the bodily frame'.[66] The correspondence with Victorian theories is implicit, but becomes apparent in the third principle, the 'Nous' – the Reason or Intellect Kant refers to – which 'pre-existent, passes into the body as something divine', and was an 'exclusively human prerogative', immortal and immutable.[67] Reason was, according to Aristotle *the* soul, the true, divine self, similar to what Cobbe and Wigan maintained. These other two constituted the 'passive' and 'active' soul respectively, which corresponded, on the one hand, with notion of the will and waking mind of Victorian double-consciousness theories, on the other, with the unconscious, the creative, the animalic, childlike, mad and

[64] Bain, 'Historical View', pp.47-8 [my emphasis].
[65] Bain, 'Historical View', pp.49;53-4.
[66] Bain, 'Historical View', pp.49-50.
[67] Bain, 'Historical View', p.50.

subversive. Plato acknowledged equivalent principles. Crucially, however, he defined the soul the mediator that unified the 'Ideal' and 'Sensible'– in modern terms, the psychological and neurological. But like pre-Socratic theory he understood the soul, an image of the Cosmic Soul, was the 'union of the Ideal and the Sensible', a balancer and synthesiser, similar to Sully.[68]

Bain noticeably steers the narrative of his history of psychology towards a three-split model of the human organism, which he also finds in the New Testament's 'body, soul and spirit' and St Augustine's belief in the 'body as the material part; and the soul and spirit as two aspects of the immaterial part'. This 'triple division' Bain asserts 'prevailed' in psychology since it was 'completed' by René Descartes. Descartes, who lent his name to 'Cartesian Dualism' of mind and body as separate, and thus mental actions as separate from physical actions, however also divided the 'soul', and the functions of consciousness, into sensation conveyed to the brain, the animal spirits, and 'the thinking principle': the 'proper *soul*'. Thus, Bain comes full circle, having begun with the language and concepts of ancient theory and the language of two different types of 'soul', one corruptible, and one incorruptible, when arriving at Herbert Spencer, in whose theories of evolutionary psychology in *Principles of Psychology* (1855) these older concepts thus still seem to echo. Spencer conceived of an inherited self, the 'atom' of humanity into which was inscribed the whole history of mankind, and the self, shaped by education, and, most importantly, the environment, natural and social, which was changeable; these theories became the foundation of narratives of 'keeping in check' inherited dangers.[69]

Considering these echoes of earlier triple divisions of the body and dualism of the soul shows how they provided Christian writers seeking to relativise and incorporate apparently

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[68] Bain, 'Historical View', p.49.
[69] Herbert Spencer's ideas of the 'soul' will be discussed in detail in chapters 2.3. and 3.2.

destabilising evolutionary theories with the rhetorical apparatus to do so with ease. The moral doctrine of the imperishable soul, which could be shielded from worldly sin by the will, and was, thus, however, corruptible, forms a context for scientific models as Spencer's that gave no room to them, guaranteeing moral and religious issues a prominent space in the psychological discourse. Thus, although the nineteenth century is often, as Bernard Lightman points out, 'readily associated with progressive secularisation', theological questions continued to reverberate, often subliminally and implicitly.[70] As Rylance outlines, the general trend seemed to be that '[T]raditional religious or metaphysical arguments' were beginning to seem 'tired' in 'rapidly changing intellectual culture' within which psychology developed, so that George Henry Lewes was convinced 'science' will 'prevail over the religious arguments that once dominated debate'. However, Jean-Baptiste Lamarck's pre-Darwinian linear trajectory of evolution which projected that mankind would not only survive but proceed to perfection was maintained by Spencer well into the 1890s, and was, as Laura Otis notes, the biological equivalent of the Christian hope for immortality.[71] Rylance summarises that the apparent paradox of the Victorian age was that its 'widely shared apprehension that certainties were vanishing lubricate[d] the' – repeated – 'return of philosophical Idealism to British psychological theory'.[72]

While these diverse disciplinary undercurrents of the unconscious came to bear in the psychological conundrums of the age of Darwin, and trembled below the surface of the debates in the aftermath of the *Origin of Species* (1859), such attributes as 'childish', 'pure' and 'nobler', or, 'morbid' simultaneously revealed differing underlying evolutionary understandings of race and human descent, and of childhood – a subject of

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[70] Bernard V. Lightman, *Victorian Popularizers of Science: Designing Nature for New Audiences* (Chicago: University of Chicago Press, 2007), p.40.
[71] Laura Otis, *Organic Memory: History and the Body in the Late Nineteenth and Early Twentieth Centuries* (Lincoln: University of Nebraska Press, 1994), p.39.
[72] Rylance, *Victorian Psycholog*y, pp.203;208.

central importance to writers as Carroll, MacDonald and Kingsley whose principal works were written for, about, or from a sympathetic position towards children. The post-Darwinian debate was dominated by fears of degeneration, a sliding *downwards* or backwards in the evolutionary scale, and often localised all that is uncontrolled, undeveloped or underdeveloped, childish in the unconscious. This stood against the conundrum, that, if man was created in the image of God, was man's creative mind an image of the Creator's mind? And, if so, how could it then be degenerate? The evolutionary status of the unconscious remained central for its political and social implications, as it held the potential to endorse or undermine efforts to regulate education and the social state, which were based upon the various understandings which degree of equilibrium of the dynamic relationship between psyche, body and nature in order to control moral influences acting upon the 'soul' was desirable, as healthy or moral.

The impact of Darwin and the rise of physiology in the second half of the nineteenth century formed the backdrop and nourishing ground for the discourse of the psychology, of the unconscious and dreams. As Rylance notes it was the 'increasingly sound findings, perceived relevance, and intellectual prestige of physiology' that not only dominated intellectual discourses but also 'a continuing substratum of psychological literature in the medical community.[73] The impact of Darwin has been discussed extensively by Beer, Levine, Gould and Secord in the past three decades, and the institutional and professional establishment of psychology and psychiatry have been discussed in detail by Rylance, Scull, Small, Shuttleworth, Jenkins and others. They all discuss the facets of intellectual and institutional dynamics, but also stress how psychology started its rise from a position of unequal prominence, as it was at a distinct disadvantage compared, for instance, to the

[73] Rylance, *Victorian Psychology*, p.203.

biological and geological sciences, which had advanced on the basis of increasing empirical evidence, in which psychological science was still limited. Although some experimentation was conducted by Lewes and Huxley, psychology then could not yet draw on the empirical means that had sustained the significant discoveries and development of geology, chemistry and neurology.[74] As Bourne Taylor and Shuttleworth highlight, 'psychological writers often developed their points through numerous literary allusions and tropes' and the majority of psychological conversations continued through the written word.[75]

Nonetheless, neither the primary medium of language, nor the continuous re-emergence of philosophical and theological paradigms necessarily stood for regress. As will be shown through the historical material of this thesis, dominant scientifically-founded narratives did emerge, and were even prescient of what scientists were only capable of proving by scientific means a century later. In the study of dreams, the medium that could as Sully had believed *make visible* the unseen parts of the minds and their workings, the binaries and three-stage models of the soul, or mind, were overcome in favour of more complex dynamic models. The conundrum of the degree of the presence of will and consciousness in dreaming acknowledged that there existed a spectrum of consciousness, and that while there appeared to be phases of dreamless sleep, there was sleep in which sensory impulses were processed, consciousness of dreaming prevailed, or indeed a lucidity to make decisions in dreams. Macnish acknowledged as early as 1830 that dreams occurred in phases when the repose, that is, the dreamless sleep, was broken, and William Carpenter even believed that in those phases in which consciousness prevailed in sleep state, and

[74] Significant experimental explorations of psychology were more commonly and prominently developed in France, by Jean-Étienne Dominique Esquirol and Guillaume-Benjamin Duchenne de Boulogne at the Salpêtrière Hospital, and in Germany, especially under Wilhelm Wundt at Leipzig.
[75] Bourne Taylor and Shuttleworth, *Embodied Selves*, p.xv.

where external impulses were not processed, the imagination may develop ‘new forms of beauty’ or even give rise to new ideas processed from those stored in recent and ‘forgotten’ memory.[76]

Before the end of the nineteenth century different phases of sleep, dreamless and dreaming sleep, were regularly acknowledged, and that the phases of dream-sleep, the dreams of sleep onset, night-sleep and those dreams experienced in the morning, near awakening, differed, and, some even suggested, fulfilled different cognitive functions. Such theories are the foundation for theories of sleep phases, their relation to muscle movement, and eventually REM (rapid eye movement) and NREM (non-rapid eye movement) phases of sleep and dreaming (Fig.1). These were only theorised, on the basis of empirical measuring, in 1953 by Eugene Aserinksy and Nathanael Kleitman, or, in the case of the distinctive forms of dreaming in onset, subsequent sleep phases and awakening by Allan Hobson and Robert McCarley in 1975 and 1977.[77]

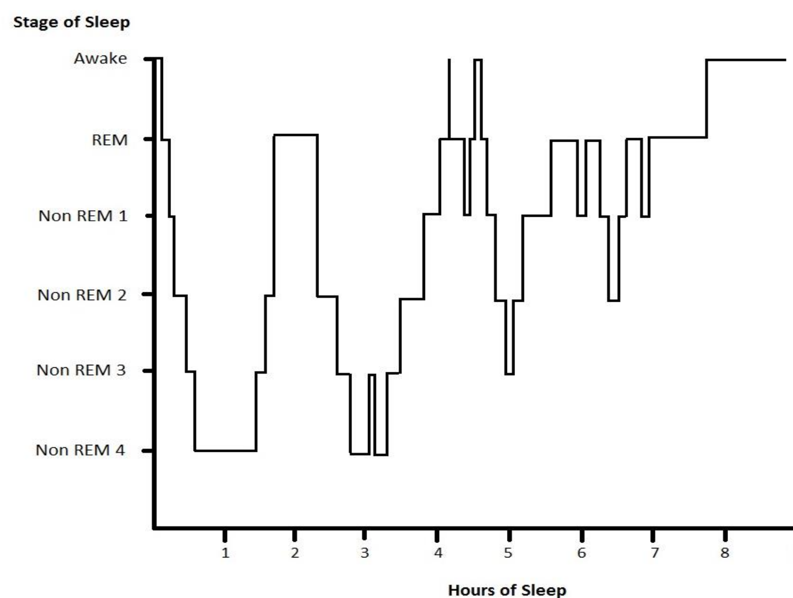

Fig.1: Hypnogram of a healthy adult’s sleep

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[76] William Benjamin Carpenter, *Principles of Mental Physiology: with their applications to the training and discipline of the mind, and the study of its morbid conditions* (London: King, 1874), p.585.
[77] Eugene Aserinsky and Nathaniel Kleitman, ‘Regularly occurring periods of eye motility, and concomitant phenomena during sleep’, *Science* (1953), 118–274; J. Allan Hobson and Robert W. McCarley, ‘Neuronal excitability modulation over the sleep cycle: A structural and mathematical model", *Science*, 4196 (1975), 58–60; J. Allan Hobson and Robert W. McCarley, ‘The Brain as A Dream State Generator: An Activation-Synthesis Hypothesis of the Dream Process’, *The American Journal of Psychiatry*, 134 (1977), 1335–48.

The potential significance of the knowledge-processing effect of these sleep phases for learning, development and identity formation was observed by Victorian scientists, but brought into even wider consciousness by literary writers. The significance of psychology's progress primarily through written form is crucial, in this context. It remained a realm of possibility, granting access to actors from diverse backgrounds, and serving, in turn, as a medium for them through which to reflect and advance diverse ideas. The possibility of a perceived kinship of forms of psychological scientific writing, shaped by literary devices, and psychological literary writing, shaped by scientific theory, shaped especially the emerging genre that chose the dream as its principal narrative form: Victorian fantastic literature. It 'made visible', not yet in the graphs and tables of Aserinsky and Kleitman, but in the metaphors commonly used in scientific texts, with the same aim of making visible, making graspable, the psychological functions they believed were acting in dreaming and the unconscious mind. The common purpose of psychology and fantastic literature is revealed in the origin of its name, derived from ancient Greek 'phantasai': to 'make visible'.

As this thesis will show, the literary dreams of the pioneers of the Victorian fantastic had deep foundations in the latest scientific writing, and were scientifically innovative and even original, and the commonalities of the two fields are more than coincidental. They emerged concurrently in the second half of the nineteenth century and are entwined in their subjects and actors. The pioneers of Victorian fantastic literature, George MacDonald, Lewis Carroll or Charles Kingsley, which this thesis will examine, were well-connected, well-read and deeply immersed in the psychological discourse. As Dickens and Collins utilised the dream as a primary device to 'make visible' theories on psychology, the literary fantastic elevated the dream, already a discursive space, into a genre that reflected, developed and advanced the psychological theory it drew on. That no comprehensive study

of these links has so far emerged – there is barely cursory mention of the genre of the literary fantastic in histories or literary considerations of Victorian psychology – is one of the central omissions from which this thesis arises.

'The literary fantastic is never "free"': fantasy, science and literature[78]

Fantastic literature, like the study of dreams, has ever been accompanied by scholarly scepticism. Castigated as wish-fulfilling, escapist, and, if purposely pursued, a denial or abandonment of reality and thus potentially dangerous, the same negative sentiment accompanying dream-studies was captured by J.R.R. Tolkien in his seminal lecture 'On Fairy-Stories' (1939; 1947) by reiterating the definition of the genre by the *Oxford English Dictionary* as an 'incredible story' or 'a falsehood'.[79] Fantasy critics, such as Rosemary Jackson have not only objected, but fed into the, by now, cliché of fantasy as escapist in the sense of a deserting of reality. In its 'desire' to 'transcend reality' and the human condition', she states, it escaped to a more complete, 'nostalgic' vision of a 'lost moral and social hierarchy' to provide 'vicarious gratification', which, it is implied, was flawed being neither *real* or real*istic*, nor achievable.[80] The notion of fantasy's apparently naïve idealism has since transcended literary criticism and continued its existence in popular discourses where it continues to echo the same issues raised by Holland and Wigan, that fantasising was a precursor of insanity, and yet, as in dream studies, another undercurrent persisted.

Tolkien, as many after him, also drew out the primarily intellectual potential of escape. Warning of 'the tone of scorn or pity with which "Escape" is now so often used', he established instead what has since become the credo of writers and critics of the fantastic:

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[78] Rosemary Jackson, *Fantasy: The Literature of Subversion*, 3rd edn (London: Routledge, 1981), p.3.
[79] J.R.R. Tolkien, 'On Fairy Stories', in *Tolkien: On Fairy-stories: Expanded edition, with commentary and notes*, ed. by Verlyn Flieger and Douglas A. Anderson (London: Harper-Collins, 2014), p.28; Tolkien worked for the OED and contributed to defining terms recorded therein.
[80] Jackson, *Fantasy*, p.2.

> Why should a man be scorned if, finding himself in prison, he tries to get out and go *home*? Or if, when he cannot do so, he thinks and talks about other topics than jailers and prison-walls? The world outside has not become less real because the prisoner cannot see it. In using escape in this way the critics have chosen the wrong word, and, what is more, they are confusing, not always by sincere error, the Escape of the Prisoner with the Flight of the Deserter.[81]

Tolkien reverses the binary that lamented fantasy's detachment from reality, its unreality, asserting instead that the 'real world' was, in fact, an artificial, unreal version of itself, as it was only a selective concept created by hiding parts of its 'realities', its unsettling elements by obscuring them from sight, thus imprisoning those wishing to acknowledge them. Tolkien here treats 'home' in the sense directly opposed to Freud's 'uncanny', 'das Unheimliche' being the 'un-homely', an incomplete replication, something that was not right or natural. The fantasist who 'heroically' addressed, and unmasks the 'unhomely', and thus reveals 'home', becomes the greater realist.

'Escape', in Tolkien's sense, has since become ever more central to defining fantastic literature. Proponents of the literary fantastic, such as Tsvetsan Todorov and Vladimir Propp, Bruno Bettelheim, and even Jackson herself, and more recently Kathryn Hume and Farah Mendlesohn have redirected the focus towards examining the ways in which the genre engages with, confronts and reframes reality. Jackson herself takes a line similar to that which Sully and Freud took to dreams, stating that the purpose of 'escape' was to compensate for a 'lack resulting from cultural constraints', seeing the task of fantasy dealing with 'the new' in different, more favourable circumstances than those offered in contemporary reality.[82] Making sense of the uncomfortable, be that because of novelty or perceived incompatibility, emerges as the bottom line of attempts to define the genre. Bettelheim saw the genre's main distinguishing feature in not avoiding, but 'squarely' confronting the 'basic human predicaments' and stating, 'an existential dilemma briefly

[81] Tolkien, 'Fairy-Stories', p.69.
[82] Jackson, *Fantasy*, p.3.

and pointedly'.[83] Fantasy, it seemed, stripped away reality and realism, to get straight to the point of engaging with unspoken difficulties, or, as Tolkien and Bettelheim believed, even the relatively greatest of these difficulties. Bettelheim highlights the significance of death in the imagery of the fantastic, which by metaphorical extension signified separation, loss, lack: letting go of the past, and, as a next step facing the insecurity that lay ahead. To Tolkien 'eucatastrophe' and 'recovery' were the next most important elements of fantasy. Eucatastrophe, the 'highest function' of fantasy, was the escape from death, the giving of a 'fleeting glimpse of Joy'; which inspired the recovery: the 'regaining of a clear view'.[84] As some believed dream did, it extracted from the tangle of sensory impressions anxieties, and incompletenesses, gave them shape, and sought to resolve and complete them.

From this point arises the kinship of fantasy with psychology, as what the psyche and the dream were believed to be capable, or incapable, of, corresponded in striking ways to what the fictionalised imagination, or fantasy, made visible – whether this was to compensate or to complete. The fundamentally psychological nature of fantasy has been raised, for instance, by Colin Manlove who links the origins of fantasy literature to the bringing to light of silenced, unsettling discourses, and potentially unanswerable questions. The 'source' of fantasy, he notes 'in the imagination and the free play of the mind often makes it uniquely sensitive to areas of the national psyche which are elsewhere hidden or ignored'.[85] Fantasy could not only reveal and resolve the anxieties of an individual psyche, but, more ambitiously, those of the individual's environment. Revelation, education and development, and cathartic resolution have crystallised as a central narrative trajectory of the fantastic, and its purpose not the escape, but the return to reality, the resettling of the unsettled mind, within its environment, with the assurance of sense and meaning. It could

[83] Bruno Bettelheim, *The Uses of Enchantment*, 3rd edn (London: Penguin, 1991), p.8.
[84] Tolkien, 'Fairy-Stories', pp.74;75;67.
[85] Colin Manlove, *The Fantasy Literature of England* (London: Macmillan, 1999), p.1.

reliably complete what dreaming in its theoretical conceptions only promised, but, on the basis of understanding its functions, also teach an understanding of the thought patterns that led to conclusion.

Bruno Bettelheim writes that if ‘we hope to live life […] in true consciousness of existence, then our greatest need is […] to find meaning in existence’; by cutting straight to the greatest existential crises, this was the purpose of enchantment.[86] Enchantment responded Jackson referring to the ‘difficult inner problems’ caused since the 1800s by the ‘destabilising psychological effects of inhabiting a materialistic culture’.[87] That was paradoxically where the seeming irrationality and unreality of fantasy arose. Stripped from its sensory referential framework and the certainty of the embodied self, it is situated in the abstract, the existential crises of the disembodied mind. Meaning, Bettelheim asserts, can only be ‘built up’ from small, ‘irrational beginnings’ via ‘intelligent understanding gained’ from transcending the ‘narrow confines of *self*-centred existence’.[88] The fantastic succeeded in achieving its aim by stimulating the imagination, imitating its workings and clarifying arising emotions. Thus, the aim of fantastic literature was to ‘develop one’s inner resources’ so ‘emotions, imagination, and intellect mutually support and enrich one another’ balancing what had been referred to as the constituent principles of the soul or self.[89] Fantasy is ‘founded in reality’ and ‘sublimates it’ to create an experience akin to imagination, escaping to return improved, and in order *to* improve – other individuals, as well as the worlds around them.[90]

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[86] Bettelheim, *Enchantment*, p.3
[87] Jackson, *Fantasy*, p.4; Bettelheim, *Enchantment*, p.3.
[88] Bettelheim, *Enchantment*, p.3.
[89] Jackson, *Fantasy*, p.3; Bettelheim, *Enchantment*, p.4.
[90] Bettelheim, *Enchantment*, pp.5;8.

Fantastic literature mirrors the psychological process of understanding, and as the evolution of fantasy criticism documents, mirrors the elements of its study and their historical sequence. Early structuralist critics, such as Propp, Todorov and to a degree also Jack Zipes, focussed on the recurring elements – symbols and characters, narrative tropes and structures – of the fantastic, culminating in 'tabulations' of fantastic tales, such as Propp's table of 155 features in the *Morphology of the Folktale* (1928;1958) that *make* fantasy. These have been taken to various extremes, for instance, by Joseph Campbell, who in his *Hero with a Thousand Faces* (1949) asserted the theory of the monomyth: that all human stories follow the same narrative structure, containing, overall, the same elements. More recently, approaches focusing primarily on finding a formula of fantasy have, despite their continuing dominance been criticised, for instance by Edward James and Farah Mendlesohn, who lament that theory of the fantastic has not offered much beyond 'the study of metaphorical and thematic elements'.[91] Those, who like Jackson have pointed out the limitations of such structuralist 'tyranny of the text', agree it stops short of acknowledging the importance of historical context and 'fails to consider the social and political implications of literary forms'.[92]

The intermediate generation of fantasy critics attempted to mitigate this shortcoming through application of the psychoanalytic method. Jackson boldly states that 'Fantasy in literature deals so blatantly with unconsciousness that it seems rather absurd to understand its significance without some reference to psychoanalysis and psychoanalytic readings of text'. And fantasy, as the literature of the unconscious, gave insight into 'social structures and "norms" […] reproduced and sustained within us', and 'redirects our attention' to how

[91] Edward James and Farah Mendlesohn, 'Introduction', in *The Cambridge Companion to Fantasy Literature*, ed. by Edward James and Farah Mendlesohn (Cambridge: Cambridge University Press, 2012), p.1.
[92] Jackson, *Fantasy*, p.6.

'we begin to perceive the ways in which the relations between society and the individual are fixed'.[93] But the aim of psychoanalysis was also ambitious: as Juliet Mitchell points out, it sought to 'decipher how we acquire our heritage of the ideas of the laws of human society within the unconscious mind'.[94] Fantastic literature resembled that of the history of dream-psychology in their shared position as mediator, an ambassador between the realms of that which is visible and manifest and that which is hidden, not yet, or not anymore, between empiricism and possibility in Victorian psychological philosophy. Yet the focus on a vast universal aim, seeking in works of the fantastic traces of a 'heritage of the ideas', which Carl Jung theorised into an inherited, shared psyche evidenced in shared archetypes, runs the risk of skipping over the immediate, synchronic phenomenological experience of the individual with its environment at one particular point in time.[95]

The frustration resulting from universal expectations towards individual texts shines through the work of the inheritors of the psychoanalytic critical tradition of the fantastic, such scholars as Stephen Prickett and Colin Manlove. They wrestle with the, seemingly regressive, pull to mythology, and the difficulties with extrapolating from it a universal interpretation of fantasy's 'nostalgia', its desire to 'escape' to ages past.[96] Edward James and Farah Mendlesohn believe the inconclusiveness of such extrapolations is further complicated through critics generating 'definitions of fantasy, [as] an act of "preference" and "intuition"'. Which definition of fantasy or 'ideological filter' is adopted, Mendlesohn adds, depends primarily on which area of fantasy fictions respective critics are interested, and which argument is being made.[97] Mendlesohn highlights the need to understand the

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[93] Jackson, *Fantasy*, p.6.
[94] Mitchell in Jackson, *Fantasy*, p.7.
[95] Anthony Stevens, *On Jung* (London: Penguin Books, 1991), p.27.
[96] Cf. Stephen Prickett, Victorian Fantasy, 2nd edn (Waco: Baylor University Press, 2005); Colin Manlove, *Christian Fantasy: From 1200 to the Present* (Notre Dame: University of Notre Dame Press, 1992); These views will be discussed throughout the thesis.
[97] James and Mendlesohn, 'Introduction', p.1; Farah Mendlesohn, *Rhetorics of Fantasy* (Middletown: Wesleyan University Press, 2008), p.11.

process of 'the construction of the genre', which, she argues, has been neglected, partly due to the focus on elements of the fantastic, and universal expectations towards them, but most importantly, due to the lack of comparative analysis in fantasy criticism: a field, she notes, dominated by single-author studies.[98]

However, disregarding divides between realism and fantasy literature can be approached, as Frederic Jameson suggests as conveyors of a historical, political and ideological unconscious. As Adam Roberts explains, Jameson's *Political Unconscious* (1982) arose from a desire to combine the merits of Freudian and Marxist approaches to literature and history: the interest in the individual, and in the individual in relation to society, respectively.[99] Thus he focuses on literary form, rather than content, as it 'embodies ideological significance just as much, or perhaps even more than the content': 'no matter how escapist their surfaces, they still embody the economic realities that shaped them': the unconscious of literature.[100] Jameson, for that reason, favours 'semantic' approaches to literature over 'syntactic' ones, such as he sees in Propp, as these are more interested in 'constructing a mode' than 'discovering meaning'.[101] In order to uncover meaning, the notion of genre must be put aside, which he believes existed primarily for its 'strategic value' as an 'institution' and 'contract' regulating the 'proper use of a specific cultural artefact', artificially and retrospectively limiting the scope of its 'unconscious'.[102] Thus, fantastic works have been treated within Victorian literary studies as children's literature and their authors limited to the metier of 'children's writers', thus pre-emptively limiting the themes and scope of their work merits.

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[98] Mendlesohn, *Rhetorics*, p.11.
[99] Adam Roberts, *Frederic Jameson* (London: Routledge, 2000), p.73.
[100] Roberts, *Jameson*, pp.76;83.
[101] Frederic Jameson, *The Political Unconscious: Narrative as a Socially Symbolic Act* (Ithaca, NY: Cornell University Press, 1982), p.110.
[102] James, *Political Unconscious*, p.106.

Jameson instead suggests focusing on the ends of a literary text, which he exemplifies in the use of the Romance narrative, which he finds applied in reality, through Marxist philosophy, in Realism and 'magical narratives' alike. Jameson asserts the 'Romance paradigm offer[s] the possibility of sensing other historical rhythms and Utopian transformations of a real now unshakably set in place' to offer a 'salvational perspective'.[103] Romance, whether in reality, realism or fantastic, mirrors the mechanisms of Tolkien's 'escape', and as Jameson believed it offered an 'imaginary solution', a 'symbolic answer' to 'a real contradiction'. In this sense, this thesis will approach the underlying scientific and philosophical 'unconscious' of fantasy, and its 'recoveries'. James and Mendlesohn define Fantasy according to the practicable 'realism' of its endeavour, stating it 'is the construction of the impossible whereas science fiction may be about the unlikely, but it is grounded in the scientifically possible'.[104] The area that emerges between the two poles defined by James and Mendlesohn – the fantastic writing constructing the *seemingly* impossible by scientific means at the genre's emergence in the second half of the nineteenth century from which this bifurcation eventually emerges – a grey area of criticism, is that in which this thesis is situated.

While this thesis will take into account critical perspectives on them, it emphatically does not set out to redefine, neither the overall theory nor the definition of what is to be considered as fantasy or fantastic literature. This is a response also in part to the concern voiced even by those who have attempted to define it, who admit boundaries of genre are (in)famously fluid. Rosemary Jackson even argues, as the task of fantasy was 'to make visible or manifest', 'all imaginary activity is fantastic, all literary works are fantasies'.[105] Jackson refines Todorov's approach of discussing a work 'in the context of the fantastic as

[103] James, *Political Unconscious*, pp.104-5.
[104] James and Mendlesohn, 'Introduction', p.2.
[105] Jackson, *Fantasy*, p.13.

a genre', and approaches fantasy as a mode, rather than pre-defining fantasy, or the fantastic, as a genre.[106] James and Mendlesohn echo the critical consensus that the definition of fantasy has not proven anything but 'extraordinarily difficult', especially, as it is still most often based on a set of rhetoric structures and symbols. These are often those isolated by Todorov and Propp, although Todorov had even himself highlighted the difficulty of defining, a 'literary genre' in the discussion of the difficulty of genre itself, and the inclusion of texts not considered within its remit, has the potential to hyper-correct and limit rather than expand the field of study.[107] He concludes that a 'deductive' method would result in too 'limited [a] number of cases' to develop a 'general hypothesis', therefore establishing a theory of 'logical coherence' on a flawed foundation.[108]

James and Mendlesohn flag in particular the practical limitations that have arisen in such attempts at defining such a canon of fantasy literature, which, they state, usually results in what individual critics 'value, and exclude what most general readers think of as fantasy', as some examples make evident.[109] Jackson, for instance, concluded the 'best-selling' tales of Ursula Le Guin, C.S. Lewis, Charles Kingsley and J.R.R. Tolkien could not possibly be considered fantasy. Although 'their original impulse' may have had at heart its defining 'unsettling' expression with 'existential dis-ease' through which she defines fantasy, this was because they 'retreat from a profound confrontation' with it, prioritising their tales' 'moral and religious purpose' – despite Adams's and Le Guin's ardent atheism.[110] At the same time Jackson praises as counter-examples, dream-tales such as Lewis Carroll's perplexing final novel-pair *Sylvie and Bruno*, which, as will be discussed later, had a

[106] Jackson, *Fantasy*, p.13; Tzvetan Todorov, *The Fantastic: A structural Approach to a Literary Genre* (Ithaca, NY: Cornell University Press, 1980), p.3.
[107] Todorov, *Fantastic*, p.3.
[108] Todorov, *Fantastic*, p.4.
[109] James and Mendlesohn, 'Introduction', p.1.
[110] Jackson, *Fantasy*, p.9.

profoundly theological undertone. J.R.R. Tolkien, in turn, dismisses as fantasy every tale that uses satire or 'the machinery as of Dream […] to explain the apparent occurrence of its marvels'.[111] Tolkien limits dream-fantasies in a way similar to that in which James and Mendlesohn divide fantasy and science fiction, believing that a writer admitting the fairy-vision merely to be 'a thing imagined in sleep, […] cheats deliberately the primal desire of the heart of Faerie: the realization, independent of the conceiving mind, of imagined wonder'.[112] But the focus on the reality of *what is constructed in* literature, leaves aside the reality that constructs *it*.

All this puts into sharp profile the Victorian fantasy which harboured a firm belief in the possibility of realising its imagined wonders, and which was framed as a dream with all due scientific grounding for this purpose. Within the critical framework of the escape to confront and resolve anxieties, the fantastic, which is situated *within* the scientifically contested realm of the psyche in which so many questions remained unresolved, holds a striking position of synthesising agent and problem solver in the scientific discourse. This thesis will address the questions arising from this, if, and to what extent the construction of the staged psyche corresponded to scientific theories beyond the theoretical kinship of the fantastic with psychology, how the forms of literary dreaming corresponded to then-known, and unknown mechanisms of dreaming, and examine the historical and personal significance of fantasy's conclusions. This thesis will thus take a different turn off the path Jackson pursued when developing 'Todorov's ideas into a more widely based cultural study of the fantastic' by examining through psychoanalysis the more general relation between fantasy and culture. As scholarship pursued more universal conclusions, it has left the territory of fantasy's historicity uncharted, and thus its links with pre-Freudian

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[111] Jackson, *Fantasy*, p.35; Tolkien, 'On Fairy-Stories', p.35.
[112] Tolkien, 'On Fairy-Stories', p.35.

psychology, the personal engagement of the authors with the works, concepts, individuals and institutions of contemporary science, with which they interacted.[113]

A 'legitimate product of science, capable of generating science in its turn': Fantasy in Literature and Science[114]

Despite the frequent presence and narrative importance of dreaming in Victorian realism, fantastic literature and beyond, and the popularity of dream science, there has also been no comprehensive historicist study of the role of science and psychology in Victorian literary dreams or fantasy, as contrasted to the few but significant monographs in Romanticism and medievalism, especially poetry. Historicist elements have featured in infrequent studies of what Edmund Cusick calls 'science-fantasy', which is, however, primarily interested in the degree to which fantasy was prescient of psychoanalysis.[115] And despite the prevalence of the fantastic in children's literature, science has only rarely featured in its studies.[116] The absence of science in fantasy studies has, further, and perhaps most strikingly, been complemented by the absence of fantasy within the growing body of literature and science scholarship. In the past four decades this field has thrived, and, as Alice Jenkins highlights, relied strongly upon historicism, a 'main pillar' to Victorian studies, and has focused on tracing 'cycles of production': an aim Mendlesohn outlined for the future of fantasy studies.[117] Yet Martin Willis records that the interaction of science with literature has been 'widely explored' in Renaissance drama, the Victorian novel, the

[113] Jackson, *Fantasy*, p.7.
[114] James Clerk Maxwell, *Scientific Letters and Papers I*, p.443.
[115] Edmund Gwilym Cusick, 'George MacDonald and Victorian Fantasy' (unpublished doctoral thesis, University of Oxford, 1988), p.86.
[116] Intersections between science, history of science and fantasy have been largely absent from respective companions, such as the *Cambridge Companions* to Children's Literature, or Fantasy, or the *Oxford Handbook of Victorian Literary Culture* (Oxford: Oxford University Press, 2015), but aspects of this subject have been recently approached by Nicola Bown, *Fairies in Nineteenth-Century Art and Literature* (Cambridge: Cambridge University Press, 2001), Melanie Keene's *Science in Wonderland* (Oxford: Oxford University Press, 2013), or Caroline Sumpter, *The Victorian Press and the Fairy Tale* (Basingstoke: Palgrave Macmillan, 2008), which this thesis will discuss in the relevant sections.
[117] Alice Jenkins, 'Beyond Two Cultures: Science Literature and Disciplinary Boundaries', in *Oxford Handbook of Victorian Literary Culture* (Oxford: Oxford University Press, 2015), p.401.

modernist poem, sensation fiction and the Gothic, [and] the Victorian stage', but not in fantasy or science fiction, only the latter of which is tackled in his *Mesmerists, Monsters and Machines*.[118] This thesis, therefore, lastly, and perhaps most importantly, builds on the rich historicist basis of Literature and Science studies, which has created, firstly, vital tools of a critical framework and methodology, and also, secondly, mapped potential pitfalls in cycles of drawing out and challenging methodological difficulties.

Jenkins clarifies the first, perhaps the most important, 'typical oddness' of literature and science studies, as the fetishisation of Literature and Science as binaries, and subsequently grounding of its own methodologies in repudiating old ones in an almost 'ritual' fashion, such as, most prominently that of C.P. Snow's 'two cultures'.[119] Thus, Snow's hypothesis of the complete separation of the cultures, the two 'poles' of 'science' and 'literature', has become 'a synecdoche' for wide conversations of 'science's relations with literary culture against which the critic states his/her own practice'.[120] Such apparently clear-cut binaries, just as the 'labels' of 'literature' and 'science', however, escape clear definition, suggesting instead, potential productive intersections and commonalities.

Responses to the two cultures have thus sought to re-conceptualise these binaries. In George Levine's 'background/foreground' model, for instance, literary criticism conceived of science as a cultural background acting as an 'influence' on literature. Bilateral dynamic models have emerged as most productive ways of engaging with such 'influences'. Thus the 'appropriately' notorious 'one-way traffic' model was challenged by Gillian Beer with

[118] Martin Willis, *Mesmerists, Monsters, and Machines: Science Fiction and the Cultures of Science in the Nineteenth Century* (Kent, OH: Kent State University Press, 2006), p.2; Such works include Gregory Tate, *The poet's mind: the psychology of Victorian poetry 1830-1870* (Oxford: Oxford University Press, 2013); Kirsten Shepherd-Barr, *Theatre and evolution from Ibsen to Beckett* (Oxford: Oxford University Press, 2015); Jill Matus, *Shock, Memory and the Unconscious in Victorian Fiction* (Cambridge: Cambridge University Press, 2011), and the works of Anne Stiles, Nicholas Dames, Sally Shuttleworth, Rick Rylance, Elaine Showalter's and Helen Small which will be referred to in the course of this thesis.
[119] Jenkins, 'Beyond Two Cultures', pp.404-5.
[120] Jenkins, 'Beyond Two Cultures', p.405.

the overwhelmingly influential 'two-way traffic' model, and 'common context' and 'one culture' models fell away, with the latter, in particular, never having been shown never to have been a 'historical reality'.[121] Beer's two-way traffic model has since held particular prominence in discussions of specifically evolutionary theory, and the ways in which it was 'assimilated and resisted by novelists', who, 'with varying degrees of self-awareness have tested the extent to which it can provide a determining fiction by which to read the world'.[122] Beer highlights, with relevance to scientific structures in fantasy, and vice versa, that especially the presence of literary structures in scientific texts contributed significantly to their success as a narrative.

Shapin and Thackray, crucially, note how this mattered particularly in a British context, as the relatively late professionalisation, and the thriving of 'scientific amateurism' meant, they argue, that 'British men of science were more involved with general culture than their counterparts in France and Prussia'.[123] This has emerged to be particularly significant, when Beer's approach was widened to other fields of science, notably, by Sally Shuttleworth's examinations of the interactions of literature with the emerging disciplines of psychology and psychiatry. Shuttleworth asserts that 'it was certainly not the case that literary texts simply drew on emerging scientific theories', and that rather 'the reverse can be shown to be true'.[124]

Key literary works, Shuttleworth shows, played a 'formative role' in the development of the frameworks of child-psychiatry', such as Leonard Guthrie's *Functional Nervous*

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[121] George Levine, *Realism, Ethics and Secularism: Essays on Victorian Literature and Science* (Cambridge: Cambridge University Press, 2008), p.168; Jenkins, 'Beyond Two Cultures', p.406.
[122] Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, 3rd edn (Cambridge: Cambridge University Press, 2009), p.2.
[123] Stephen Shapin and Arnold Thackray, 'Prosopography as a Research Tool in History of Science; The British Scientific Community 1700-1900', *History of Science*, 12 (1974), p.4.
[124] Sally Shuttleworth, *The Mind of the Child: Child Development in Literature, Science and Medicine, 1840-1900* (Oxford: Oxford University Press, 2010), p.3.

Disorders in Childhood (1907) – one of the 'first book-length studies of child psychiatry – which draws case studies from George Eliot's *The Mill on the Floss*, from which it quotes at length.[125] This provides a tantalising precedent for an exploration of the attempts of original scientific theory in scientifically founded fantasy, as this was indeed common practise, and known to authors of fantasy. Lewis Carroll owned many works using literary case studies, such as *The Psychology of Shakespeare* (1859) by psychiatrist John Charles Bucknill. Bucknill praised 'the extent and exactness of the psychological knowledge displayed in [the works of Shakespeare]', which he is convinced could only have arisen from 'diligent observation', crediting psychological accuracy to literary work.[126] Carroll himself approached literature in this way. He notes in his diary that in the course of his scientific self-education he had read the works of Thomas De Quincey besides pioneering works of Victorian Psychology, as he found De Quincey's literature 'full of *information* of all kinds'.[127] Like Bucknill, Carroll appreciates literary accounts of mental states *as* scientific fact, which poses questions as to how Victorians evaluated the scientificity of literature, and the literariness of psychology, and how this changed against the scientific progress throughout the century, and its impact upon society and philosophy.

Literature and science studies has, in turn, produced the 'common discourse' idea, which, while crucial for the approach this thesis takes, has also been perceived as problematic. The premise of 'common discourse' is that Victorian literature and science shared a common language, but Beer warns, scientific and literary discourses overlap only 'unstably', and Jenkins amplifies this concern. While 'tensions and affiliations between literary and scientific expressions and ideas are created as different disciplinary groups use

[125] Shuttleworth, *Mind of the Child*, pp.15-6.
[126] John Charles Bucknill, *The Psychology of Shakespeare* (London: Longman, 1859), p.vi.
[127] *Lewis Carroll's Diaries: The Private Journals of Charles Lutwidge Dodgson (Lewis Carroll): The first complete version of the nine surviving volumes with notes and annotations*, ed. by Edward Wakeling, 10 vols (Luton: Lewis Carroll Society, 1993) II, pp.130-1.

similar words, phrases and metaphors for different purposes', she warns.[128] Sharing 'a language with another group, or to use a discourse that overlaps with theirs', while it 'implies a degree of shared or overlapping knowledge or belied', 'does not imply the smooth access to one another'.[129] Levine warns of the 'absurd' and 'dangerous' fallacy of *considering* science literature.[130] Yet, common linguistic features *can* also be applied to a common purpose, and include efforts to provide access.

Ralph O'Connor overcomes the apparent tension established by Levine by examining science *as* literature in the same way as Todorov had considered realist texts *as* fantastic, and Jameson had focused on the 'unconscious' of a text: the inevitable traces of historical origin. O'Connor picks the imagination as the lens through which to examine this 'unconscious'. He makes the case that fantastic elements not only came to bear as an optional and indulgent avenue when empiricist and materialist limits were exhausted, but were in fact integral to nineteenth-century science. As the geologist Hugh Miller asserted, every 'man who enter[ed] the geological field in quest of the wonderful, need[ed] to pass […] from the true to the fictitious' at one stage. In 'oceans of fossil descriptions', 'islands' of 'poetic passages' allowed to 'look behind' and 'glimpse the indescribable' – make visible – 'sensations underlying the whole', those things in science which were longed for but not (yet) achieved.[131] Diffusion models that imagine a 'docile' recipient of popularised science fail to fully conceptualise the nature of the nineteenth-century scientific discourse in which the 'mind's eye was given more exercise than its present-day equivalent' and the

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[128] Jenkins, 'Beyond Two Cultures', pp.408-9.
[129] Jenkins, 'Beyond Two Cultures', p.409.
[130] Levine, *Realism, Ethics and Secularism*, p.167.
[131] Ralph O'Connor, *The Earth on Show: Fossils and the Poetics of Popular Science, 1802-1856* (Chicago: University of Chicago Press, 2007), p.4.

'written word' which was 'widely felt to be the most reliable vehicle for calling up those pictures in the mind's eye'.[132]

In an environment of rationalisation and empiricism, not only literary writers but especially also scientists, such as John Tyndall, extolled the visionary power of the imagination as a crucial handmaiden to science. Tyndall understood it 'as a mode of transport towards a place where knowledge might be discovered by rational investigation'.[133] This was possible, first, through its capacity for reflection, a literary quality, which he finds in works such as Bain's *Logic w*hich acted to him as a 'mirror of my own condition'.[134] Here Victorian scientific writing reflects the advancement in psychological thought. John Locke in his *Essay Concerning Human Understanding* (1689) responded to the 'hypothesis the thoughts of a sleeping man ought to be the most rational', that 'the soul in [...] a state of thinking' was, in fact, '*not* perceived in a sleeping man', but was then instead as passive as 'a looking-glass', 'which constantly receives variety of images, or ideas, but retains none'.[135] Instead of being only capable of replicating what it knows, the likes of Tyndall believed, the scientific imagination of Victorian unconscious was active, and, what is more, could in its autonomy be directed.

Its attraction was also as a curative: Tyndall highlights 'the *griefs of thought* are more patiently borne when we find that they have been experienced by another'.[136] Imaginative science writing took the reader 'behind the drop-scene [...] to show you the hidden mechanism' the psychology of perception, cognition, and formation of knowledge, where

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[132] O'Connor, *Earth on Show*, p.5.
[133] Martins Willis, 'Imaginative Mobilities', in *Staging Science: Scientific Performance on Street, Stage and Screen*, ed. by Martin Willis (London: Palgrave 2016), p.3.
[134] John Tyndall, *The Scientific Use of the Imagination: A Discourse, Delivered before the British Association at Liverpool* (London: Longman, 1870), p.3.
[135] John Locke, 'An Essay Concerning Human Understanding', in *The Works of John Locke in Nine Volumes*, 12th edn (London: Rivington, 1824), I, pp.85-6.
[136] Tyndall, *Imagination*, pp.3-4.

the imagination 'grapples with a subject of enquiry, wrestles with it, overcomes it'.[137] It thus not only drew out and reflected scientific problems, and posed a 'mental diagnosis' but also enacted the process of engagement leading to resolution and putting the mind at ease.[138] The science teacher, and thus the imaginative science writer, Tyndall asserted, had to make their students 'copartners in thought', to share this process. If 'scientific exposition [was] conducted in this way', Tyndall concludes, it would be 'possible […] to uncover to some extent the unseen things in nature'.[139] The use of the imagination in science held the potential to 'make visible', produce a collective enlightenment and mental cure, mirroring the double life of the Victorian literary dream. Reflecting scientific problems and diagnosing anxieties, it illuminated processes and mechanisms, suggested resolution and thus 'cured' the anxieties arising from them. Analogously, the fantastic offered explanations, and facilitated for the strained mind a catharsis from anxieties of unsolved scientific problems, and could, if founded upon scientific fact, advance scientific theory.

Others, however, found the imagination too uncontrolled a force to be applied to scientific fact: the anxiety about the nature of unconscious still reverberated. But dismissal was not categorical. Michael Faraday had judged reason 'the noblest', but imagination 'the most enticing' means of pursuing science, reflected in the use of metaphor in the nomenclature of his scientific discoveries: the electric current, anode and cathode.[140] Metaphors like Locke's 'looking-glass' were evoked to *embody*, to make graspable and enact the limits of perception encoding mental functions in optic devices enhanced by metaphoric

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[137] Tyndall, *Imagination*, pp.4-5.
[138] Tyndall, *Imagination*, p.2.
[139] Tyndall, *Imagination*, p.5.
[140] Alice Jenkins elaborates on these in *Space and the 'March of Mind': Literature and the Physical Sciences in Britain*, 1815-1850 (Oxford: Oxford University Press, 2007), and *Michael Faraday's Mental Exercises: An Artisan Essay Circle in Regency London* (Liverpool: Liverpool University Press, 2008) which will be discussed in more detail in Chapter 2.2. of this thesis.

imagination. These enchanted optical devices such as microscopes and telescopes, or 'Magic Glasses', as Arabella Burton Buckley called them, had currency in physical and popular sciences as means to transcend the physical limitations of human perception, and, by metaphorical extension, also the limitations of human understanding.[141] As the 'bodily eye […] cannot see the condensations and rarefactions of the waves of sound'; 'we constructed them in thought', Tyndall stated. It was the fantastic elements, imagination in science, guided by scientific 'syllogism and mechanical laws' that carried 'our experience into a new region', and back into 'the world of sense', and 'always [landed] on the solid shores of fact', an act of 'creation' producing 'something more than a mere figment of the scientific fancy'.[142]

One of the most absolute claims on the power of fantastic narrative elements in science, however, came from James Clerk Maxwell. While he criticised Tyndall's reliance on the 'leap of the imagination', imaginative elements were paramount to Maxwell, too, as they overcame the 'limiting [of] the range and free play of thought [by] both positivist phenomenalism and *a priori* systems of mathematics'.[143] Imaginative elements, he believed, must be, like metaphor and analogy, rooted in the law of nature. Analogy, Maxwell defines, is 'one truth is hidden under two expressions', like 'a natural growth on the inner side of the mind' it was an expression of a '*real* inter-dependence'.[144] As such, he believed, metaphor and analogy were thus to serve as stepping stones for the scientific imagination.[145] While analogy was immensely appealing and 'at the heart of some of the period's most important scientific structures' such as the 'unity of nature', evoking the

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[141] Arabella Burton Buckley, *Through Magic Glasses, and Other Lectures* (London: Stanford, 1890).
[142] Tyndall, *Imagination*, p.10.
[143] Daniel Brown, *The Poetry of Victorian Scientists: Style Science and Nonsense* (Cambridge: Cambridge University Press, 2013), p.73 [my emphasis].
[144] James Clerk Maxwell, 'Are there real analogies in nature?', in *The Life of James Clerk Maxwell with a Selection from his Correspondence and Occasional Writings and a Sketch of his Contributions to Science*, ed. by Lewis Campbell and William Garnett (London: Macmillan, 1882), pp.235-6 [my emphasis].
[145] Tyndall, *Imagination*, p.6.

Romantic idea of a universal law in nature, but they were, as Jenkins warns, not without risk.[146] Maxwell himself was wary of tautology, of too 'readily imposing our forms of thought upon the phenomena of nature'. He was concerned where analogy expressed only 'partial similarity between the laws of one science and those of another' which made them merely 'illustrate the other'.[147] But due to their natural, *material* basis analogy and metaphor could, he believed, generate new knowledge, if this basis was adhered to consistently:

> The characteristic of a truly scientific system of metaphors is that each term in its metaphorical use *retains all the formal relations* to the other terms of the system which it had in is original use. The *method is the truly scientific* – that is, not only a *legitimate product of science*, but capable of *generating science in its turn*.[148]

Thus, anxieties about the limitations of analogy and metaphor did not limit the popularity or productiveness, and as analogy was crucial to Maxwell as the imaginative extension to science, so poetry was, vice versa, the means for 'establishing epistemological foundations of scientific discovery'. Thus, when Maxwell ventured to contribute to an incomplete scientific field to create new knowledge, his contribution is, naturally, to psychology, in the form of a poem on the subject of dreams.[149]

'Recollections of Dreamland' acts almost as a keynote to Victorian fantastic dream-novels. The scientifically trained dreamer, in critical self-reflection, weighs up personal gain and theory of dreaming. His account traces the soul 'retiring inward'. It leaps from 'facts and figures' into the 'boundless' inner space, an array of functions of dream thought, in which 'vague emotions rise and ripen into thoughts and words and deeds' anticipating such theories as Sully's revelation of the noble hidden real self, which directs unfinished waking thought to moral conclusion. 'Old impressions long forgotten' are revisited, and

[146] Jenkins, 'Beyond Two Cultures', p.411.
[147] Maxwell in Brown, *Poetry of Victorian Scientists*, p.57.
[148] James Clerk Maxwell, *Scientific Letters and Papers I*, p.443.
[149] Brown, *Poetry of Victorian Scientists*, p.56.

dream's 'fancies' 'link[in] the past and present into one continuous life' result in insights 'to grow and ripen, hidden in some living breast', evoking the same identity-shaping, 'autobiographical importance' of revisiting memories as in Dickens.

But Maxwell's narrator steps back, and by means of a 'hydrodynamic' analogy of the mind examines 'the peculiar personal forces that compose its subconscious ground'.[150] Were the 'bubbles floating upwards through the current of the mind' merely 'lawless force', or did they trace back the 'stream of conscious action' to its source arising from 'where the self in secret lies', between 'rocks and eddies hidden in the depths below'? Maxwell evokes the geological analogy for psychology, which, present also in Sully's 'sub-strata' via which it eventually finds its way into the writing of Freud, imbued with scientific meaning during the Victorian age. Maxwell's is thus not purely imaginary, but a fundamentally mechanistic model of the unconscious mind. Whether it is the critical, or the personal perspective that is supported by the narrator, is resolved in the concluding couplet, in which the dreamer 'rise[s] afresh' and see their duty 'lie before [them] straight and plain' as the narrator has gained the clearer thought suggested by Tolkien as being the ultimate aim of fantasy. The dream activity is shown to be a functioning mechanism for producing insight, unconscious thought, moral, but materially-based, not purely spiritual.[151]

In poetical analogy Maxwell provides a fictional account of an as yet original scientific theory and even Cobbe in her reservations concurred that this was the 'evidence that there is a real law of the human mind causing us constantly to compose ingenious fables explanatory of the phenomena around us […] which resumes its sway even over the well-tutored brains when they sleep'.[152] The well-tutored brain, perhaps, being the reason it

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[150] Brown, *Poetry of Victorian Scientists*, p.75.
[151] James Clerk Maxwell, *Scientific Letters and Papers I*, p.443.
[152] Cobbe, 'Dreams', p.513.

produced such fables, gave the likes of George MacDonald – fantasist, theologian and trained scientist – reason to believe that the greatest an educated man can do for another, was ‘to rouse’ the most powerful force within him, from the regions of the ‘uncomprehended’: the ‘fantastic imagination’.[153]

The science of Tyndall, Faraday or Maxwell provided a toolkit of literary scientific devices, to which the metaphors and analogies in fantastic literature did not correspond by coincidence but by kinship. Accordingly, such work as O’Connor’s on the scientific imagination, and Jenkins’s and Daniel Brown’s work on metaphor and analogy in science have come closest to the scientific functions of fantastic literature. Without the latter being specifically their subject, they thus define an important critical foundation for the crucial role of the fantastic in science, and vice versa. Metaphor and analogy, like Tyndall’s idea of the imagination, were spatially framed terms: metaphor, ‘carrying from one place to another’ in one concept, and analogy as a more complex philosophical argument. Concerned with generating access to a different field (another spatial metaphor) of knowledge – on the basis of a known, towards an unknown field – they sought to fill the voids of the ‘incomplete’ sciences, such as psychology, on the basis of more ‘complete’ sister disciplines, such as geology. Imaginative elements mobilised science, broadened its participatory basis, and were thus a precondition of its advancement. Through them, disciplines became fluid, the vehicle of the imagination enabled tentative advances, and thus, in turn, scientific knowledge ceased to ‘reside within the scientific discipline that produced it’.[154] Between the start and end points of an idea entering the public discourse and a scientific discovery manifesting, this process of what Willis describes through Secord’s term of ‘science in transit’ takes place, ‘mobilising science’ through the

[153] MacDonald, ‘Fantastic Imagination’, p.313.
[154] Willis, *Mesmerists*, p.236.

transmission of scientific knowledge through non-scientific texts.[155] As Gillian Beer explains, scientific discovery first occurred in the non-material imagination of scientists, and in order to become a scientific revolution it must in this non-material way not only manifest ‘in the minds of scientists but in the belief of other inhabitants of the same culture’.[156] Most significantly, their acquisition must be shared by modelling the process of the understanding and incorporation into the individual psychological fabric. An effective way of so doing was the ‘making visible’ and enacting of this process; before a scientific discovery can begin its journey to become a ‘common sense’ fact, it reaches out to metaphor, to analogy, which, as Beer states describes the ‘willed, half-consciously fictive and incomplete nature of hypothesis’ that is epitomised in fantastic literature into narrative form.[157]

This thesis will thus probe how the common use of scientific language, including such metaphor and analogy that arose from the richness of the Victorian psychological discourse and its undercurrents, informs and illuminates the use of identical images in Victorian fantasy of such scientifically minded writers, such as Lewis Carroll’s *Through the Looking-Glass* (1871), or the microscopic fantasies of Charles Kingsley’s *Water-Babies* (1862-3). In the context of their scientific grounding, this thesis will explore the extent to which these metaphors and analogies, enhanced by imaginative processes, were rooted in science, granted access into creative scientific thought, and were employed to both scientifically productive ends and curative mental purpose in the psychological realm of the unconscious and the dream. Where the scientific realm discussed the dangers, the

[155] Willis, ‘Imaginative Mobilities’, p.3.
[156] Beer, *Darwin’s Plots*, p.1.
[157] Beer, *Darwin’s Plots*, p.2.

fantastic pursued the lesser discussed discourse of what results might emerge from combining the two.

It is crucial to reiterate warnings, such as Jenkins's, that despite, or precisely because of analogy having emerged as the 'central gesture of literature and science studies', underpinning its 'methodological proceeding' and forming 'often the key part of our form of argument', scholarship must remain alert to 'excess of its own analogical practices'.[158] Beer also notes the 'sense of trepidation as we follow the analogy through its various stages lest we are arriving at the point where the parallels depart', which leave the void for scholarly conclusion, beyond which the 'leap of imagination' unaided by fact ever beckons into the pitfall of undue, retrospective historical generalisation.[159] In response, Jenkins posits as the two opportunities for future history of science scholarship the need to 'become better historians' to determine connections not on the basis of mere semblance, and 'develop an understanding of analogies and similarities in our primary texts and the cultural field surrounding them'.[160] One is a matter of historicism, the other a matter of literary form in the context of historicism, which will together form the basis for the structure and content of this thesis.

As its leading tenet this thesis will reflect what Allan Hobson has identified as a paradigm shift, which has in fact been occurring across disciplines. Hobson observed a turn away from a focus on elements to a focus on structures and processes in dream studies of the second half of the twentieth century, which mirrors the scholarly paradigm shifts in fantasy and literature and science studies. This thesis is structured by the three types of visions it examines: dreams, morbid visions and death-visions – visions experienced in and beyond

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[158] Jenkins, 'Beyond Two Cultures', p.411.
[159] Beer, *Darwin's Plots*, p.74.
[160] Jenkins, 'Beyond Two Cultures', p.413.

death – and sets out to examine the recreation of mental processes, while drawing upon, and aiming to further, past scholarship into the use of images for metaphoric and symbolic value. It is through this scientific yet linguistic, metaphoric imagery that meaning is carried forward and made visible, and it is the aim of this thesis to examine the contribution made to literary and scientific discourse, and evaluate what the fantastic enabled that science and literature were perhaps incapable of. In the sense of Jameson, it will examine fantastic literature's scientific unconscious, and explore the causes from which literary forms arise, to illuminate the reasons why certain narrative structures were adapted for the portrayal of scientific phenomena by the respective authors, and to what ends. The fact that these are shared becomes the basis for this classification**.** On this basis it will probe in how far Victorian fantasy acted as the 'unconscious' of Victorian literature.

Its second tenet, thus, arises from historicism. This thesis shares the aim formulated by Jackson, while not necessarily sharing the means by which she pursues it, namely linking what is manifested in text to historical context and influences, not by retrospective means of applying twentieth-century apparatus to nineteenth-century text. This thesis responds to Jenkins's and Willis's calls for keen historicity and historianship and an understanding of the meaning of such devices as analogy in primary text and historic context, by unearthing the nineteenth-century apparatus.

Each of the three sections is prefaced with an initial discussion of the scientific biographies and psychological studies of the primary authors this thesis treats – George MacDonald, Lewis Carroll and Charles Kingsley – framed within their contemporary scientific discourse. This is almost exclusively drawn from extensive and original archival research, often through little, or indeed, never-before examined sources. This precursory exploration of the medico-historical context has been dramatically absent in each of the authors, especially in the case of MacDonald, in whose biography these were obscured, actively

and passively, and in Carroll and Kingsley, whose contemporary preoccupations with psychology have, for different reasons, gone almost entirely unmentioned in. Their inclusion radically changes the tone of how these authors have hitherto been conceived of, as the subsequent literary case studies will show.

The first section, 'Inner Worlds' will examine dream narratives that follow one uninterrupted narrative arch with a largely introspective focus on the dreamer's mind, its functions and malfunctions. A historical preface will reconstruct George MacDonald's study of science and psychology at King's College, Aberdeen. It will shed light on key influences on MacDonald's scientific biography: his engagement, firstly, with Common Sense philosophers, faculty psychology and physiologically-based models of science, secondly, with applied science, focused at the improvement of social issues, such as practised by William Gregory and Justus von Liebig, and, thirdly, the dialectic and integrative models of German scientific philosophers such as Schelling and Hegel, and their literary adaptions by such writers as Goethe and Novalis.

As neither applied science nor integrative philosophies *rejected* rationalist approaches to science, but found different ways to integrate scientific rationalism into wider philosophies, the case studies in this section's two sub-chapters will re-examine George MacDonald's *Phantastes* (1858) and Lewis Carroll's *Alice's Adventures in Wonderland* (1865), which have, in different ways, been discussed as primarily as rejections – of science, in MacDonald's case, or rationality, in Carroll's. Instead the chapter in this section will examine the metaphoric exploration of the dialectic workings of the mind through the dream in *Phantastes*, the first Victorian fantastic novel, and how the dream as curative means rebalancing the mind through the integration of the imagination in intellectual and individual psychological development. The following chapter will discuss Lewis Carroll's

Alice, as, simultaneously, an adaptation and parody of the dream-narrative and its cathartic aims. Rather than a rejection of sense, it will examine how *Alice* exposed its hypocritical manifestations, through theory and imagery drawn from the Victorian psychiatric discourse, and advocated an alternative, 'true' manifestation of sense. It will show how this is enacted by through elements from the emerging psychological discourse of performance science. This section will thus substantiate how Victorian fantastic dream narrative engaged with psychology out of a concern for the individual.

The second section, 'Between Worlds', will consider morbid visions, the fragmented, intermittent visions arising from physiological illness. This section will focus on the phenomenological dimension tracing the interactions between environment, mind and body. The precursory historio-biographical section will reveal Lewis Carroll's profound and extensive autodidactic study of psychology and medicine, focusing on the particularly well-substantiated, but little-researched *fin-de-siècle* period of Carroll's psychological thought, in which it was both representative and innovative. Through his scientific contributions to newspapers, correspondence with professional scientists, and, most notably, his substantial, and not yet extensively examined, scientific library to which his final literary works make copious references, it will reconstruct Carroll's psychological knowledge, of, on the one hand, physio-psychology and the evolutionary psychology's discussion of dynamics between environment, body and mind, and, in this context, degeneration and recapitulation theory. On the other hand, it will also trace, through his diaries and personal correspondence, the questions, unanswered and unanswerable, and, therefore, anxieties that arose from his study, which are mirrored in the Victorian resurgence of spiritualism and transcendentalism, which Carroll also studied.

As with MacDonald, Carroll's scientific preoccupations emerge thus not opposed to, but complementary to his intellectual, spiritual and literary endeavours, rather than the result of a suspected 'split personality', and the following chapter will explore how this illuminates in particular Carroll's and MacDonald's *fin-de-siècle* literary 'experiments', which, with their intellectual complexity, have perplexed and frustrated scholars. Discussing the numerous theoretical attempts to theorise, and thus control unconsciously received external influences, such as Spencer's algebraic cognizance, Carpenter's unconscious cerebration, or Bushnell's' moral atmosphere', the first chapter of this section will crystallise how, through psychologically scientific fiction, Carroll hoped to refine the 'common denominator' of these theories in his *Sylvie and Bruno* novels to draw true conclusions about the possibility of free will and moral action his novels discussed (1889; 1893). Similarly, with aligning paradigms from geology, evolutionary biology and psychology, divine creation with ideas of the fourth dimension, MacDonald's *Lilith* (1895) attempted to practically address the dangers arising from fluid cerebral boundaries between mankind and animal. The second chapter in this section will fathom how MacDonald hoped to revert and control degeneration through an attempt to create nothing less than a universal philosophy. This was his response to a fragile epistemological atmosphere, as Sally Ledger and Roger Luckhurst note, which was at constant risk of 'dissolving without some organizing framework' that he thus sought to create.[161] Thus, this section will substantiate how Victorian fantastic morbid visions engaged with psychology out of a concern for the intellectual discourse, due to its crucial role in the psychological – that is intellectual and spiritual – evolutionary progression of mankind.

[161] *The Fin de Siècle: A Reader in Cultural History c.1880-1900,* ed. by Sally Ledger and Roger Luckhurst (Oxford: Oxford University Press, 2000), pp.xxii-xiii.

The third section, ‘Beyond Worlds’, will consult visions experienced in dying and death, examining chiefly Charles Kingsley’s *Water-Babies* (1862-3). Cut off from the world of the living, the worlds grounded in this world, but played out in a realm separated from it, this section will cast a glance backwards to Kingsley’s externally focused, and more explicitly political visions, to also give an outlook, towards the ways in which this specific narrative form was re-purposed by the inheritors of the fantastic traditions in early science fiction of the twentieth century. The preface will study Kingsley’s so far unnoted psychological thought expressed in his natural history, theological and literary writings, and its commonalities with the psychology of Herbert Spencer’s early sociology, and environmental psychology. It will look at the link between the circumstances and symbolism of death, and their link to utopianism, and, especially in later adaptions of this narrative form, dystopianism. The subsequent chapter will thus be able to illuminate so-far cryptic imagery and its psychological meanings, through studying Kingsley’s material texts also in its periodical context, pointing out unmentioned intertextualities, also with Carroll and MacDonald, through which Kingsley attempted a radical scientific redefinition of theological concepts of the soul, salvation and miracle, through which his narrative lent itself to secular adaptations. This section will substantiate how Victorian fantastic death-vision narratives engaged with psychology out of a concern for the future of society.

This thesis will conclude by evaluating how scientifically reframing the works of pioneers of fantasy resituates them in relation to the inheritors of the fantastic tradition. Examining the evidence that the fantastic did not escape from science, but emerged from an engagement with it, as a problem-solving, discursive space, rooted in reality, to which, and to whose benefits it returned to be applied, the conclusion will assess psychology and the fantastic literary vision as sister disciplines. Thus this thesis will aim to redefine the ‘wonderlands’, the fantastic dream-spaces emerging from the minds of scientifically

inclined pioneers of Victorian fantasy, to highlight how the twofold influence of the engagement of the early pioneers of fantastic literature with psychological science on themes and structures, and how the common origin, can shed light on the theoretical bifurcation of fantasy and science fiction, and how the commonalities in origins of these genres might be able to enrich examinations of what these elements have, in the past, and can still, in the future, enable them to do.

1. Inner Worlds: Dreams, and the emergence of fantastic literature

This book will make a traveller of thee,
If by its counsel thou wilt ruled be;
It will direct you to the Holy Land,
If thou wilt its directions understand.
John Bunyan, *The Pilgrim's Progress*[1]

The two first and most influential fantastic dream-novels of George MacDonald and Lewis Carroll emerged within five years of each other from common interests and a shared philosophical background, but distinctly different historical and biographical circumstances. In August 1858, the 29-year old George MacDonald returned to his hometown, Huntly, in the Scottish Highlands for the third funeral in three years. He buried his father and his brother John next to his sister Bella, his beloved brother Alec, and two of his younger brothers and mother, whom he had lost in early childhood. Troubled in his first clerical position which he was to shortly lose, the freshly-married young father, struggling himself to recover from bouts of tuberculosis – the 'family attendant' that was to claim several of his children – was steeped in the 'sorrowful night of death' in which he sought 'comfort'. Thus, he set to finish his work on *Phantastes* (1858), 'a sort of fairy tale for grown ups', a vision that 'had about it', as C.S. Lewis wrote, 'a certain quality of […] good Death'.[2] Five years later, MacDonald received the manuscript of a fairy tale extemporised on a carefree 'blazing', 'golden afternoon' boating along the river Thames to the three young daughters of the Dean of Christ Church, Oxford, by the mathematician and deacon Charles Lutwidge Dodgson: the manuscript of *Alice's Adventures Under Ground*

[1] John Bunyan, *The Pilgrim's Progress from This World to That Which Is to Come; Delivered under the Similitude of a Dream* (London: Folio Society, 1962), p.12.
[2] *The Letters of George MacDonald*, ed. by Glenn Sadler (Eerdmans: Gland Rapids, 1994), pp.129-30.

(1863).[3] Originally gifted to Alice Liddell, Carroll agreed to publish it as *Alice's Adventures in Wonderland* (1865) only after begging from MacDonald's son Greville.[4]

Although the genesis of the two extraordinarily influential first novels of MacDonald and Carroll appears as different as night and day, the lands into which the protagonists venture seem, at times, merely different regions of the same fairy country. Both, *Phantastes* and *Wonderland*[5], are uninterrupted dreams with a single narrative arch drawing on the structure of the classical katabasis: the underground journey into the realm of sleep and death that serves as a psychological mirror of the waking world. Yet both authors draw on different aspects of contemporary dream-psychology in order to enhance the dream's narrative functions. MacDonald's night-dream is an exploration of the individual psyche of a young man. It aims to resolve the psychological strain caused by the epistemological conundrum of how to pursue knowledge in such a way as to improve both the individual that sought it, and the society of which they were part through it. In his day-dream, Carroll draws on the dream narrative's satirical potential, focusing on the external forces, embodied traditionally in katabatic grotesques and allegories, shaping the mind of a girl child to show the ways by which society is *not* improved, and yet, likewise seeking to facilitate the reader's catharsis. This first section will fathom what the purposes to which psychological ideas were applied in their texts may reveal about the authors' early engagement with the unconscious and its products at a nascent stage of this science, and how fictional treatments of scientific questions illuminate the practices and limitations of mid-Victorian psychology and psychiatry, and, perhaps, enhance them.

[3] Alice Liddell Hargreaves and Caryl Hargreaves, 'Alice's Recollections of Carrollian Days, as told to her son, Caryl Hargreaves', *Cornhill Magazine*, July 1932, p.8.
[4] Greville MacDonald, *George MacDonald and his Wife* (London: George Allen & Unwin, 1924), p.342.
[5] This thesis will adhere to the standard abbreviated forms of Carroll's novels as *Wonderland* and *Looking-Glass*, as specified in the 'Notes on Conventions'.

1.1. George MacDonald, Natural Science, Romanticism and mid-Victorian psychology

George MacDonald's reception in literary criticism and biography is paradoxical. On the one hand, he stands out through his extraordinary popularity among Victorian and early-Edwardian audiences. Reviewer Louise Willcox called him 'a giant amongst pygmies' compared to Thomas Hardy and George Meredith, and his obituary in the *Athenaeum* praises a man 'distinguished for many years above the crowd of authors who were his contemporaries' whose 'fairy tales' have 'never been surpassed'.[1] His work had an immense literary impact upon such twentieth-century authors as H.G. Wells, W.H. Auden and G.K. Chesterton who called MacDonald's *Princess and the Goblin* a 'book that has made a difference to my whole existence'.[2] J.R.R. Tolkien and C.S. Lewis referred to MacDonald as their 'master'.[3] To Lewis, MacDonald was nothing short of a genius: 'Many myths were made in prehistoric times, and I suppose not consciously by individuals at all. But every now and then there occurs in the modern world a genius – a Kafka or a Novalis – who can make such a story. MacDonald is the greatest genius of this kind who I know'.[4]

Such perspectives stand in stark contrast to MacDonald's virtual absence from the literary canon. Sparse mention of him in criticism of the fantastic and Victorian literature is consistently noted with concern by his biographers and critics, such as John Docherty, Roderick McGillis, John Pennington and Rolland Hein.[5] William Raeper, however, also observes that the image of MacDonald as 'unjustly neglected author' has 'almost become a

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[1] Louise Collier Willcox, 'A Neglected Novelist', *North American Review* (7 September 1906), p.303; 'George MacDonald', *The Athenaeum* (23 September 1905), p.400.
[2] G.K. Chesterton, 'Introduction', in Greville MacDonald, *George MacDonald and his Wife* (London: George Allen & Unwin, 1924), p.9.
[3] J.R.R. Tolkien, 'On Fairy Stories', p.74; C.S. Lewis, *George MacDonald: An Anthology* (London: G. Bles, 1946), p.1.
[4] Lewis, *Anthology*, p.1.
[5] John Docherty, *The Literary Products of the Lewis Carroll – George MacDonald Friendship* (Lampeter: Edwin Mellen Press, 1995), p.xi; John Pennington and Roderick McGillis, 'Introduction', *Behind the Back of the North-Wind*, ed. by John Pennington and Roderick McGillis (Handen, CT: Winged Lion Press, 2011), p.vi; Rolland Hein, *George MacDonald: Victorian Mythmaker* (Eugene, OR: Wipf and Stock, 1993), p.xxii.

cliché', which raises questions as to why this appears to remain the status quo, and whether this characterisation may have distorted biographical accounts.[6]

John Pennington opposes the idea that MacDonald has fallen into oblivion by historical circumstance or active scholarly neglect. He suggests instead a shift in readership. As the 'founder', as Pennington believes, 'of a literary genre: religious fantasy' MacDonald was assured 'to have a readership for the foreseeable future' primarily recruited from those interested in C.S. Lewis, who prominently linked his conversion to Christianity to reading MacDonald.[7] Pennington thus also provides an explanation for why the overwhelming majority of recent criticism has treated MacDonald primarily as theological thinker and writer, this being the direct result of this shift in readership. Strikingly, as most works maintain the focus on Christian aspect in MacDonald's works, a scholarly consensus has become established that the '*goal*' of his writings was a missionary one, namely to convey 'a sense of the immanent God' to 'those spiritually open to it', as Manlove asserts.[8]

In due course, Christian readings have, somewhat recursively, become asserted as the most appropriate critical approach to MacDonald: Rolland Hein is representative in his view that despite MacDonald's continuing to 'appeal to diverse audiences', due to which '*some* scholars *believe* that MacDonald's fantasies *may be* contemplated quite apart from Christian doctrinal considerations', the latter approach has rightly 'won the day'.[9] Yet despite scholarship having subjected his fiction to diverse and thorough theological readings, from the history of the church fathers, to mysticism and new testamentary readings, such interpretations have consistently found MacDonald's works 'inconclusive'

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[6] William Raeper, *George MacDonald: Novelist and Victorian Visionary* (Tring: Lion, 1887), pp.11;46.
[7] John Pennington, 'A "Wolff" in Sheep's Clothing', in *George MacDonald: Literary Heritage and Heirs*, ed. by Roderick McGillis (Wayne: Zossima Press, 2008), p.241.
[8] Colin Manlove, *Christian Fantasy: From 1200 to the Present* (Notre Dame: University of Notre Dame Press, 1992), p.166 [my emphasis].
[9] Hein, *Mythmaker*, p.xxii [my emphasis].

and 'impenetrable'.[10] And that Lewis's praise of his 'master' highlights, above all else, his capability of composing modern myths – narratives that speak with some degree of universality for a time or people – indicates a broader intellectual basis of MacDonald's writing than a purely religious one.

In this context it stands out that critics have ignored or indeed dismissed the role of science in MacDonald's life and work, uniformly, and almost compulsively, stressing the strong 'general belief among critics' that he categorically 'rejected science altogether', or as Manlove asserts even more emphatically than Hal Broome, that he 'turned away' from all pursuits of science '*absolutely*', allowing it, as Manlove states, '*no place* in the discovery of *worthwhile* knowledge'.[11] Nearly every one of MacDonald's more than forty novels, however, features doctors, students of science and medicine as protagonists, all with strongly autobiographical traits, mirroring MacDonald's own equally little-discussed scientific education. As a prominent part of the novels' plots they ponder the same epistemological paradigm changes of their times as their author. These fictional portrayals were considered so accurate that fellow student William Duguid Geddes, later principal of the university, referred to them as the 'Classic Epic of Student Life in Aberdeen'.[12] And it was particularly because of their innovative engagement with scientific ideas, that later readers of MacDonald's novels such as H.G. Wells took an 'exceptional interest' in them, praising, for instance, the treatment of optical polarisation in *Lilith* (1895) as 'neat in the extreme'.[13] When reconsidering the status of science in MacDonald's biography, it is

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[10] Docherty, *Friendship*, p.366.
[11] F. Hal Broome, 'The Scientific Basis of Macdonald's Dream-Frame', in *The Gold Thread: Essays on George MacDonald,* ed. by William Raeper (Edinburgh: Edinburgh University Press,1991), p.88 [my emphasis]; Colin Manlove, *Modern Fantasy: Five Studies* (Cambridge: Cambridge University Press, 1975), p.58 [my emphasis].
[12] Greville MacDonald, *MacDonald and his Wife* (London: George Allen & Unwin, 1924), p.57.
[13] H.G. Wells in Greville MacDonald, *Reminiscences*, p.323 (cf. Appendix II).

evident that, far from rejecting it, he in fact engaged with its developments, discoveries and conundrums all his life.

For an exploration of the interplay of MacDonald's fiction with scientific ideas, it is crucial to firstly reconstruct the engagement with them, which has not been in any substantial way acknowledged. George MacDonald's scientific biography begins in 1840, when he won a bursary to study for a four-year A.M. (Artium Magister) at King's College, Aberdeen. It was a period which profoundly shaped MacDonald's scientific knowledge, philosophy and the way in which to he expressed his engagement with it. MacDonald's broad and contextual knowledge of scientific developments of his day had been formed by his education: Aberdeen 'pointed with pride' to the breadth of their degrees which covered 'every department of literature and science'.[14] MacDonald's degree covered such subjects as Mathematics, Ancient Greek and Latin, Natural History, Natural Philosophy and Moral Philosophy, reflected in his fiction.[15] Lectures in Moral Philosophy were based on those designed by the Scottish pioneer of psychology James Beattie (1735-1803) and focused on dreaming and the nature of the soul – themes which will dominate MacDonald's fantasies – as well as principles of poetry, logic, the function of language, upon which the author himself later lectured.[16] MacDonald also read profusely, and as his letters written home during his time at university reveal, science was an interest he had in common with his father. He mentions to his father in 1845 that he had just read 'a recent publication: Darwin's account of a voyage around the world, which though in many places is too

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[14] Colin A. McLaren, *Aberdeen Students, 1600-1860* (Aberdeen: University of Aberdeen, 2005), p.99.
[15] P.J. Anderson, *The Arts – Curriculum* (Aberdeen: University of Aberdeen, 1892), p.17 (cf. Appendix I); McLaren, *Aberdeen Students*, pp.99;108; cf., *Lectures in Natural Philosophy,* MS M 185, MS M 186, MS M 187, Duncan Rice Library Special Collections, University of Aberdeen.
[16] *Dr Beattie's Lectures in the Philosophy of the Mind and Logick*, MS M 186, Duncan Rice Library Special Collections, University of Aberdeen.

scientific for me as yet—I think you would enjoy very much […] I wish you would read Dr Smith's work on Geology, it would give you much pleasure and satisfaction'.[17]

Aberdeen was a thriving as a scientific institution. Among MacDonald's teachers were central figures in Scottish and Victorian science, such as the chemist William Gregory (1803-1858), to whom MacDonald was close. Gregory collaborated with David Brewster at the University of St Andrews, whose inventions, such as the kaleidoscope, frequently play a crucial narrative, scientific and philosophical function.[18] As a member of the intercollegiate Philosophical, Literary and Debating Societies, MacDonald was fully integrated into the ongoing intellectual and epistemological debates reflecting on progress in the sciences at the Aberdeen colleges in which psychology featured prominently.

Nicholas Wade stresses that psychology was 'preached in Scottish Universities before the discipline was notionally founded in the late 19th century', and 'long before it was practised in departments devoted to its study', driven by such figures as Thomas Reid, James Beattie, and John Gregory, father of MacDonald's tutor.[19] Considering the formative influence of this environment upon MacDonald's psychological thought, Aberdeen's role as a beacon of the Scottish Enlightenment and the 'Common Sense' tradition, firmly associated with scientific materialism and positivism, is crucial. The Aberdonian Thomas Reid (1710-1796) and his followers understood the brain as a series of mechanical processes. They were, further, opposed the doctrine of faculty psychology that promoted the *a priori* idea of 'all the marked distinctions of human character as innate' and 'intuition to be the voice of Nature and of God, speaking with an authority

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[17] George MacDonald to George MacDonald (senior), 8 November 1845, in MacDonald, *Letters*, p.12; The second edition Charles Darwin's *Journal of Researches*, which became known as *The Voyage of the Beagle* from 1901, had been published in 1845.
[18] This will be discussed in more detail in chapters 1.2. and 2.3.
[19] Nicholas Wade, 'Scotland', in *The Oxford Handbook of the History of Psychology: Global Perspectives*, ed. by David Baker (Oxford: Oxford University Press, 2012), pp.462;483.

higher than our reason'.[20] It was this Common Sense philosophy that fundamentally shaped the thinking of MacDonald's contemporary, Alexander Bain, the future psychologist and founder of the journal *Mind*.[21] A protégé of John Stuart Mill and disciple of Auguste Comte, Bain accordingly came to regard consciousness as 'an effect of the material processes on the organic system': a view widely rejected by 'religious thinkers' for its alleged atheism: one of the reasons why Bain's psychology was 'shunned' in London circles on 'political and religious grounds'.[22]

Although Bain is perhaps the most prominent Aberdonian psychological thinker contemporary to MacDonald, his views were not representative of the trend in teaching at the Aberdeen colleges, which promoted scientific study, but also preserved the authority of religion. This explains the complications at Bain's return to Aberdeen in 1860, at which some condemned him as a 'radical, a Comtist, and a materialist unfit to instruct young men'.[23] While Common Sense doctrines were certainly one of the discourses available to MacDonald at Aberdeen, consulting his lecture notes makes clear that by the 1840s there was a lingering resentment against such teachings and that the education MacDonald received was a distinct departure from them. Instead of their focus on rationalism, positivism and materialism, his lectures presented the study of science as a means of mental self-improvement that functioned *alongside* Christian moral teachings, more akin to Natural Theology. A question in an examination in Natural Philosophy which MacDonald would have had to pass reads:

[20] Rylance, *Victorian Psychology*, p.162; John Stuart Mill, *Autobiography* (Lanham: Start Publishing, 2013), pp.162-3.
[21] Bain remained at Aberdeen until 1846 and left a record of lectures MacDonald would have attended as part of his degree, cf. *William Knight*'s *Lecture Notes Natural Philosophy 1938-9*, MS M 172 [these lecture notes were taken by Alexander Bain]; McLaren, *Aberdeen Students*, p.100; A.J.S. Mann and A.D.D. Craik, 'Scotland: Land of Opportunities but few rewards', in *Mathematics in Victorian Britain*, ed. by Raymond Flood, Adrian Rice and Robin Wilson (Oxford: Oxford University Press, 2011), pp.77-101.
[22] Rylance, *Victorian Psychology,* pp.52;168.
[23] Rylance, *Victorian Psychology,* p.166.

> What advantage is to be derived from the study of Natural Philosophy as a system of mental training? And is any danger to be apprehended to religion from the study of Physical Science?[24]

The model answer, at first, praises the philosophical purpose of science and promotes facts and reason:

> The study of Natural Philosophy forms an admirable system of mental culture, as it habituates the mind to a rigorous investigation of the causes of the phenomena of nature. It likewise *forms a disposition to search after truth*, and to take nothing for granted, as hypothetical reasonings are null and void in Natural Philosophy, but all conclusions must be drawn from facts previously established.[25]

Yet it goes on to highlight the apparent danger that '*superficial* knowledge of Natural Philosophy, may sometimes be *accompanied by a spirit of infidelity*'. The primary aim of scientific study was to '*elevate* and *invigorate* the mind' and its chief purpose was to '*lay open to our view* the wisdom, power, and magnificence displayed in the works of God'.[26] While in past scholarship MacDonald's science and religion have been cast as mutually exclusive ways of pursuing 'worthwhile knowledge', this is not an antagonism to which he had been exposed at his alma mater. Instead, the chief antagonism would have been between pure rationalism, and science as an integrated philosophy encouraging a, perhaps idealistic, synthesis of the two poles: an idea foundational to all of MacDonald's writing.

The idea of such an integrated science was enhanced by Aberdeen's focus on the applied sciences. While Bain's mentor Mill had criticised the hubris of Victorian institutions' 'conservative interests' getting in the way of a 'rational treatment of great social questions' – 'one of the great stumbling blocks to human improvement' – the Aberdeen colleges had begun catering to the fabric and agricultural industries of Aberdeenshire, with the aim of improving industrial processes and population health.[27] While Aberdeen students had

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[24] *Questions on Natural Philosophy*, MS K 211 [MS 3340], Duncan Rice Library Special Collections, University of Aberdeen, pp.189-90.
[25] *Questions on Natural Philosophy,* p.190.
[26] *Questions on Natural Philosophy,* p.190 [my emphasis].
[27] Mill, *Autobiography*, pp.162-3.

traditionally sought vacation employment in these industries, as indeed did Bain, an increasing number started building their careers in their administration, diverging from the more traditional career paths in medicine, law and the church, which, in turn, influenced the focus and content of Aberdeen's teaching. McLaren notes how the Aberdeen colleges' nineteenth-century reforms reflected this shift and the 'modernised curriculum' reflected that 'the majority' of students sought to 'enter a profession, run a business or manage an estate'.[28] While, so far, the only scientific detail commonly acknowledged in MacDonald's biography has been his interest in chemistry, there have only been speculations as to the reasons why, it generally being considered a 'strange choice'.[29] Aberdeen's focus on science applied to society and industry, however, illuminates these reasons, reshaping fundamentally past biographies' views on the place of science in MacDonald's life.

Rather contrary to suggestions that he did not pursue a scientific career because he 'did not possess the required qualifications', or because his 'passion was for poetry and literature, not for science', unpublished and so far never-analysed correspondence with William Gregory shows that MacDonald had clear intentions and clear motivations of pursuing a scientific career.[30] In 1845 MacDonald wrote to Gregory, who had just taken up a post in Edinburgh in 1844, to express his plans of pursuing further study, but also his concerns about the cost of doing so in Giessen, Germany under Justus von Liebig (1803-73), under whom Gregory had himself studied. He received an enthusiastic response from his former tutor, encouraging MacDonald to join him at Edinburgh. The wish to study with either Liebig or Gregory is telling. A descendant of a dynasty of Scottish academics and scientists[31], Gregory taught Organic Chemistry and translated Liebig's works that focused

[28] McLaren, *Aberdeen Students*, p.134.
[29] Raeper, *MacDonald*, p.42.
[30] Raeper, *MacDonald*, p.55.
[31] cf. Agnes Grainger Stewart, *The Academic Gregories* (Edinburgh: Oliphant Anderson & Ferrier, 1901).

on chemistry in agriculture and the life sciences into English; among his translations were *Analysis of Organic Bodies* (1839) and *Organic Chemistry in its Applications to Physiology and Pathology* (1842).[32] Gregory expanded on Liebig's work on the improvement of farming but also population health, especially the issue of malnourishment which was a central concern of the impoverished MacDonald, who for much of his later life participated in efforts to improve the living conditions of the poor of Octavia Hill, receiving support from John Ruskin.[33]

Rather than a dismissal of MacDonald for his want of academic qualifications derailing his scientific career ambitions, Gregory expressed no concerns at all about his former student's academic capabilities, and regarded this as a minor issue. Reassuring him, in fact, he writes that 'although *at the present* you are not qualified for the duties' of an academic assistant, 'you may probably become so *in no long period*'.[34] Although MacDonald's original letter is lost, it is clear Gregory responds to worries about the cost of studying 'abroad', listing in great detail the fees for his own laboratories over more than one page.[35] And while the whereabouts of MacDonald's response are also unknown, the thoughts of his protagonist Cosmo in *Castle Warlock* (1881) appear to give insight as to its possible contents, and the true reasons for MacDonald not pursuing a professional scientific career. Cosmo passes his science degree with identical results as MacDonald, and similarly deliberates over his future plans:

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[32] Gregory published translations of seven of Liebig's books beginning in 1842, going through several editions, these books were often enlarged and prefaced by Liebig himself. These included especially the works concerning the improvement of agriculture and population health, such as: Justus Freiherr von Liebig, *Familiar Letters on Chemistry in its Relations to Physiology, Dietetics, Agriculture, Commerce, and Political Economy*, 3rd edn, trans. by William Gregory (1851); Justus Freiherr von Liebig, *Researches on the Chemistry of Food*, trans. by William Gregory (London: Taylor and Walton, 1847).
[33] This will be treated in further detail in chapter 2.3.
[34] William Gregory to George MacDonald, 14 April 1845, MS MacDonald 1/1/1, King's College London Archives [n.p.; my emphasis; cf. Appendix III].
[35] This letter was in the private possession of William Raeper until his death in 1988, and has become available to view in 2018 when his estate was made accessible by the King's College London archive. No other biographies cite this letter directly, but some reiterate Raeper's account of it, as it is not mentioned in any other collection of letters it is evident that Raeper has, intentionally or not, misrepresented its content.

> The one profession he had a leaning to was that of chemistry, at the time receiving *much attention in view of agricultural and manufacturing prospects* […]. But for the realisation of the possible hope […] *A large sum must be spent* before his knowledge would be of money-value, and fit for offer in the scientific market. For that he must go to Germany to Liebig, or to Edinburgh to Gregory.[36]

Many like William Geddes vouched for the historical accuracy of MacDonald's novels, and while such autobiographical revelations about MacDonald's relationship with science grate against modern critical consensus, they confirm Greville MacDonald's accounts on his father's abandoned scientific career and ambitions. Greville writes that after finishing his degree a 'strong desire took hold of' his father to train as a doctor, a common career for 'more affluent' graduates of his degree, but it was 'the want of money' which 'stood in the way'.[37] The 'abandonment' of his career was not a step taken lightly, and George MacDonald still grieved the missed opportunity when Greville began to study medicine at King's College, London, in 1870. Greville recalls that the 'wish made [his father] very happy […] seeing that he himself would have *been* a doctor if his father could have afforded it'.[38]

MacDonald instead moved to London which had become a 'centre of Scotch medicine', of Scotsmen, like himself trained at Scottish institutions, who then studied at continental European universities, such as Heidelberg, Leipzig or Leiden, to subsequently settle as medical practitioners in London.[39] MacDonald had fully intended an identical career path before it was thwarted, evidently, by a lack of funds. But far from 'abandoning' the field, his desire to study and practice science persisted. In a succession of posts as tutor in English Literature, he also lectured on Physics and Chemistry at Manchester Ladies'

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[36] George MacDonald, *Castle Warlock: A Homely Romance* (London: Kegan Paul, 1890), pp.169-70 [my emphasis]; Whereas the fees at Aberdeen would have been £18 for the full course, and MacDonald received a bursary of £13, Gregory would have charged £5.5 for laboratory cost and £1.1 for lectures towards the qualification (cf. MS MacDonald 1/1/1 and McLaren, *Aberdeen Students*, pp.131;132).
[37] McLaren, *Aberdeen Students,* p.134; Greville MacDonald, *MacDonald and his Wife*, p.68.
[38] Greville MacDonald, *Reminiscences of a Specialist* (London: George Allen & Unwin, 1932), p.36 [my emphasis].
[39] Wade, 'Scotland', p.464.

College, and Bedford College. There his paths once again crossed with Bain's, who taught at Bedford College from 1851-1854, and acted as examiner at the University of London until 1863, before he became Professor of Logic and Rhetoric – not science or psychology – at Aberdeen. MacDonald became professor at Bedford College in 1858, and at King's College, London 1866-8, after first lecturing there in 1859. His 'last lecture course – 48 lectures in 58 days – was delivered in 1891' – six years before the publication of his final novel, and fourteen years before his death aged 81.[40] Greville specifies that he 'had been asked to lecture on Natural Philosophy at Bedford College', and as David Neuhouser adds, wrote in a letter to his wife Louisa 'that I will make trial of the Natural Philosophy. I have very little doubt I shall succeed. I know plenty for them and know it well, too'.[41] Greville also mentions 'the Chemistry class he instituted' during his short spell at Manchester, due to which he wrote to his father 'I am so pleased that you are going to interest yourself with your loved chemistry again. I think it will make you much happier than anything else'.[42] It is clear that MacDonald maintained consistent interest in scientific subjects, and the comparison with Bain makes clear that even though he did not enter a scientific profession, the form in which he continued to engage with science was not untypical.

Having won third prize in his degree, it is evident that MacDonald had a thorough training in science, and considering his professional curriculum, it is beyond doubt he remained committed to it, its application for the improvement of society and the life of the individuals within it and that he maintained his dislike of it as a rationalistic, purely academic pursuit. Considering, finally, a third aspect of his scientific pursuits at Aberdeen,

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[40] Manlove, *Modern Fantasy*, p.56.
[41] Greville MacDonald, *MacDonald and his Wife*, p,73 David Neuhouser, 'Mathematics, Science, and George MacDonald', *Association of Christians in the Mathematical Sciences* <https://acmsonline.org/home2/wp-content/uploads/2016/05/Neuhouser-MacDonald.pdf> [Last Accessed: 1 May 2019].
[42] Greville MacDonald, *MacDonald and his Wife*, p.325.

it becomes clear that rather than deserting the field 'altogether', he found alternative ways of participating in it. Besides the integrative and applied approaches, this formative component illuminates how becoming a writer and teacher of literature was precisely that alternative path.

Writing became MacDonald's career partly by chance. Forced to intermit his studies for one year in 1842 due to a lack of funds, MacDonald's continuously poor health prevented him from undertaking, as many of his contemporaries in the same situation would have done, manual labour in the fields and factories of Aberdeenshire, and led him to instead take up residence in a 'great house in the North', most probably Thurso Castle, to catalogue the owner's library.[43] This is widely considered the period in which he was introduced to the German Romantics and acquired his knowledge of the German language. He became attracted to the works of Johann Wolfgang von Goethe (1749-1832) and Novalis (1772-1801), who expressed their thought on biology, evolution, geology, physics and psychology through literature, particularly through elements of the fantastic.

These authors became a paramount influence on MacDonald's literary imagination, Novalis, in particular, second perhaps only to the Bible. MacDonald's translations of these authors bookend his oeuvre: his version of Novalis's *Spiritual Songs* ('Geistliche Lieder') appeared as early as 1851 and was republished alongside poems of Goethe, Schiller, Uhland, E.T.A. Hoffmann and others *in Rampolli: Growths from a long-planted Root* in 1897. The thematic focus of the poems and extracts chosen rests particularly on the philosophy of science, the figure of the scientist and the cognitive potential of the soul in sleep, dream and death. References, and at times lengthy quotations from these authors,

[43] Raeper, *George MacDonald*, p.111.

especially from Novalis's *Heinrich von Ofterdingen* (1800), Goethe's *Faust* (1829) and *Farbenlehre* ('Theory of Colours'; 1810) are littered throughout his works.

But science was not only the subject matter of these works. It also had a structural and philosophical significance which MacDonald subsequently emulated in his own fiction, but which has never been considered a framework for them. Unlike such English Romantics as Wordsworth, Novalis and Goethe did not conceive of science, literature and religion as irreconcilable concepts, but drew significantly, like much of German Romanticism, on Friedrich Wilhelm Joseph von Schelling's (1775-1854) *Naturphilosophie*, which regarded science and religion as complimentary forms of understanding, and literature as the synthetic force to combine them; the 'biologist's great aid in comprehending nature would be poetic'.[44] Schelling 'never thought of his *Naturphilosophie* […] as a *substitute* for empirical natural science', as Robert Richards elaborates. His writings 'groan with the weight of citations to the most up-to-date experimental work of the sciences'.[45] *Naturphilosophie* was a way of grounding their laws in 'higher a priori principles', which, while opposed by Mill and Bain, was a philosophy that resembled the Natural Philosophy MacDonald was taught.

However, rather than integrating the sciences in a static, religious framework, as these lectures did, Schelling devised a dynamic, dialectic model which classified the world, and the ways of knowing and representing it, into three categories: firstly, the objective, which comprised studying and representing visible nature in terms of the material; secondly, the subjective, the realisation of 'unknowable presence' and its representation in monotheistic religion, representing the 'bifurcation of mind and matter'. Thirdly, the 'object-subject-

[44] Robert J. Richards, *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe* (Chicago: Chicago University Press, 2002), p.114.
[45] Richards, *Romantic Conception*, p.128 [my emphasis].

identity' comprehended the unseen through the seen: it was the synthesis of nature and soul. Schelling hoped to provide 'both a speculum in which the empirical self could view that original unity of mind and object, and a *therapy* by which it could become whole again'.[46] Literature, especially poetry, emerged as the most appropriate medium to negotiate, to 'therapy' tensions arising in science and from scientific study, and through their synthetic integration into a larger framework of meaning to potentially resolve them.

That the synthetic function of literature in *Naturphilosophie* conveyed in these works inspired MacDonald is likewise evident in the autobiographic accounts of his protagonists. Near-identical scenes of the libraries of great houses, like the one in which MacDonald worked, and descriptions of the psychological processes of reading the books within it, occur in nearly every one of his novels. In *The Portent* (1864) Duncan finds in such a library a 'whole nest of German classics' in whose volumes he discovers 'a mine of wealth inexhaustive'.[47] In *Castle Warlock* the reading in this library enlightens Cosmo's search for 'knowledge' during his Aberdeen science degree:

> And already [Cosmo] saw a glimmer here and there in regions of mathematics from which had never fallen a ray into the corner of an eye of those grinding men. That was because he read books of poetry and philosophy of which they had never heard.[48]

The reading of literature, especially of the same German literature as MacDonald had himself read, is repeatedly shown to enhance the scientific quest for knowledge.

These and similar scenes from *Phantastes* (1858) or *Lilith* (1895) also put into perspective those passages of MacDonald's writings often cited to prove his rejection of science. In a lecture on Wordsworth's poetry, MacDonald criticised scientific materialism in quoting the same passages with which, as Rick Rylance notes, Alexander Bain was targeted by his

[46] Richards, *Romantic Conception,* p.137 [my emphasis].
[47] George MacDonald, *The Portent: A Story* (London: Smith and Elder, 1864), p.80.
[48] MacDonald, *Castle Warlock,* p.164.

adversaries.[49] Those lines on the 'meddling intellect' that 'misshapes beauteous forms of things; | We murder to dissect' compared Bain to the cold, reckless scientist, the 'fingering slave | One that would peep and botanize | Upon his mother's grave' had famously rendered scientific materialism a threat to beauty, art and nature as revelations of God.[50] MacDonald, only apparently similarly, lectures that finding 'the first primrose of the year' was as beautiful 'as if you had found a child'; but 'Science, in the person of the botanist', regardless, 'pulls it to pieces to see its construction': it 'kills what it touches'.[51] But while science and the poetry of nature were two fundamentally different things to MacDonald, they were, however, not mutually exclusive, but must, in fact, complement each other:

> The poet may be man of science, and the man of science may be a poet; but poetry includes science, and the man who will advance science most, is the man who, other qualifications being equal, has most of the poetic faculty in him.[52]

But it was not merely the case that poetry, in its reverence of nature closer to religion, was therefore the more important of the two and improved the scientist, but also vice versa. MacDonald applied the same thinking to other epistemologies, and William Paley, author of *Natural Theology* (1802), was thus shown to be as limited as any scientific materialist:

> [Paley] taught us to believe there is a God from the mechanism of the world. But […] what does it prove? A mechanical God, and nothing more.[53]

What MacDonald criticises is not science, but the limitedness of a specific type of pursuing science, namely, with a purely rationalistic mindset that left no room for other forms of enquiry. MacDonald's own writings accordingly do not seek to eliminate or

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[49] Rylance, *Victorian Psychology,* p.152.
[50] William Wordsworth, 'The Tables Turned', in *Lyrical Ballads and Other Poems* (Ware: Wordsworth Editions, 2003), p.83.
[51] MacDonald, 'Wordsworth's Poetry', in *Orts: Chiefly Papers on the Imagination and Shakespeare* (London: Sampson Low, 1882), pp.257-8.
[52] MacDonald, 'Wordsworth's Poetry', pp.256-7.
[53] MacDonald, 'Wordsworth's Poetry', p.246.

replace science, but act as a synthetic force to integrate its methods with other approaches to learning.[54]

To MacDonald, poetry provided a 'teaching' in what was missing from scientific study, and its chief value was that it made graspable the processes of the imagination: the faculty, strongest in the poet, whose function it was to bring 'two levels of experience […] together as a coherent whole' – a function achieved to its fullest extent in dream.[55] Whereas Victorian novels had only used it in isolated instances, the dream is elevated to the main structuring element of MacDonald's fantasies specifically because of MacDonald's scientific understanding of it, which is shaped significantly by his Aberdeen days. The focus on application pervaded also Aberdeen's teaching of psychology which focused to a large part on diagnosing and curing various mental conditions. MacDonald had learned that dreams were 'a striking instance of the activity of the Human Soul' when such cognitive functions associated with the waking mind, such as 'Will' and 'Rationality' were dormant, and it was those 'who are most addicted to intense thinking' that were 'most apt to dream'. In MacDonald's lectures, dreams were taught to be 'therapeutic', 'giving variety to our thoughts and forcing the mind to exert itself into new directions' they provided a different mode of thinking which was psychologically curative – as Schelling believed the synthesis of apparently opposing systems of knowing to be. They were 'useful as fables for conveying moral instruction', and by attending to the content of a dream 'discoveries concerning [the dreamer's] health' could be made, who learned from them to' live more temperately than usual'.[56] The dream's visualisation of psychological processes in MacDonald's fiction not only reflects on science, but scientific knowledge also

[54] MacDonald, 'Imagination', p.11; Manlove, *Modern Fantasy*, p.58.
[55] MacDonald, 'Imagination', p.8.
[56] *Philosophy of the Mind,* MS M 186, Duncan Rice Library Special Collections, University of Aberdeen [n.p.].

underlies the intellectually, psychologically and socially diagnostic and curative functions he hoped his novels, which imitated the dream, would fulfil. What was wrapped up in the fantastic imagery drawn from Novalis, was a scientifically founded literature that participated in scientific debates, in accordance with how he thought science should be applied: to the improvement of society and the individuals within it. His literary writings *were* his pursuit of science.

The way in which MacDonald practiced and wrote about psychology was thus, in fact, not entirely distinct from, or irreconcilably different to how professional scientific actors participated in this discourse, but in fact to a degree even typical. Despite the differences in their views, this is apparent in the parallels for instance with Bain, firstly, in their professional background. Bain and MacDonald both lectured on scientific subjects at the University of London at a time when Bain's first major contributions to psychology, *The Senses and the Intellect* (1855) and *The Emotions and the Will* (1859), as well as MacDonald's first two works, *Within and Without* (1855) and *Phantastes* (1858), were published in London. As Wade highlights, their style of writing was alike: the works of both authors harnessed the analogies which Wade highlights: 'Scottish medicine and philosophy provided widespread [with] currency within the emerging psychology'.[57] Bain drew on scientific metaphors which had helped such scientists as Faraday and Tyndall to popularise a discipline still in search of its own language. Bain, for instance, compared his theory of the nervous system as 'dynamic and transformative' to 'the course of a railway train' with 'many stations where the train drops a certain number of passengers and takes up others in their stead': a 'system of telegraph wires' running alongside the train might' as it 'represent[ed] exactly what takes place in the brain'.[58]

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[57] Wade, 'Scotland', p.462.
[58] Alexander Bain, *The Senses and the Intellect,* 3rd edn (New York: Parker, 1855), p.30.

Rylance notes such images quickly caught on in literature where ‘metaphors of electric currents and galvanic batteries’ described ‘the action of human sensibilities’; scientists, however, increasingly came under attack for their use.[59] Concerned about the implications of such analogies, experimentalists demanded accuracy, implying science must be strictly experimentalist and materialist. As the use of such metaphors and analogies was increasingly seen as problematic, it was in a literary environment the synthesising and resolving potential of the literary fantastic came to play a distinct and crucial role. It could put these metaphors centre stage as a means through which to continue scientific thought where limitations of what experiment could not yet achieve prevented science from doing so; and through the synthetic potential of literature fantastic literature could reintegrate scientific thought into a wider discourse.

Wade notes how Bain’s attempts to ‘integrate physiology with psychology’ are thus, most of all, indicative of the ‘forces *against* which he reacted’.[60] It is in this framework of hardening debates and perceived institutional inertia that the portrayal of scientific matter in MacDonald’s fiction can be better understood in its endeavour to harmonise opposing forces. It is tempting to think that MacDonald’s training at theological college, his short ministry at Arundel from 1850-53, and his subsequent professorships of English Literature would have allied him to the opponents of Bain’s ideas, that truly saw ‘*no* place in the discovery of worthwhile knowledge’ for science.[61] But Rylance warns, the ‘power of discursive regulation to shape and set limits to enquiry’ should not be underestimated, highlighting how ‘in the complex architecture of Victorian psychology individuals made choices and pushed arguments within a heterogeneous’, ‘overwhelmingly rationalist and intellectual’, framework, and initiated, influenced and responded to most of the leading

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[59] Rylance, *Victorian Psychology,* p.167.
[60] Wade, ‘Scotland’, p.464 [my emphasis].
[61] Manlove, *Modern Fantasy*, p.58 [my emphasis].

psychological ideas of the period'.[62] As Wade notes, Bain's first chair and his first books were in English Language, yet 'intensely psychological', the 'expression of language' marking 'the mental processes underlying it', and, in their own ways, and coming to different conclusions about the psyche, MacDonald and Bain worked to integrate psychological science into wider philosophy and society through narrative practices.[63]

[62] Rylance, *Victorian Psychology*, pp.147;167;150.
[63] Wade, 'Scotland', p.482.

1.2. *Phantastes*, 'chemical analogies' and the katabatic dream

Often considered the first fantastic novel in English Literature, *Phantastes* opens in a mundane, even clichéd fashion. On the night of his twenty-first birthday, the threshold to legal maturity, Anodos, the son of a wealthy family enters his deceased father's study to discover what the estate might hold for him. Although his hopes are directed, first of all, at finding 'records of lands and moneys', he secretly longs to uncover his family history in order to discover more about his own identity and position in society: a notably non-science-related endeavour. The way in which MacDonald describes the thought processes of his protagonist is, however, comparably peculiar. 'Perhaps', Anodos ponders, 'like a geologist, I was about to turn up to light some of the buried strata of the human world, with its fossil remains charred by passion and petrified by tears'.[1] A geologist of emotion, Anodos describes the process of fulfilling his desires as a transcending of the material world into a dimension of past human thought turned natural history specimen. Geological, psychological, and sociological systems are aligned and become interconnected through analogy to form the semiotic framework of *Phantastes*, which, in turn, is a novelistic exploration of them.

Science and Revelation

MacDonald's language indeed evokes an unearthing and physical descent as Anodos enters the room to pursue his apparently mundane undertaking with the curiosity of a scientist on a geo-archaeological expedition, and reverence, as if it were a grave. In the room that has been left undisturbed since his father's death 'darkness' clings to the walls 'bat-like', 'as if the dead were drawing near'; a secretary appears as the inner sanctum of a

[1] George MacDonald, *Phantastes: A Faerie Romance for Men and Women*, ed. by Nick Page (Paternoster: London, 2008), p.42.

room that resembles a family sepulchre (42). As he seeks to penetrate the desk's many drawers, tensions between conscious anticipation of material gains and unconscious psychological desires arise, recapturing the paradox of wanting to resolve an immaterial crisis with a materialist mindset: a problem which had preoccupied MacDonald since his student days. This conflict is enacted on a linguistic and physical level. Just as Anodos's material desires grate against the reverend language describing his environment, his actions and method fail to yield what he seeks. Impatient for discovery, he breaks the fine woodwork of the secretary with his inadequate method, and unearths merely faded letters and petals whose 'rose-scent' had 'gone' (43). His materialist cast of mind is perplexed by the notion of their immaterial value. MacDonald's framework of analogy thus makes visible the damaging effects of Anodos's philosophy on his own mental condition, inhibiting the fulfilment of his own desires, and on the real world.

That the psychological subject matter of *Phantastes* is, as this scene shows, expressed through metaphor becomes even clearer when Anodos abandons his quest. Disappointed by the 'fossil remains' uncovered, he reclines in a chair. As his fruitless way of pursuing his aims are now rendered *passive*, the secretly longed-for illumination of his identity now becomes possible. This becomes manifest in a spectral woman, resembling a 'small Greek statuette roused to life and motion', who grants him a wish. As Anodos, however, rejects her offer, considering her too small to 'grant or refuse him anything', he frustrates this fairy-tale device. Causing seemingly an anti-climax, the encounter makes manifest the clash of two ways of knowing (43-4).

Having arisen from passive thought, rather than active will, the spectre is a revelation from this former realm, who scolds Anodos for his care for superficial values such as height: 'Is this all the philosophy you have gained in one-and-twenty years?'. Adding that it was

'always the way with you men', who 'believe nothing [they] could not see or lay hold of', they 'believe nothing the first time', and 'let mere repetition convince' them of what they 'consider unbelievable', she perceives Anodos as suffering from an imbalanced mindset (44). This only scientific-rationalist-focused approach Anodos displays was precisely the doctrine criticised in MacDonald's lectures, which stated that 'human knowledge' can '*only* be ascertained' through 'observation' and the 'analytic method', and reproduction of their results in experiment; 'from hence [the scientist] deduces' the 'great laws of *corporeal* nature'.[2] It is, thus, revealed to Anodos that his lack of engagement with *non-corporeal* nature and ignorance of its laws prevents him from fulfilment of his desires, and that it must be overcome. MacDonald's dream-narrative is diagnostic, revelatory and intends a psychologically curative philosophical conversion.

Phantastes turns specifically to the psychological phenomenon of the unconscious, as the apparition proves to Anodos that the dimension from which she arose indeed holds what he desires. Her prompting him to 'look' into her 'eyes', rendering him *fully* passive, releases a vision first of recent, then of lost memories when he 'remembered somehow' the death of his mother when he was 'a baby', and finally, another form of knowledge, impossible to put into words, but conveying glimpses of his situation within not only society, but the world and its history (45). Like a mesmerist controlling a subject by staring 'into each other's eyes', the spectral statuette lets Anodos experience a state of the 'fulfilment of the mind's greatest potential', Schelling's idea of overcoming the limitations imposed by the body-mind bifurcation, which many Victorians hoped to find in mesmerism.[3] MacDonald, who considered mesmerism a 'parlour-trick', however,

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[2] *Knight's Lectures in Natural Philosophy,* MS K 237, Duncan Rice Library Special Collections, University of Aberdeen [n.p.; my emphasis].
[3] Alison Winter, *Mesmerized: Powers of Mind in Victorian Britain* (Chicago: Chicago University Press, 1998), p.2.

demonstrates the effect of unleashing of the 'fantastic imagination': a type of thought which the preface of *Phantastes* clarifies, citing Novalis, 'wholly opposed the world of reason', most active in dream, which demonstrably can be applied in the solution of problems in the manifest world.[4]

That this diagnostic revelation of the protagonist's state of psychological and intellectual imbalance also has a greater moral significance, is driven home by the theological imagery of the opening scene. The spectre is clad in a 'robe of white', 'confined by a belt about the waist, descending to her feet'; 'her voice', Anodos adds, 'recalled a sensation of twilight, reedy river banks, and a low wind' and mesmerised by her eyes, he 'sank in their waters' (44). In the opening of the Revelation of St John the Divine, Christ heralds St John's vision similarly 'clothed in a garment down to the foot girt about the paps with a golden girdle', his voice resembling 'the sound of many waters'.[5] With this allusion to the Revelation, the most prominent example of apocalyptic literature in the Bible, MacDonald establishes a 'narrative framework in which a revelation is mediated by an otherworldly being to a human recipient' with the purpose to disclose '*a transcendental reality*' that promises 'eschatological salvation'.[6] Anodos's vision reveals not only a novel way of knowing that is salvational to the visionary's own mind, and worldly accomplishments, but especially also to mankind's future.

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[4] In *David Elginbrod* MacDonald had in a draft disparagingly referred to Mesmerism as 'Ghost Hunting'; its mesmerist, Funkelstein, is the chief villain of the novel and an atheist. Novalis, *Fragmente*, 2 vols (Heidelberg: Verlag Lambert Schneider, 1951), I, p.392; The word Märchen is considered by MacDonald untranslatable. In 'The Fantastic Imagination', he writes 'That we have in English no word corresponding to the German "*Mährchen*" drives us to use the word *Fairytale*', which he only considers to confer the correct meaning in Spenser's use of 'the word *Fairy*', it is otherwise a term which is to MacDonald linked explicitly to works of German Romanticism.

[5] Revelation 1:13-15.

[6] John J. Collins, *The Apocalyptic Imagination: An Introduction to Jewish Apocalyptic Literature*, 2nd edn (Grand Rapids, MI: Eerdmans, 1998), p.5.

The opening scene makes apparent that the theological imagery of *Phantastes*, which has so far attracted the most attention in MacDonald scholarship, functions not in isolation, but links the internal and external dimensions to navigate the moral dimensions of other underlying themes. In the referential framework of MacDonald's scientific education and philosophy, *Phantastes* appears as a psychological reform narrative which engages directly with the role of science and education within personal and societal development in the contemporary psychological discourse. This, in turn, suggests that *Phantastes* is more than an 'allegorical', or 'sacramental' fantasy quest for 'spiritual truths' and Christian virtues.[7] MacDonald indeed himself rejected the idea of *Phantastes* as an allegory, stating, in response to a review in the *Atheneaum* , that it had 'misjudged' his novel as one. He wrote, instead, that it was a fairy tale which could have 'allegory in it, but is not an allegory'.[8] The crucial point is, that MacDonald was disturbed by the limitation of allegory to 'two meanings', which problematises *solely* Christian interpretations of his theological references that instead also enact scientific and psychological subjects.

After Anodos's rejection, the spectre grows to his height and Anodos is overcome by an 'incomprehensible desire' to touch her, and the spectre warns 'If you could touch me, I would hurt *you*' (45). This reference to the Passion conveys a psychological point about scientific thinking. In the Passion, the disciple Thomas refuses to believe the resurrection of Christ declaring that '[U]nless I see the nail marks in his hands and put my finger where the nails were, and put my hand into his side, I will not believe'.[9] Thomas believes only once he has touched Jesus, and is scolded 'because thou hast seen me, thou hast believed: blessed are they that have *not seen*, and yet have *believed*'.[10] Past interpretations of

[7] Stephen Prickett, *Victorian Fantasy*, 2nd edn (Waco: Baylor University Press, 2005), p.159.
[8] Prickett, *Victorian Fantasy*, p.159.
[9] John 20:25.
[10] John 20:29 [my emphasis].

MacDonald's version of this scene have understood it as a manifestation of the Jungian unconscious, in which it was a revelation of 'Man's greatest Sin'; Anodos's confrontation with a spectre of his own mind thus represents an 'Oedipal' conflict.[11] Yet MacDonald's historio-biographical context reveals a more differentiated psychological understanding of the unconscious underlying this scene. As the spectral lady represents immaterial truth, which suddenly gains the same proportional presence as the material – which Anodos represents, himself scolded, he would not 'believe nothing which he could not see or lay hold of', the reform Jesus demands of Thomas, that is here demanded of Anodos in the framework of revelation, is a reform of his intellectual and psychological constitution (45). That the eschatological salvation of *Phantastes* diagnoses, but ultimately requires a dream to 'exert' the mind into 'new' and therapeutic directions, for the benefit of mankind and creation, makes visible what MacDonald's psychology lectures conveyed. The imminent dream thus originates in, navigates and negotiates the psychological discourse of a manifest problem regarding the role of science in education and society.

Fig.2: Arthur Hughes, Anodos Waking

One of the 'twain wings' of thought 'paralysed and broken': dream as diagnosis[12]

As the idea of balance was at the heart of MacDonald's philosophy, Anodos needs to reconcile the two modes of thought. But as the White Lady indicated, this required first an expansion of his understanding of the more unfamiliar of the two, which clarifies the confusing environs into which Anodos

[11] Raeper, *MacDonald*, pp.146;150; Carl Jung, *The Archetypes and the Collective Unconscious, 2 vols* (New York: Pantheon Books, 1969), I, p.253.
[12] MacDonald, 'The Imagination,' p.26.

awakens after his spectral encounter. With his bedroom having turned into a forest (Fig.2), he is like Dante in his wood at the outset of the *Divine Comedy*, or the confused lovers of Shakespeare's *Midsummer Night's Dream,* disorientated in uncharted territory of his psyche, but also in a state of anticipation of revelation and resolution of a conflict.

As the vision which Anodos now experience remains, at first, liminal, with his material, known bedroom and fantastical landscape overlapping, MacDonald, in fact, provides orientation by drawing out interconnections between the two worlds. Anodos observes in amazement his 'dressing-table' which exists in three states simultaneously. Its 'elaborately carved in foliage' at

> the nearer end […] remained just as it had been, but on the further end a singular change had commenced […]. The first of these was evidently the work of the carver; the next looked curious; the third was unmistakable ivy; and just beyond it a tendril of clematis had twined itself about the gilt handle of one of the drawers. (48-9)

In between manifest object of art and nature was a state through which MacDonald reverse-traces the creative, as opposed to destructive thought through which Anodos had destroyed the secretary, to the dimension in which Anodos now finds himself. When he observes that, similarly, 'the branches and leaves designed upon the curtains of my bed were slightly in motion', he remarks that the

> carpet, which I had *myself designed* to imitate a field of grass and daisies, bordered the course of the little stream, the grass-blades and daisies seemed to wave in a tiny breeze that followed the water's flow; while under the rivulet they bent and swayed with every motion of the changeful current, as if they were about to dissolve with it, and, forsaking their fixed form, become fluent as the waters. (49; my emphasis)

As Anodos traces the source of this creative imagination in a landscape in which natural imagery acts analogously to mental function, he realises that this kind of unconscious creative thought is already part of him, but has been neglected, as the objects in his rooms had, after all, in the past been designed by him. The vision asserts a psychological sequence in the two types of thinking portrayed: the unconscious is established as natural,

original state of mind, the scientific mindset is secondary, acquired through man-made education.

The transition into the dream world makes clear that although what is seen is a physical exploration of nature, it is, by analogy, also a psychological journey: an exploration of manifest natural law active also in the mind. Tyndall had suggested a 'scientific system of metaphors', which 'retains all the formal relations' to its system of references, may be 'capable of generating science in its turn'.[13] MacDonald's literary dream in *Phantastes* thus lays the foundation for developing a credible solution to a psychological dilemma upon the basis of natural science.

The liminality that makes the link between symbol and referential framework explicit is next left behind when the unconscious mind is fully entered, and dimensions of symbolic and psychological meanings are aligned and Anodos fully immerses himself in this dimension and its laws in a baptismal moment in which he washes in a 'green marble basin', from which, like a spring, a 'stream of cool water' flows (47). Seeing *becomes* knowing. Suddenly capable to *feel* that the rivulet's course 'must surely be the path to Fairy Land' makes him '*know* better which direction to choose when any doubt arose' (47;49). The dimension becomes, and *is* part of him, it enriches and enhances him. As he feeds upon the 'strange nuts and fruits' of Fairy Land, they 'operated in such a way upon my senses that I was brought into a far more complete relationship with the things around me'. He begins 'to *feel* to some degree what the birds meant in their song': the nourishing effect of the imagination upon his thinking opens up a new way of understanding nature, thus how this unfamiliar part of his mind enhances his accustomed scientific thought (47). As Anodos learns to interpret the landscape of his unconscious, MacDonald shows that it

[13] Maxwell, *Scientific Letters and Papers I*, p.443.

was not, as psychologists as G.H. Lewes had suggested, ultimately 'unknowable', but that it could be understood through the functions of natural law, which is shown to work analogously in nature and mind.[14]

Through the analogy with nature MacDonald establishes equally symbolic directionalities and topographies conveying psychological and moral meaning in Fairy-Land using metaphors that already had currency in the psychological discourse. The rivulet signifies the natural flow of consciousness, but as opposed to a metaphor based on a man-made system, like the telegraph wire to which it had been compared by Bain, the river flows *away* from all man-made, science, and the secondary rational waking thought, to guide Anodos towards a way of knowing new to him. Darkness connotes further descents into introspections into the mind in its current state; light the revelations from a higher knowledge, which he needs to integrate into it: a system in which MacDonald enacts the conflicting philosophies, how insight arises, or fails to do so.

How this new way of knowing could function in Anodos's mind is thus illustrated when nature and introspection mingle. Weary from his journey through Fairy-Land, Anodos enters a natural cave to rest, and after another baptismal washing that marks another step away from his old into a better frame of mind. He falls into 'delicious reverie'. In this state 'lovely forms, and colours, and sounds', a kaleidoscopic 'assembly of *forms* and spiritual sensations', 'seemed to *use my brain* as a common hall' (81). A complete inversion of the mindset that broke the secretary, Anodos's mind is now *acted upon*, naturally *receiving* insight without pressing for it. That this portrayal of submission to the unconscious imagination at action is perceived by MacDonald as a liberation of the mind is clear in his reference to the cave as an 'antenatal tomb', a place, where, according to Shelley, 'where

[14] George Henry Lewes, *Physiology of Common Life,* 2 vols. (Edinburgh: W. Blackwood, 1859), II, p.53.

butterflies dream of the life to come' (84).[15] Anodos's vision marks an awakening of the soul, as butterflies are the symbol of the soul: the Greek word 'psyche' (ψυχή) translates both as 'soul' and 'butterfly'. The 'psyche' being specifically the soul after bodily death that was conversant with the higher creative principle present in nature, an equivalent of what Schelling called *Weltseele*.[16] What is necessary to incorporate this thinking is no less than a death of his old ways, and a rebirth into a new understanding.

The term 'antenatal', pre-birth, thus links the scene back into the apocalyptic framework, setting the scene for the reconciliation of the two ways of knowing to be enacted. Indeed inspired by the revelation of the imagination, Anodos , initially, springs into action to translate the rediscovered way of knowing in creation, a material endeavour, attempting to invert again what he saw enacted in his room's transformed furniture. Guided by 'thinking of Orpheus, of Sleeping Beauty' and 'many other histories', Anodos finds himself like 'Pygmalion, as he awaited the quickening of his statue' and begins to shape a rock 'delicate enough […] destined to become an ideal woman in the arms of the sculptor' (82). MacDonald believed the 'fantastic imagination', the force active in the unconscious Anodos has now experienced, as 'the nearest' to the divine, and the 'act of poetry' of 'calling up new forms', the process of giving shape to the 'products of the Imagination', 'the nearest' MacDonald believed one 'can come to *creation*'.[17] 'Creation' must only bring into existence in the material world what is in harmony with the – immaterial – laws of the creator of Nature, the 'poeios', which Anodos had now *seen.* What he carves out is an

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[15] Percy Bysshe Shelley, 'The Sensitive Plant', *The Sensitive Plant*, ed. by Edmund Gosse (London: Heinemann, 1820), p.79.

[16] The Greek word 'psyche' (ψυχή) refers to both 'soul' and 'butterfly'; the Greek goddess Psyche's Roman name, Anima, likewise found its way into psychological terminology, cf. 'psyche', in Emily Kearns and Simon Price, eds., *Oxford Dictionary of Classical Myth and Religion* (Oxford: Oxford University Press, 2004), p.150.

[17] MacDonald, 'Fantastic Imagination', p.314.

attempt of making manifest an ideal union of immaterial imagination and material world.[18]

The chapter's epigraph, taken from Novalis's *Heinrich von Ofterdingen* however foreshadows the impending failure of this endeavour. In the scene it references, Heinrich understands birds and nature, unlike Anodos, who can only '*almost* tell by their looks what they *would* say' (47; my emphasis).[19] But it is also a moment of failure, which Johannes Rohen calls the 'apocalypse of Novalis', in which Heinrich awakes from his dream-journey ultimately unable to save the woman who embodies his philosophical ideal.[20] Anodos continues where Heinrich leaves off, seeking to revisit, comprehend, and correct his failing – MacDonald, in fact, finishing Heinrich's journey which, due to Novalis's early death remained unfinished.

To correct this failing, it must, however, first be re-enacted for it to become *seen* and thus understood by Anodos. This making-graspable occurs through the ambiguous image of Pygmalion. Novalis had evoked him as a progressive thinker, a symbol for the 'day' those 'illuminated' by the worlds of poetry and philosophy see the 'sunrise of a higher glory, and requite [Pygmalion's] long love and faith in it', the day the worlds of the material and the spirit are united.[21] But Anodos falls for the same temptation as Ovid's flawed sculptor. As the lady begins to take shape, he begins to desire his creation in '*passionate* need', and in a sexual awakening which expresses itself only in terms of the material – a 'primitive' drive akin to the veneration of embodied deities in heathen religions, according to Schelling –

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[18] George MacDonald, 'A Sketch of Individual Development', in *Orts: Chiefly Papers on the Imagination and Shakespeare* (London: Sampson Low, 1882), p.38.

[19] *Heinrich von Ofterdingen* remained a fragment due the author's death from tuberculosis, aged 29. Consisting of two parts, the first, 'Anticipation', begins with a mysterious dream after which Heinrich sets out on a journey to understanding, culminating in the revelation of a dream-like fairy tale foreshadowing the conflict's resolution in the incomplete part two, 'Fulfilment'. The fairy tale encourages the union of the two thought systems.

[20] Novalis, *Heinrich von Ofterdingen*, in *Novalis: Werke in einem Band*, ed. by Hans-Joachim Mähl and Richard Samuel (Munich: DTV, 1995), pp.240-1; Johannes Rohen, *Die Apokalypse des Novalis: Das Märchen von Eros und Fabel* (Stuttgart: Freies Geistesleben, 2010).

[21] Novalis, *Fragmente II*, pp.97-8.

Anodos repeats his initial error (85). Exasperated at the failure of the beautiful 'cold lady of lovely stone' to respond, Anodos desires to grasp her once she comes alive, and she escapes. Failing to grasp, that is, to comprehend, that the ideal she embodies is not of the material, but of the philosophical world, she cannot be *possessed* or grasped in material terms, as such a symbiosis can only occur in a platonic union.

This scene's structure mirrors the anti-climactic opening of the novel, showing how two ways of knowing now present in Anodos's unbalanced mind cannot function productively, or indeed creatively, if one usurps or acts superior to the other. The focus is clearly directed on the damaging impact of his materialistic thinking, at first. The phallic associations of Anodos's 'penetrating the marble' do not singularly show a sexual and thus immoral drive, but highlight also the inhibiting force of selfish-centred materialistic philosophy. The 'amazement and concentration of delight [which] permitted the nerves of motion again to act' before he decides to chase her, all point towards Anodos's motivations for creation being a narcissistic reproduction and furthering of the self for the sake of his *own* satisfaction. This selfish chase for self-satisfaction was, however, is not only, as McGillis suggests, of a sexual nature, but, more widely significant in the framework of apocalyptic revelation that seeks to crystallise the global relevance of revelatory insight (86).[22] It was not, as critics have previously suggested, that MacDonald believed science in itself to be dangerous, but the selfish motivations with which it is pursued, that make it so.

With the escape of the White Lady, his mind is vacated of the imagination, and leaves only the secondary system of knowledge with which Anodos's journey began, the subsequent landscape enacting the intellectual and moral damage of Anodos's harmful habits on his own mind. The flavour of the journey turns. The landscape of his mind gives rise to

[22] Roderick McGillis, '*Phantastes* and *Lilith*: Femininity and Freedom', in *The Gold Thread: Essays on George MacDonald,* ed. by William Raeper (Edinburgh: Edinburgh University Press, 1991), p.42.

demons and ogres, and the feeling that Fairy Land was a 'delusion of my brain' (129). Anodos is lured from the path of the rivulet by a deceptive alder-maiden: a dryad mimicking the White Lady, who is revealed as a monstrous 'thing'. Anodos follows an unnatural way of thinking, a deception, only on the surface what he desires: the alder-maiden embodies the incongruous philosophy that promises selfish satisfaction, but yields no productive insight (96). MacDonald takes sides here in the contemporary Victorian disagreement over the nature of the unconscious, as *either* a dangerous source of delusions, *or* a realm with revelatory potential. As Anodos's state of mental distress is the result of the now *knowingly* false disbelief in the latter, and his continuous *longing* to 'regain [his] former elasticity of mind' facilitated by the poetic vision is of a diametrically different, natural quality than his 'desires', it is clearly not the imagination that is the source of danger, but the mind overwhelmed by rationalism (102).

That this was a moral as well as a practical point, is conveyed through a theological literary reference whose multifacetedness illustrates the complex philosophy his framework of analogies aims to contain. The same desires and 'irresistible attraction' of Anodos's old ways, unmitigated by any guiding forces of his unconscious, draw him *towards* the house of one of the ogres which the citizens of Fairy Land have explicitly warned him not to 'not go near' (107). He fails to resist, a second time, when he is drawn *into* the 'rude building' with a 'half open' door, no windows, and a cypress tree that appears as a 'spire': the 'church of darkness' (108;129). The warning only fuels his greed, and when a voice warns him from the darkness, for a third time, that he 'had better not open that door' in a wall of the church, the 'prohibition only increased' a *still* more 'irresistible desire' (110). He opens it, and a 'dark figure' attaches itself to him, and the ogre woman announces that it was his 'shadow which has found [him]', the manifestation of something that 'you call […] by a different name in your world' (110;108). As the

epigraph of the chapter – 'part of the part which was at first a whole' – a quote from Goethe's *Faust* (1790) characterising Mephistopheles – clarifies, what had manifested Anodos's heels, as a now inseparable companion, is his devil (108).

This episode, Raeper notes, is the 'inversion of the first chapter of John's Gospel': 'In [God] was life; and the life was the *light* of men. And the light shineth in darkness; and the darkness comprehended it not' – Anodos has, according to Raeper, been tempted by the devil and strayed from the paths of God.[23] Through its evocation of the devil, the antithesis of morality in the Christian value system, this scene has commonly been interpreted to carry a universal Christian meaning. Yet, despite scientific themes not being explicit, juxtaposing it with a near-identical scene from *Faust* and other similar situations in MacDonald's oeuvre makes clear that what is portrayed is a crisis arising from the false study of science, and its effect upon the mind, upon intellect and morality, illuminating how these concepts are interlinked in MacDonald's understanding.

Mephistopheles enters into Faust's life in his 'high vaulted, narrow Gothic study': the same spired, dark architecture as MacDonald evokes, equally, only after being invited 'thrice', while Faust mistranslates the passage from the Gospel of John, to which Raeper alludes, although without a mention of *Faust*. Misinterpreting it, Goethe's Faust alters 'in the beginning was the Word', 'λόγος', Christ as the word of God, to 'in the beginning was the *deed*', thus equating the actions of man with the creative power of God.[24] The origin of Faust's hubris is embodied through his study, which MacDonald's 'Church of Darkness' evokes: crammed to the roof full of science and incomplete knowledge of the world it makes manifest the aged scientist's narrow and unilluminated mind. Through *Faust*,

[23] Raeper, *MacDonald*, p.149; John 1:4-5.
[24] Johann Wolfgang von Goethe, *Faust: Der Tragödie Erster Teil,* in *Faust: Erster und Zweiter Teil,* ed. by Max Hecker (Leipzig: Verlagsbuchhandlung Weber, 1921), I.1224;1237.

MacDonald addresses the intellectual problem which has caused Anodos's psychological imbalance, personal distress, and a risk for mankind, on an institutional level. Faust has studied every science under the sun and achieved academic success, yet lacks the wisdom to understand 'what binds the world and guides its course'.[25] He is like the 'grinding men' described in *Castle Warlock* who will never obtain a 'glimmer' from the dimension whose knowledge they desire.[26] Only for this reason can Faust fall for the temptation of Mephistopheles, who identifies himself with progress: as 'a part of the force that constantly wills good, yet constantly causes evil'.[27] The Devil, MacDonald clarified in the 'Poet-Physician', 'is the Shadow of thy own self' – a Mephistophelean embodiment of worldly desires, and 'self-centredness'.[28] Anodos's shadow is the revelation of his mental flaw being the inhibition of any progress in the real world, causing only distress.

The danger of the false emphasis in teaching science is equalled to the devil's temptation: the ultimate destructive force, to which Faust also sacrifices a female ideal, Gretchen, which illustrates the impact of this mindset not only on the psyche but the outside world. Thus, even when MacDonald's imagery, *on the surface*, appears to have unambiguously theological or literary significance, it is a layer ultimately amplifying the issues of the *underlying* intellectual discourse, and MacDonald's views on them, even when it is only, as it is here, implicit. As Anodos's mindset is shown to be the polar opposite of MacDonald's ideal of science, taught to improve mental culture and applied to the improvement of society, these first scenes of *Phantastes*, in the context of MacDonald's

[25] cf. Goethe, *Faust,* I.355-85.
[26] MacDonald, *Castle Warlock*, p.318
[27] Goethe, *Faust,* I.1336-7.
[28] George MacDonald, *St. George and St Michael* (London: Kegan Paul, 1876), p.129; Goethe's Faust Similarly concludes 'The devil is an egoist' (*Faust,* I.1651).

scientific biography, show the ways in which science teaching can cause psychological damage; they are not a rejection of science *per se*, as Anodos's progress will illustrate.

Ways of seeing the 'cipher of nature': optical metaphor and developmental psychology[29]

As evident in the different aspects of MacDonald's preoccupation with science in his life, the influence of it on *Phantastes* takes several forms. In addition to addressing a wider philosophical point on the nature of scientific knowledge and education, MacDonald's own knowledge of the sciences also shapes the structure of the text. Anodos's journey through his own mental processes captures the author's theoretical understanding of how the dream counteracted or enhanced their (mal)functions, and also highlights his innovative scientific thought. The respective phases of the dream, for instance, fulfil distinct cognitive functions, through which MacDonald projects their practical use and potential for applications in scientific education and society. The onset of Anodos's dream, in which environment and vision still intermingle, for instance, is the phase in which the mind is 'exerted into new directions', a mechanism of realisation and admittance of unconscious thought. The more profound dream, in which no trace of the waking world is visible, which follows, is the vision from which 'a man of prudence might make discoveries concerning his health', a vision of engagement with the products of unconscious thought, that reveals a moral ailment arising from an intellectual dilemma, caused by false education.[30] Beattie's functions of dreams are organised into a recurring pattern, in which the role of the dream as provider of 'fables useful for conveying moral instruction' is crucial.

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[29] Novalis*, Die Lehrlinge zu Sais*, in *Novalis: Werke in einem Band*, ed. by Hans-Joachim Mähl and Richard Samuel (Munich: DTV, 1995), p.201.

[30] MS M 186, Beattie, *Philosophy of the Mind,* Duncan Rice Library Special Collections, University of Aberdeen [n.p.].

As within the analogical framework of *Phantastes,* the dream's revelation of the unconscious imagination is expressed in terms of nature, which MacDonald understood to be the manifestation of God's thought, and therefore a latent scientific as well as moral truth, discoveries made through 'science' could, and should thus be tested against this dimension in contemplation. MacDonald envisaged dream-thought to be harnessed to improve scientific mental culture, which, checked against a dimension of truth, was thus guided towards a science in harmony with the laws of natural creation – the two co-operating, rather than functioning on their own.

In the context of past scholarship, this most crucially proves that science *had* a place in the discovery of worthwhile knowledge for MacDonald, which he himself later formulated in theoretical terms in his rarely-studied psychological essay 'A Sketch of Individual Development' (1880). While strikingly not having been linked to *Phantastes*, this essay provides to the novel a framework of MacDonald's understanding of developmental psychology, and thus highlights the contribution of *Phantastes* to this scientific discourse. Both *Phantastes* and the 'Sketch' outline the psychological development of a young man. MacDonald writes in the 'Sketch' that at the beginning of its cognitive development the human mind is like that of 'a child, in a chronic condition of wonder', like Anodos when he first experiences this in the antenatal tomb (67). The subsequent development of the intellectual faculties is to MacDonald a 'second birth', a 'growing out of truth' into an age 'we foolishly call maturity', a 'passing from consciousness [...] to self-consciousness': in Schelling's terms the objective to the subjective.[31] The youth of MacDonald's essay has, in this phase, wandered 'over the threshold of *what is commonly called Science*' in 'his college life', like the still-adolescent Anodos is at the beginning of the novel.[32] Originally

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[31] MacDonald, 'Sketch', p.43; MacDonald's essay was drafted in 1867, and presented as a lecture in 1880.
[32] MacDonald, 'Sketch', p.40 [my emphasis].

driven by the by the search for 'What is behind? What is beyond?', at first, 'every new fact is full of joy and excitement' to his mind, but soon, 'ever the thing that is known sinks into insignificance'.[33] The mind of the educated youth of the 'Sketch' is then 'seized' by the 'powerful hand' of the 'Law of the Visible House in which we dwell' – which is embodied in the deceptive surface of the Alder-maiden in *Phantastes*, and the same term, 'the scaffold of the Visible House' linked to science in MacDonald's essay on the Imagination.[34] In the 'Sketch', this singular pursuit of 'what is commonly called Science', is focused on the selfish accumulation of 'facts'; the youth's vision becomes 'sorely dimmed, through the fog-laden, self-shadowed atmosphere of his microcosm': he is 'seized' by the force that always wills the good, yet causes evil.[35] It is 'what is commonly called Science', not what science *should be*, that MacDonald is opposed to. The two types of consciousness, linked to childhood and adolescence, correspond with Anodos's two types of experience upon entering Fairy Land, and show that neither of them is fundamentally good or bad, but that both on their own yield no interpretable knowledge. Although the poetic brings Anodos joy, he, frustratingly, can gain no meaning from it. And even though his selfish intellectual pursuits, embodied in the shadow, to his own later horror, bring him pleasure, albeit short-lived, they are frustrating in the same way; an insight that revises the idea of the poetic vision as superior in the quest for knowledge in MacDonald criticism.

Anodos's failure is necessary to make clear this relationship, and it is also preconditional to demonstrating how they are to function productively through synthesis in an

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[33] MacDonald, 'Sketch', p.50.
[34] MacDonald, 'Sketch', p.41; MacDonald, 'Imagination', p.15; This allegorical image was, along with numerous direct references to scientific concepts only contained in the manuscript of the essay, but omitted in the printed version. As the MS also refers not, generically, to 'a child', but 'my' child. It is likely MacDonald derived his theories of developmental psychology from an observation of his own children, of which three became students of science or medicine.
[35] MacDonald, 'Sketch', p.39.

intellectually and spiritually mature mind, and how dream-consciousness could facilitate this. This process is enacted in the subsequent encounter of Anodos's journey, through optical metaphors. As these optical metaphors, and the functions to which MacDonald's links them, should become his most enduring legacy to fantastic literature, it is crucial to highlight the ways in which they originate in a scientific discourse.

After the acquisition of his Shadow, which fills Anodos with 'a growing sense of horror', he encounters 'a lovely fairy child' that arouses a longing for the lost way of knowing: a dilemma encapsulated in the 'two wondrous toys' the boy carries:

> The one was the tube through which the *fairy-gifted poet* looks when he beholds *the same thing everywhere*; the other that through which he looks when he *combines into new forms of loveliness those images of beauty* which his own choice has *gathered from all regions wherein he has travelled*. Round the child's head was an aureole of emanating rays (115-6; my emphasis).

Anodos is now, for the first time, suffering from what the Shadow's interference embodies. As it intervenes in the poetic vision, it is dispelled:

> As I looked at [the fairy boy] in *wonder* and *delight*, round crept from behind me the something dark, and the child stood in my shadow. Straightaway he was a commonplace boy, with a rough broad-brimmed straw hat, through which brim the sun shone from behind. The toys he carried were a *multiplying-glass* and a *kaleidoscope*. I sighed and departed (116; my emphasis).

The juxtaposition of the Shadow's interference with the vision of Fairy-Land embodies the two unreconciled ways of thought, how '*self*-consciousness […] dims—often obliterates—that [consciousness] that went before', but its effect is heightened, and escalated, in a second encounter.[36] A'lovely maiden' who plays with a glass globe, 'bright and clear as the purest crystal', a total counterpoint to the 'church of darkness' which had 'gradually diminished' appears when his 'power of seeing fairies of the higher orders' until they 'almost ceased' (117-8). Upon seeing the radiant globe, and despite the maiden's 'tears' and 'prayers', Anodos greedily 'laid hold of it' with 'both hands', and breaks it, leaving

[36] MacDonald, 'Sketch', p.43 [my emphasis].

Fig.3: Maiden with glass globe

the maid 'wailing' and 'crying' and bringing 'unknown suffering' to Fairy Land and (Fig.3; 129). The broken globe highlights the vital importance of the imagination beyond the self, guiding science's application to the improvement, not the detriment, of society which is indicative of the role of these optical metaphors as powerful embodiers of discourses and philosophies, and visible-making links between the worlds of the manifest and the imagination. The juxtaposition through the fairy-toys of the two ways of seeing and knowing, the light-based fairy vision and the Shadow, provides the most unambiguous explanation of, firstly, the semiotic relationship of symbolic artefact and meaning in *Phantastes.* In these 'magic glasses' MacDonald borrows Victorian popular science's 'illusionistic representations of reality', a context within which he has so far not been examined, but whose use of such metaphors to explicitly synthetic philosophical ends further enhances the complexity of the novel's underlying epistemology.[37] Nicholas Wade illuminates how so-called 'philosophical instruments', or 'philosophical toys', such as the kaleidoscope or the multiplying glass, inhabited several spheres of the Victorian intellectual discourse. By the virtue of their dual function as toys for 'popular amusement' and as instruments for 'experimental assistance' in life, they lent themselves to metaphorical treatments in fiction. With regard to their application in writing, it is, however, important that their mid-nineteenth century science popularisers, such as David Brewster, collaborator of MacDonald's tutor Gregory, attempted to make visible through them specifically the

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[37] Ralph O'Connor, *The Earth on Show: Fossils and the Poetics of Popular Science, 1802-1856* (Chicago: Chicago University Press, 2008), p.266.

philosophical truth underlying the natural laws that shaped the Earth and its inhabitants.[38]

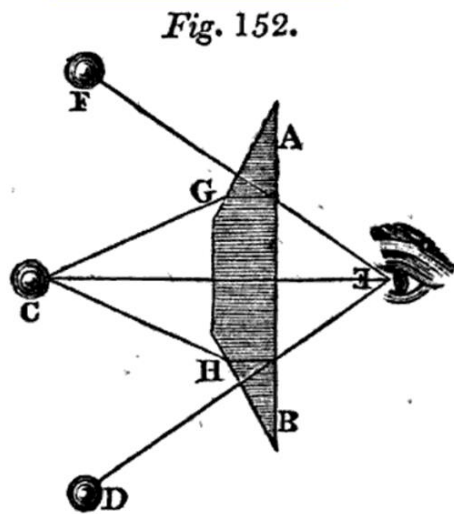

Fig.4: Brewster, Multiplying Glass

The multiplying glass (Fig.4), for example, Brewster notes in his popular *Optics*, gives 'a number of images of the same object'; in MacDonald's words it 'shows the same thing everywhere'.[39] It embodies the realisation of the same natural law, working in everything, the analogy of *Naturphilosophie*'s universal law of nature. Novalis had called it 'the great *cipher* of nature' in his *Bildungsroman, Die Lehrlinge zu Sais* (1798-9), which was written in 'crystals and rock formations, on frozen water, on the inside and outside of mountains, plants, animals, humans, in the lights of the sky' as much as 'on pitch-coated glass in the formations of iron filings around a magnet'.[40] This cipher was, according to the psychology of *Phantastes* also revealed by and in the unconscious mind.[41] Through the dual function of these glasses as both experimental and philosophical devices emerges their most important function as instruments of transcendence. Through their materiality firmly situated in the world of the manifest, they facilitate a synthetic process of manipulating vision in such a way to find *meaning* through *seeing*. Causing two kinds of seeing, and thus capturing both Anodos's child-mind, the unconscious

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[38] Nicholas J. Wade, 'Philosophical Instruments and Toys: Optical Devices Extending the Art of Seeing', *Journal of the History of the Neurosciences* (2004) 13, p.102.
[39] David Brewster, *A Treatise on Optics* (London: Longman, 1853), p.458.
[40] Novalis*, Lehrlinge zu Sais*, p.201 [my emphasis].
[41] Brewster notes multiplying glass could be encountered in nature in some minerals and gemstones: MacDonald in almost all novels compares the eyes of his grandmother figures to gemstones. *Princess and the Goblin, Lilith, At the Back of the North-Wind, Castle Warlock* – to name a few. They always are related to their scientific property, and are of moral and psychological significance. Their optical properties become a major plot device in MacDonald's final fantastic novel, *Lilith*, which is the subject of chapter 2.3. of this thesis, in which MacDonald's Optics will be treated at greater extent; Novalis*, Lehrlinge zu Sais*, p.201 [my emphasis].

imagination, and scientist-mind, the waking rational mind, their function begs for synthesis of the two through transcendence, without which no knowledge, and no revelation of the world's underlying truths can arise.

This is epitomised especially in the fairy boy's kaleidoscope. Brewster, who has been credited with the invention of the kaleidoscope, designed it for 'creating and exhibiting beautiful forms', and 'images of new objects' from reality, by fragmentation and recombination, 'multiplication and 'arrangement of the images' by 'the principle of symmetry which is essential to this instrument'.[42] It was a highly symbolic act of dissolving and reordering reality, 'flowers, animals, pictures, busts', and introducing them into a new order: an image of reality 'beyond description splendid and beautiful', that due to it originating in philosophy, and indeed embodying philosophy, lent itself to philosophical application, such as in literature.[43] In *Heinrich von Ofterdingen*, Novalis had compared poetry to the kaleidoscope as the force that 'fractures into pieces manifold | and pulls calmly back together what is kept apart by longing' [*Sehnsucht*].[44] In MacDonald, the kaleidoscope, as the instrument of the poet, signifies the process of the poet imparting the insight thus gained to others to inspire in them also the synthetic way of thinking, illuminating his understanding of fantasy. Like the kaleidoscope, it re-awakens an abandoned way of thought; it brought together, and back into balance, parts once a whole, which the intellectual unrest really longed for. The dream thus functioned analogously: once both types of knowledge-acquisition are levelled, it becomes their synthesiser: only then real acquisition of *true* knowledge – 'scientia', not in the 'common', but in the original sense of the word – can take shape in the mind.

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[42] Brewster, *Optics*, pp.443-4.
[43] Brewster, *Optics*, p.445.
[44] Novalis, *Heinrich von Ofterdingen*, p.365.

The 'lens as toy and research instrument', but also as part of the human bodily apparatus for the acquisition of knowledge, as Isobel Armstrong notes, like its imitations in *Phantastes*, 'raised the problem of knowledge' and its acquisition in fiction.[45] Anodos's thought is rooted in the counter-narrative which Armstrong calls the 'disciplinary panoptical culture that educated the subject into optical obedience to an atomized and mechanized self both for work and pleasure in a capital-driven commodity culture'; a process of 'modernization' which Jonathan Crary highlights 'uproots', and 'makes exchangeable what is singular'.[46] It is when Anodos inhabits this discourse that the instruments become 'merely toys', reminiscent of those essential to science, but useless to it without natural law itself guiding it. MacDonald's literary vision in *Phantastes* is, instead, a *credo* for what Rylance has called the tradition of 'Scoto-German transcendentalism' of philosophy, as opposed to the materialistic school of Reid, Mill and Bain. The inherently transcendent meaning of 'philosophical toys', which like the human eye refracted light into knowledge, enacted a belief of Helmholtz's, that 'non-verbal, visual, and sensory perception', which took place in the *synthesis* of the dream, was, in fact, the 'highest form of philosophical enquiry'.[47]

The evocation of the philosophical framework of vision and knowledge raises the problem of translating the Biblical term for receiving visions, implied in the apocalyptic framework

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[45] Isobel Armstrong, *Victorian Glassworlds*: *Glass Culture and the Imagination 1830-1880* (Oxford: Oxford University Press), p.256.
[46] Armstrong, *Victorian Glassworlds*, p.256; Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, MA: MIT Press, 1991), p.10.
[47]Armstrong, *Victorian Glassworlds*, p.256; The nature of seeing and understanding Anodos lacks is illuminated in theological references, in the framework of apocalyptic visions in which *Phantastes* is situated. The revelation in spiritual vision of a higher form of knowledge through the sight of a boy-child evokes Simeon's recognition of Christ the child. Simeon asks to 'depart in peace' after his 'eyes have seen salvation'; Anodos, conversely has seen salvation, but not having fully receives and incorporated the meaning of the revelation, he 'departs', but in mental distress (II Luke 29-30). Simeon, who refers to this revelation of the salvation to all people as a 'light'; in Christian iconography, Simeon is, in the tradition of Ancient seers, blind, so that what he has perceived is knowing, more than seeing, whereas Anodos is still seeing more than knowing (II Luke 32).

of *Phantastes*, through ‘gnosis’, denoting both ‘seeing’ *and* ‘knowing’, expressing the unity of the two principles – the latter, however, being established as ideal. Synthesis implies a transcendence of both, and the mode of transcendence evoked through the optical instruments is that of *dia*gnosis. Henri Bergson highlights in the aspect of transcendence the kinship of staging and medical diagnosis, which he notes, was from Greek dia-gnosis, ‘*seeing* through’, ‘*knowing* through,’ and ‘to perceive an underlying medical condition it is necessary to see through the surface of events’. Both required ‘an abstraction from the web of meanings and environs of the “paramount realities of life”’ – which were afforded MacDonald through the fantastic, the making visible of what has been seen through the surface, in his dream-narrative.[48] Diagnosis is itself metaphorical. In a medical sense, its aim is to make visible malfunctions, and to compare to ideal function, for the purposes of knowledge-production and cure – a concept that can be transposed upon MacDonald’s literary use of it.

This scientific process of diagnosis is fundamentally akin to the aims and purposes of the fantastic. Fantasy, as Bruno Bettelheim noted, was a form of ‘enchantment’ , and as the diagnostic optical devices of MacDonald’s tale are enchanted, they enhance their function, which themselves imitate physical functions, by metaphorical extension into the psychological realm. One of the ‘uses of enchantment’, Bettelheim highlighted, was to ‘squarely’ confront the ‘basic human predicaments’ and to state ‘an existential dilemma briefly and pointedly’: a formulation of the results of the psychological diagnostic process, fantasy is its counterpart, its literary sister-phenomenon.[49] It is thus MacDonald makes visible the diagnosis of the ideological imbalance in Anodos’s mind, its malfunction, to compare them against an ideal, to seek cure. Intellectual imbalance is a pathological

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[48] Henri Bergson in Peter Berger, *Redeeming Laughter: The Comic Dimension of Human Experience* (New York: De Gruyter, 1997), p.29.
[49] Bettelheim, *Enchantment*, p.8.

condition, which holds a contaminating potential through education exerting its destructive influence into the world, directly, as embodied in the secretary or the glass globe. As the dream's ultimate function is intellectual, a synthetic production of knowledge, and thus cure, from thesis and antithesis – it models a therapeutic process of knowledge-production. Rather than a departure from it, *Phantastes* is thus profoundly scientific: a reflection of MacDonald's psychological knowledge, and scientific ideals for its improvement equally.

'To combine two propositions, both apparently true' to 'find a truth higher than either': MacDonald's dialectic psychology

The science-philosophical context casts new light also on the final scenes of *Phantastes* as an expression of how this synthesis by which MacDonald sought to reform the psyche, unbalanced by false scientific education, was to be accomplished. These have so far been understood as a surrendering of active, for passive acquisition of knowledge, rather than as synthesis. After his failed journey, Anodos, in the absence of a solution for his psychological crisis, resigns: he finds a boat, pushes it into the stream and falls asleep in this 'cradle', waiting for the 'death that wipes out the sadness of life' to come, being borne away by the stream of unconsciousness (124-5). To McGillis, this marks the progression between the 'two halves of the book' that represent 'a structure of binary opposition: male/female'.[50] The second half was, he asserts, a regression to femininity, the 'passive, imaginative, and sacrificing', a succumbing to the 'comfort and protection of the womb', and surrendering of his manhood.[51] His views are representative of similar arguments made by Wolff and Docherty, who agreed the Church of Darkness and acquisition of the Shadow in chapter eight mark a caesura in Anodos's journey from which they point out the 'centred' structure of *Phantastes*, especially the symmetrical axis formed by 'the middle

[50] McGillis, 'Femininity', p.34.
[51] McGillis, 'Femininity', p.32.

chapter' thirteen out of twenty-five.[52]

There is however more regularity to the structure of the novel. Overall, twenty-one chapters are spent in Fairy-Land: the initial chapter prefaces three cycles of seven chapters which mark the twenty-one years of Anodos's life which he relives in his dream. The novel falls into three sections, which, rather than the structure of mutually exclusively opposites implied by critics as Docherty and McGillis, points towards a three-stage dialectic basis for the novel, an interpretation encouraged also by MacDonald's scientific philosophy, his developmental psychology and the prominent influence of German literature and philosophy. The first two parts, the discovery of the fantastic imagination, and its absence, thus represent thesis and antithesis, the third part, which is yet to unfold, their synthetic union. While the boat-scene has been interpreted by McGillis and Woolfe as the symbolic death to the world of science, the framework of *Naturphilosophie*, and an investigation of the sources of MacDonald's literary imagery suggest otherwise.

It alludes to an almost identical scene in Novalis's *Hymns to the Night* (1801), which MacDonald had translated. It had been composed after the death of Novalis's ideal woman, his fiancée Sophia, and his boatman imagines the fulfilment death might bring, which can only be mirrored in a 'dream [which] will dash our chains apart | And lay us on the Father's heart'. He imagines himself 'in the narrow little boat', floating 'into the bosom of the earth', 'to the heavenly shore', which precedes a synthesis implicit in the scene on a structural level.[53] In Novalis, this moment heralds a revelatory vision, which Sophia Vietor noted was a crucial feature of the synthetic structure of German Romantic fiction. In *Heinrich von Ofterdingen*, *Faust I* and *II*, and *Wilhelm Meister's Lehrjahre,* the first half

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[52] Robert Lee Wolff, *The Golden Key: A Study of the Fiction of George MacDonald* (New Haven: Yale University Press, 1961), p.47; McGillis, 'Femininity, p.34.
[53] Novalis, 'Hymns to the Night', in George MacDonald, *Rampolli: Growths from a Long-Planted Root, Being Translations, New and Old, Chiefly From the German* (London: Longman, 1897), pp.15-6.

presents the conflict of two worldviews, a departure from home, and the pursuit of a female ideal. A 'kaleidoscopic' dream 'mirrors themes and figures of the novel's first part', 'personal life becomes allegory', and the vision 're-shapes' past events and the conflict of the waking world 'into a solution' and 'cosmic' order in a 'dimension of poetic fulfilment'. Thus, the second part, after the 'death of the female ideal', as of Mathilde in *Heinrich von Ofterdingen* and Gretchen in *Faust*, can become an enactment of the practical application of what has been learned.[54]

Anodos's immanent dream-within-a-dream can therefore best be understood in the context of multiple symmetries: of halves *and* thirds, binary and synthetic, as an overcoming of one through the other, and the striving for ideal synthesis. This dialectic structure contains multiple dialectic systems: the three phases of perception which Schelling had also related to the three ages of mankind – antiquity, the Middle Ages and modernity – which MacDonald links analogously, to the three stages of individual development, childhood, adolescence and spiritual maturity and their distinct mental peculiarities. These, in turn, function under a common umbrella of dialectics, the 'universal law' of German Romantic *Naturphilosophie*, in which the dialectic stages inform the imagery through which the psychological development experienced in them is conveyed. Acknowledging the clarity with which MacDonald links this dialectic structure to its underlying psychological science fundamentally redefines *Phantastes* as a novel based in science. Through it *Phantastes* bears witness to MacDonald's profound understanding of psychology upon the basis of which he sought to reform scientific thinking – presenting through fiction, an informed commentary on contemporary science.

This aim of psychological reform becomes apparent as the novel now moves towards its

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[54] Sophia Vietor, *Astralis von Novalis: Handschrift, Text, Werk* (Würzburg: Königshausen & Neumann, 1999), p.149.

two-stage climax. As the narrative also moves inwards, where this change needs to manifest, and away from an exploration of thought processes to the brain, the river brings Anodos to the Fairy Castle. The castle references Edmund Spenser's *Faerie Queene* (1590) and its House of Alma, an allegory of the 'soul in perfect command of the body'; analogically, from which MacDonald had borrowed the title of his book, as he is, likewise, about to express the ideal functioning of the brain.[55] According to the chivalric setting, Anodos becomes 'Sir Anodos', wanders the castle halls and reads in its library, retracing the steps of the two knights who ascend under the guidance of their 'white lady' Alma, to the chambers of the 'higher faculties of the sensitive soul' in the *Faerie Queene*. These are embodied in the allegories 'Memoree' and 'Phantastes', who, only in synthesis, facilitate good 'Judgement': functions, in fact, foreshadowed in the opening of MacDonald's novel.[56] 'Phantastes', who is 'of years yet fresh', and knows 'all artes, all science, all Philosophy' inhabits a room filled with 'sondry colours' of reflections, 'visions' and 'dreames': the kaleidoscopic vision of the 'antenatal tomb' which Anodos longs to regain.[57] Memoree, an 'old man' of 'infinite remembrance' , 'recorded' all 'things foregone', catalogued them in his 'library', a 'chamber' full of 'old records', 'some made in books' of two kinds: factual or fairy histories.[58] The virtuous Guyon chooses the 'Antiquity of Fairy Lond', a Romance and Spenser's 'universal history', and then turns to inward contemplation, asking leave of Alma.[59] MacDonald's evocation of Spenser's brain-metaphor highlights that the physical apparatus for the imagination is *as naturally* and *equally* present in the brain as that facilitating scientific thought, neither is superior. That

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[55] McGillis, 'Femininity', p.35; John Docherty, 'Anodos and Kathodos in *Alice's Adventures in Wonderland*', *The Carrollian: The Lewis Carroll Journal*, 9 (2002), p.46.
[56] Docherty, 'Anodos and Kathodos', p.46.
[57] Edmund Spenser, *The Faerie Queene, Longman Annotated English Poets*, rev. 2nd edn, ed. by Hiroshi Yamashita and Toshiyuki Suzuki (Harlow: Longman, 2007), II.9.50-1;53.
[58] Spenser, *Faerie Queene*, II.9.55-7.
[59] Bart van Es, *Spenser's Forms of History* (Oxford: Oxford University Press, 2002), p.117.

Phantastes takes its name after only one of these allegories represents the act of rehabilitating this principle in modern intellectual inquiry, akin to increasing the size of the spectre in the novel's opening – not, however, as a rejection of the other principle, which would defeat MacDonald's fundamental ideal of balance.

MacDonald further shows that not only the apparatus, but that all thought processes function on the basis of such a dialectic system. This is enacted in Anodos's visit to the room of Memoree. As the library in *Phantastes* is explicitly located in a psychological space, the books Anodos discovers, are, in one way, like Spenser's – books in 'ancient bindings', 'some in strange new fashions' – but, in another way, the 'peculiarity' of this library of the mind is that it enacts to Anodos the mental process of learning (136-7). As in Spenser, books representing both modes of thought are available. The formation of his initial, scientific mind is made graspable to him when he opens a 'book of metaphysics', and 'had scarcely read two pages before [he] seemed to [him]self pondering over discovered truth, and constructing the intellectual machine whereby to communicate the discovery to my fellow men' (137). The premature wish to possess the discovery is played out on the same stage as the desire to possess the White Lady.

The meta-narrative aspect of the fairy tale books, in whose journeys Anodos himself 'became a traveller', and the fairy books themselves have been the predominant focus of critics, especially the fairy story of Cosmo von Wehrstahl, which, equivalent to Guyon's History, is a magic reflection and reliving of past moral choices. Yet MacDonald's connecting of the two experiences through psychological theory has never been explored, although it is here it is, for the first time, explicit. Anodos ponders that

> all the time, I seemed to have a kind of *double consciousness*, and the story a double meaning. Sometimes it seemed only to represent a simple story of *ordinary life*, perhaps almost of *universal life*; wherein *two souls*, loving each other and longing to come nearer, do, after all, but *behold* each other *as in a glass darkly.* (148; my emphasis)

As Cosmo's tale stimulates an *awareness* of a 'double consciousness' at work within Anodos's mind, referring to a theory from psychological science discussed since the 1840s yet still contemporary to *Phantastes* stands out in this passage. Arthur Wigan described it, the 'duality of the mind' as two 'distinct' cerebra, or even the 'duality of person in the same individual'.[60] Wigan explained each cerebrum was 'capable of a distinct and separate volition', one rational and in the 'healthy brain' dominant; the other, inhabited by the 'passions', the creative mind, which if it took over would render the mind 'morbid', which tied into such theories as Henry Holland's that dreaming was akin to insanity.[61]

Even when psychology is only implicit in *Phantastes*, it is clear MacDonald opposes such approaches as Wigan's – a healthy brain could not be one that had one mode of thought dominate another – this is, in fact, precisely the state from which Anodos's initial dilemma arises. Thus it is interesting that it is after MacDonald references this theory explicitly, he also formulates this dialectic aim when a third type of book in the fairy library, towards which little to no critical attention has so far been turned, puts this part of MacDonald's philosophy into sharper focus. These 'other books' sought after the source 'whence the spiritual vision sprang', and hoped to

> *combine two propositions*, *both* apparently *true* […] to find the point in which their invisibly converging lines would *unite in one*, revealing *a truth higher than either* […] whence each derived its life and power. (137-8; my emphasis)

The synthetic objective of the vision was 'the worlds' beyond 'science and poetry', '*universal life*; wherein '*two souls'*, as those within Faust, '*loving* each other and longing

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[60] Bourne Taylor and Shuttleworth, *Embodied Selves*, p.123.
[61] Wigan, *The Duality of Mind*, pp.26;30; Holland, *Mental Physiology*, pp.123-4.

to come nearer, do, after all, but behold each other as in a glass darkly' (148;140).[62]

Through referring to the gravitational dialectic force synthesising these principles as 'love', MacDonald thus further aligns the layers of his analogical system to integrate science and psychology into a theological dimension through the similarly threefold dialectic system presented in St Paul's epistle to the Corinthians. St Paul's notions of childhood and manhood, equivalent to those of Schelling, are linked to the ways of 'speaking' and 'understanding', 'knowing' and 'prophesying' 'in part,' and the virtues of faith and hope.[63] The third virtue, ordinarily translated as 'charity' can only be comprehended beyond ordinary life, and anticipates Anodos's imminent cathartic death and rebirth into 'charity': ἀγάπη ('agápē'), unselfish and divine love, the force Faust believed 'holds the earth together at its core, the source from whence, in a psychological system based on *Naturphilsophie* both systems of knowing 'derive [their] life and power', without which, St Paul asserts, all actions are 'nothing'.[64] MacDonald presents a fully integrated *Universalphilosophie* in which natural law and Christian values are equivalent, and thus science, natural law and theology alike prescribe the only 'true' application of science as the altruistic one which he believed right since his own studies at Aberdeen.

The obvious critical emphasis on the mental principle referenced in the novel's title and its representations within the novel, such as the fairy tale of Cosmo, and the relative neglect of both the scientific context, and the third type of book in the fairy castle's library, the embodiment of MacDonald's principle of imagination and dream, have contributed to a distortion, and eventually misunderstanding of MacDonald's relationship to science – despite this principle being at work in nearly every of his works, even if under different

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[62] Cf. Goethe, *Faust,* I.1112-7; 'Two souls inhabit, oh my bosom| one wanting to divorce the other| One clinging to brute and carnal cravings| the other struggling from the dust| up to the realms of higher fathers'.
[63] I Corinthians 13:9;13.
[64] I Corinthians 13:11;2.

names. This trajectory is confirmed also when MacDonald outlines the encounter between the two '*apparently* true' propositions in his 'Sketch', in allegorical form. Once the essay's youth has been enticed by the 'cold, clear and beautiful' face of 'Madam Science', the embodiment of his former thinking, 'Lady Poetry' flees, her departure diminishing even the 'rainbow glimmer' of the biblical symbol of hope, to an accumulation of those 'bare facts of external existence': 'evaporation, caloric, atmosphere, refraction, the prism' – in a similar way to which the optical instruments enact the Shadow-limited vision of Anodos's state of mind.[65] Although as this encounter resembles in character MacDonald's Wordsworth lecture, which has been used to prove his rejection of science, the origin of the names of the two allegories again proves the opposite and drives home MacDonald's integrated understanding of the place of science in the quest for 'worthwhile' knowledge. While MacDonald describes the emerging bifurcation and subsequent imbalance of the two phases that represent the two spheres of mental action in the youth's mind as a sign of adolescent immaturity, this is not where the essay ends; instead, it anticipates their reconciliation as a marker of maturity and wisdom:

> It is *not* that Madam Science shows *antagonism* to Lady Poetry; but the atmosphere and *plane* on which they can *meet as friends who understand each other*, is the mind and the heart of the sage, not of the boy.[66]

The 'plane' indicates, as in the metaphor borrowed from Spenser in *Phantastes*, that scientific and poetic thought are not mutually exclusive, but at the same level, and that 'the faculty' of the 'Imagination' reconciled them.[67]

The allegories in the 'Sketch' are almost certainly drawn from Charles Kingsley's *Madam How & Lady Why* (1869) and its two eponymous fairies, which act on an analogical global

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[65] MacDonald, 'Sketch', p.38.
[66] MacDonald, 'Sketch', p.51.
[67] MacDonald, 'The Imagination', p.8.

scale.[68] They allegorise the two chief principles of knowing the world in this natural history fairy tale: the two different questions, which require two different types of knowledge as an answer, and only make sense complementing one other as a 'coherent whole'. Kingsley's tale was not only serialised at the time MacDonald's essay was conceived, but it was also printed alongside *At The Back of the North-Wind* in *Good Words for the Young*, under MacDonald's editorship. Madam How, or Madam Science, Kingsley explains, 'lets us see her work' and 'teaches us to copy her'; Lady Why, or Lady Poetry, was hidden and shy, and if she were ever to be seen, she would 'make us feel smaller, and meaner, and more stupid and more ignorant than we had ever felt in our lives before'.[69] Although MacDonald was averse to allegory's limitations to only two meanings, in this point only two meanings are necessary. In addition to the developmental level of meaning which allows him to draw conclusions about the functions of the individual human mind, these allegories confirm their validity in relation to natural law, upon which basis truth claims can be made. What Anodos learns in the fairy-library, by reading the fabric of his own mind, is that the dialectic system of mind and nature portrayed through literary and theological imagery *is* natural law.

Imagination, MacDonald crucially states in the credo of his dialectic philosophy of mind, '*is aroused by facts, nourished by facts*, seeks for higher and higher laws in those facts, but refuses to see science *as the sole* interpreter of nature, or the laws of science as the *only* region of discovery'.[70] Only by combining the 'twain wings', science *and* poetry, could the mind to 'rise up' to the dimension of knowledge it pursues; 'when one of the two [wings] is paralysed or broken', as in the unbalanced mind of Anodos and Faust in his study, it

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[68] Cf. Appendix VII; This will be treated in more detail in Ch. 3.2.
[69] Charles Kingsley, *Madam How and Lady Why, or: First lessons in Earth Lore for Children* (New York: Macmillan, 1901), pp.2-3.
[70] MacDonald, 'The Imagination', p.6 [my emphasis].

leaves them open to the sin of selfishness, ultimately destructive to the environment which it seeks to improve.[71] MacDonald thus not only refutes such contemporary rationalistic psychology as Bain's or Wigan's, but also the Romantic backlash against them, representing a progressive position from both.

Galvanic torrents of malevolence and sparks of nobleness: Towards a physiological pathology of dreaming

The aim of *Phantastes* is however not only to present an ideal of the mind's workings, but show the mechanics of and effect a change in the fabric of the mind towards it, which is staged in the final descent into the metaphorical geological strata of the mind. This climax also reveals the mind's physiological, electro-chemical basis, before and after the resolution of Anodos's crisis, and, eventually, its intellectual products. Anodos encounters the White Lady for the third time when his 'soul' treads 'lonely up and down the halls of the brain', and wanders the 'hall of Phantasy' (181). Among a host of similar marble statues, the White Lady stands upon a pedestal with the warning 'TOUCH NOT'. An evocation of the resurrected Christ's warning to Mary Magdalene 'Touch me not; for I have not yet *ascended* to my father', the meaning of the phrase becomes clear through the Biblical parallelisms in *Phantastes*. It refers to the desire for materiality which both Thomas and Anodos display – Thomas following the resurrection of Christ, and Anodos upon the first appearance of the White Lady – a desire which prevents the salvation the resurrected Christ and the White Lady symbolise, as the apocalyptic framework set up in the opening scene indicates (186).[72] Anodos, however, once more repeats his error, and grasps her, this time not hesitantly, but, as with the maiden's glass globe, with both arms, she escapes yet again, this time in torment.

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[71] MacDonald, 'The Imagination,' p.26.
[72] John 20:17.

Rather than an *ascent* into the realm of insight, the 'salvation' promised by the psychological cure of his ailing mind to which the 'twain wings' could have lifted him, Anodos now descends from the allegory of his brain, into its *inner*, neuro-psychological workings, to physically unmake, to seek the death of these old ways. He is now at the innermost point of his psychological workings, and the extreme end of his path of failure: everything about the impending climax conveys finality. In 'the darkness of his soul's night' he is drawn to a 'waste windy hill', where 'great stones like tombstones stood all about' him (187). Anodos states that 'ever as I went, darker grew my thoughts': the actual topographical descent in his dream is equivalent to getting to the bottom of his conundrum. Consequently, 'whenever a choice was necessary' he 'always chose the path which seemed to lead downwards' (188). A 'natural staircase' within the 'deep chasm' of a grave-like 'excavated well' and 'saw at once that this was my path' (188). As compared to the first two phases, this is the *deepest* of the dream phases, the deepest descent into the self, and most opposed to the 'lofty realms' of imagination. Everything is oppressively material. MacDonald thus clearly distinguishes the revelations of bodily, material truth, and revelation from above, the realm of poetry.

The analogy of geology and physiological psychology is as evident. Docherty points out that the tortuous descent into this underworld made visible the 'malfunctioning parts of [the] soul which have created regions of hell closely comparable to those of the traditional subterranean hell'.[73] MacDonald thus anticipates later psychologists' analogies for the 'subconscious', such as Sully's 'stratified', 'hidden' layers of the mind which he believed were an 'unveiling' of the 'organic substrate of our conscious personality', and which Freud, in turn, adopted, making MacDonald's sons suspect him of having copied their

[73] Docherty, 'Anodos and Kathodos', p.45.

father.[74] What Anodos encounters are embodiments of his thoughts, which act, according to the dream-theory MacDonald put forward in *Phantastes* as revelations and diagnoses.

When in the first stages of his descent Anodos is reflecting on his mistake of wanting to grasp and kiss the White Lady, and contemplating how to could win her back, 'queer goblin creatures', 'of all varieties of fantastic ugliness, both in form and feature', seemingly read Anodos's mind and taunt him. Pursuing his every step, the entire 'pandemonium of fairy devils' echoes his thoughts, and cry 'exasperating speeches into [his] face' – 'She's for a better man; how he'll kiss her, how he'll kiss her!' – and, with 'harsh grating laughter full of evil humour' they mockingly sing the 'song with which I had brought the light into the eyes of the White Lady' (189;191). As the fabric of his unconscious is analogous to natural law, the manifest thought of God, they inevitably reveal the immorality of his mind, its malfunctioning. MacDonald later uses the image of the goblins in the *Princess and the Goblin* (1871) specifically to make visible the degeneration of the faculties through immorality, revealing it as against natural law.[75]

As the unconscious mind through which he now journeys, just as he had wandered the landscape of his imagination, is an expression of natural truth, he cannot escape its diagnosis: when he attempts 'to run', he finds he cannot, and 'they all rushed on [him]', leaving him unable to move or escape. And according to the functions of the dream MacDonald had studied, in its deepest phase the dream now acts in its curative function. Having lost all hope 'of finding the White Lady', Anodos 'no longer called her' to himself '*my* White Lady' and at the lowest point of his journey, experiences catharsis – which is

[74] Sully, 'Dream as Revelation', p.359; Ronald MacDonald, *From a Northern Window* (London: James Nisbet, 1911), p.92; While it is not known whether Freud read MacDonald, the suspicion arising is further evidence for the perceived currency of psychological theory and imagery in MacDonald's writings.
[75] In his goblins MacDonald embodies sinful thought in the same image as Charles Dickens in 'How the Goblins Stole a Sexton' (1836), or, later, Christina Rossetti in 'Goblin Market' (1861), however, with evolutionary undertones. This becomes a major plot device in *Lilith* which will be addressed in chapter 2.3.

worded in the same peculiar manner as his first psychological descent in his father's study:

> [T]he *galvanic torrent* of this *battery* of malevolence *stung* to life within me a *spark* of nobleness, and I said aloud, "Well, if he is a better man, let him have her." (190)

MacDonald's complex layering system thus comes full circle. The dream's enactment of its psychologically and morally curative function of a scientifically rooted intellectual problem is expressed in terms of geological chemistry and galvanism, embedded in the framework of the mythological katabasis, the hero's journey to the underworld: towards which the name Anodos is the clearest indication. Commonly mistranslated as 'pathless', 'on no road', 'lost on his way' or 'having no way', the name in fact derives from ancient Greek 'ἀνοδος', or anabasis ('ἀναβασις'), 'a way up', or 'a way back' – the antithesis to kathodos ('κάθοσος'), 'way down', or 'katabasis' ('κατάβασις').[76] These are the phases of the underworld journey, as Joseph Campbell, most prominently, noted, in which allegorical embodiment of world sin are encountered to result in catharsis ('καθάρσις'), a spiritual 'cleansing, purifying' from 'the contagion of sin' or 'disobedience to divine will', a figurative rebirth (Fig.5).[77]

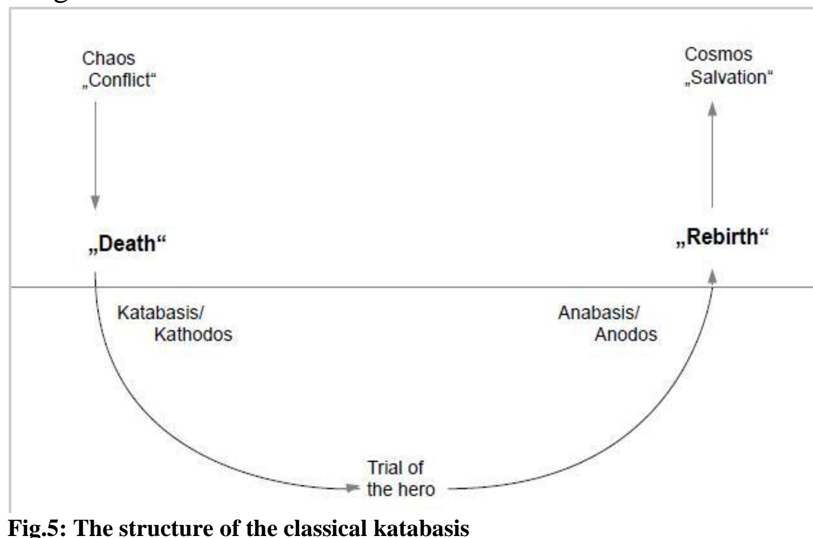

Fig.5: The structure of the classical katabasis

The katabasis lent itself to MacDonald's purposes as it was an inherently psychological and cathartic concept. As

[76] Page, 'Introduction', p.44; Soto, 'Chthonic Aspects', p.20.
[77] Joseph Campbell, *The Hero with a Thousand Faces*, 3rd edn (Novato: New World Library, 2008), p.21; There can be little doubt about MacDonald's awareness of the linguistic and mythological implications of his protagonist's name. As a student at Aberdeen he was examined on the translation Xenophon's *anabasis*, and obtained a distinction; he also continued to study Ancient Greek at Highbury. Variations of this term recur throughout his fiction: his final novel *Lilith*'s temporary working title was 'Anacosm', and its protagonist's ancestor, 'Sir Upward', evokes Anodos's knightly name. This will be discussed in chapter 2.3.

Rachel Falconer has highlighted, its most important philosophic rationale was the 'traversal' of 'psychological suffering and purification of the protagonist': an unmaking of the self which is inherently an 'account of psychiatric and pathological trauma'.[78] It was linked to the dream also through the ancient Greek underworld , which was governed by the brothers Hypnos (Sleep) and Thanatos (Death). It was, however, at MacDonald's time also a metaphorical concept already widely used in physics. Although Fernando Soto had tentatively suggested, that to a 'man trained in electro-chemistry', 'the *anodos* and *kathodos* would have had primarily scientific connotations', and Hal Broome suspected MacDonald *may have* possessed 'significant knowledge on biochemical processes', the scientific background of this connection has never been explored beyond these remarks.[79]

MacDonald had, in fact, studied the scientific terms at university, and learned that 'cathode' and 'anode' had been coined in 1834 by Faraday, who had himself derived the water-based metaphor of the 'electrical current' from the 'terrestrial globe', and consequently settled on 'directional' terms for visualising electricity that 'signify way up and way down'.[80] As Alexander Bain's railway and telegraph wires showed, metaphors were abundant in Victorian science writing, and Alice Jenkins notes that Faraday 'did not attempt to expunge metaphor', but rather allowed 'for the possibility of interpretation of their referents as either concrete or conceptual'.[81] In accordance with this conceptual freedom, MacDonald plausibly extends the spatial metaphor of the eponymous mythological concepts. While this aspect has been noted only in subclauses by Broome and Soto, electrical imagery, linked to the formation of thought and emotion, recurs

[78] Rachel Falconer, *Hell in Modern Literature: Western Descent Narratives Since 1945* (Edinburgh: Edinburgh University Press, 2005), p.114.
[79] Soto, 'Chthonic Aspects', p.44; Broome, 'Dream-Frame', pp.87;88.
[80] Alice Jenkins, *Space and the 'March of Mind'* (Oxford: Oxford University Press, 2007), p.126; 'Lecture 119', in *Lectures in Natural Philosophy*, MS M 172, Duncan Rice Library Special Collections, University of Aberdeen [n.p.].
[81] Jenkins, *March of Mind*, pp.128;131.

consistently throughout MacDonald's work.[82] In 'A Hidden Life' (1864), MacDonald's first publication, directly preceding *Phantastes*, the protagonist is '[M]et by some stranger flash from cloudy brain' when a vision is revealed to him.[83] This follows his passing through a thunderstorm, in which 'the electrically-charged stormy air disrupted the normal equilibrium', an effect also described in *David Elginbrod* (1863).[84] This electrical imagery operates alongside that of 'water of consciousness', which had also in *Phantastes* symbolised the continuous unconscious though processes transporting, as MacDonald put it in *Castle Warlock*, the 'thoughts' which were 'throbbing through' the 'brain like the pale electric pulse of a […] receiver'.[85] MacDonald would have drawn on common beliefs of many Victorian scientists, that the 'mind-body circuit [ran] on electricity', and that changes of emotion were reflected in change of body charge – which explains the sudden swing in the catharsis of Anodos.[86] The chemistry lectures he attended as a student treated Galvani's experiments and Volta's battery, and described the influence of the galvanic shock upon the human body as 'blinding', 'bright flash', or 'spark'. The double meaning of 'battery', and 'volta' – in its poetic sense a 'turn' and moment of poetic insight commonly used in the sonnet – would not have gone unnoticed by MacDonald as prolific translator of Italian literature, who had studied poetic terminology at the same time as chemistry at university, and later lectured on both.

That *Phantastes* was a novel-length visualisation of the psychological formation of insight under the productive incorporation of the unconscious upon the basis of chemical science, becomes even clearer when comparing it to the way in which MacDonald's most

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[82] Fernando Soto, 'Chthonic Aspects of *Phantastes*: From the Rising of the Goddess to the Anodos of Anodos', *North-Wind*, 2000, p.20.
[83] George MacDonald, 'A Hidden Life', *A Hidden Life and Other Poems* (New York: Scribner & Armstrong, 1872), p.38.
[84] Broome, 'Dream-Frame', p.92.
[85] MacDonald, *Castle Warlock*, p.217.
[86] Rylance, *Victorian Psychology*, p.35.

significant literary influence, Novalis, had conceptualised it in his works. Novalis, or Georg Philipp Friedrich Freiherr von Hardenberg, was trained at the Bergakademie, the German mining academy at Freiberg. He subsequetly acted as salt mining superintendent of Saxony where he performed galvanic experiments, like those MacDonald had studied at Aberdeen, to improve processes of separating salt crystals from rock more efficiently. His private interests in galvanism exceeded the boundaries of its application in mining: he extended his experiments to human biology, hoping that '[T]o penetrate the laws of Nature would mean to gain insight into the laws of the human mind'.[87] His fascination with the polarity of electricity led him to believe that beyond the '*superficial* polarity of all things lay a *hidden*, dialectic unity', that 'cipher' in nature, and it is his fiction reveals what he was hoping to find in action.[88] In *Heinrich von Ofterdingen*, the focal dream-fairytale 'Klingsohr's Märchen' galvanism *is* the 'original force' ('Urkraft') and 'central phenomenon' ('Centralphänomen') which, as Daiber notes, Novalis believed operated in precisely the same manner 'wherever there was life'.[89] This was the same idea signified in the metaphor of the multiplying glass, of a law that functioned analogously in 'the evolution of nature' as much as in 'the soul development of the human being' which Novalis could only make visible in a fairy tale.[90]

MacDonald's fiction thus enacts the underlying physiological processes of thought-formation through their analogy in geology. As Faraday had demonstrated that 'passing an electrical current through some mixed solutions' by electrolysis would decompose 'the solution into its constituent parts', a process of refinement, Novalis transposed this

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[87] Jürgen Daiber, *Experimentalphysik des Geistes – Novalis als Experimentator der Außen- und Innenwelt* (Stuttgart: Franz Steiner Verlag, 2000), p.17.
[88] Daiber, *Experimentalphysik*, p.28.
[89] Daiber, *Experimentalphysik*, pp.21-2; Baruch Luke Urieli, *Eros and Fable: Novalis' Fairy Tale of Human and Earth Evolution. Three Lectures*, ed. by Wain Farrants and Peter Howe (Aberdeen: Camphill Books, 1999), pp.42-3.
[90] Daiber, *Experimentalphysik*, p.22.

principle to the psychological processes of spiritual improvement through Hegel's dialectics, which reconciled opposites into a synthesis, also evoked by Schelling.[91] Novalis next linked the binaries of 'facts of nature' and 'the images of the mind' through a synthetic force which he called the 'productive fantastic imagination' ('produktive Einbildungskraft'): the principle MacDonald recaptures as 'phantastes', 'the fantastic imagination' that was captured best, and, in turn, stimulated by the fairy tale, as MacDonald had, in the words of Novalis expressed in the epigraph of *Phantastes*.[92] Novalis had intended to 'poeticise the sciences' into 'real, scientific poetry' in his dream-novels: an 'explicitly galvanic experiment' from which cathartic truth about the workings of nature is crystallised by a galvanic shock.[93] MacDonald's novel elevates this principle, and Novalis's focal narrative element, the fairy-tale dream, into a narrative form. *Phantastes* is an experiment expressed through literary means, aiming to synthesise scientific truth by which to improve mind and society: the literary dream re-enacting the effect MacDonald believed its real-life counterpart to induce.

Phantastes concludes with a simile of the synthesis and application of gained insight, leading to the resolution that had been denied to *Heinrich von Ofterdingen*. As Anodos's dream, finally, responds to his wish 'to turn up to the light some of the buried strata of the human world, with its fossil remains charred by passion and petrified by tears', 'like a geologist', his ascent returns to the metaphor of the frame, and immerses him in this psychological 'country of rock' (42;196). It 'narrowed', the 'roof sank lower and lower', until he was 'forced to creep' on 'hands and knees,' a posture indicating his immanent rebirth. Instantly, he is overcome by 'terrible dreams of childhood', which disappeared into

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[91] Jenkins, *March of Mind*, pp.125-6.
[92] Novalis, *Fragmente II*, p.376; Daiber, *Experimentalphysik,* p.29.
[93] Daiber, *Experimentalphysik,* p.28; Novalis, *Fragmente I*, pp.182-3; MacDonald had studied the influence of electricity on gem stones and semi-precious stones in his lectures on Natural Philosophy (see MS K 172, p.190).

a ‘gray mist’ of ‘what had gone by’ (196). MacDonald taps into the metaphors of Victorian geology: Anodos’s memories shaped these caves, as the Tree of Life, as Darwin later wrote, filled ‘with its dead and broken branches the crust of the earth’.[94] What Ralph O’Connor calls the ‘panoramic imagination’ informed popular science visualisations to contextualise the significance of fossils, condensing the earth’s history into one optical contraption.[95] But it is through Novalis’s analogy that MacDonald describes the formation of thought, memories stored in the brain, like ‘fossil remains’, are through psychological pressure galvanised out of its fabric like salt crystals. The ‘mind galvanising the soul,’ the ‘human gem’ becomes an image for the purified soul which recurs throughout MacDonald’s work from then on.[96]

Seeing the subjective, the self, through the objective, through nature, Anodos’s vision reaches its culmination. Emerging from the cave, ‘a new wonder met his view’: a ‘panoramic’ vision of his ‘whole past’, ‘fields of my childhood flitted by; the hall of my youthful labours’ (199). This ‘indistinct’ vision marks the moment of synthesis: in the ‘shallow sea’, ‘strange rocks’ and ‘forests of sea-plants’, the things of his previous scientific study, now ‘bewildered my eye’, transformed ‘by the magic of *phantasy* into well-known objects and regions’ (200). As if through the fairy-child’s multiplying-glass, Anodos now ‘beholds *the same thing* everywhere’, Novalis’s ‘cipher’, Schelling’s ‘Weltseele’: he is overcome with ‘delight’, ‘dreams of unspeakable joy’: ‘floods of love’ of St Paul’s ‘agápē’ (116;200). Anodos has overcome the ‘goblin Selfishness’ (196). He passes through a final cottage, in which he may view himself only in a ‘convex mirror’, which, as Brewster has noted, produces a ‘diminished image’; he has now seen Lady Why,

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[94] Charles Darwin, *On The Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (London: John Murray, 1859), p.130.
[95] O’Connor, *Earth on Show*, p.270.
[96] MacDonald, *Castle Warlock*, p.165; Novalis, *Fragmente I,* p.332.

and feel ‘smaller, and meaner, and more stupid and more ignorant’ than ever before.[97] Serving and labouring alongside those he encounters, Anodos eventually dies in self-sacrifice, allowing him to be reborn into the waking world, and rises into a ‘single large primrose’ – a primrose created by the scientific thinker, and not ‘murdered to dissect’ (225;267).[98] Being transformed into the object whose symbolic meaning the scientist of MacDonald’s Wordsworth lecture failed to grasp, Anodos *becomes* the embodiment for the overcoming of this mindset.

Anodos’s journey had at this stage enacted psychological, natural, philosophical and theological truth, but the way in which his dream manifests within the material world also shows that deep-rooted psychological change is accompanied physiological phenomena. These re-establish the link between the mental and manifest, the sleeping and waking worlds which had dissolved in the bedroom scene at the onset of the dream. Anodos awakes ‘in the open air’ on the ‘summit of a little hill’ near the ‘valley with his own castle’, indicating apparent somnambulism (269-70). Contemporary psychologists had at the time *Phantastes* appeared started putting forward experimentally-founded accounts of different phases of sleep and their cognitive learning potential. While the ‘intense Cerebral activity’ of dreaming could ‘evolve important ideational results’, William Carpenter noted, in somnambulism ‘the dreamer *acted* his dreams’, which enabled him to ‘*execute* […] whatever it may be on his mind to do’, indicating that Anodos must now put his insights into action, according to MacDonald’s ideals of applied science.[99] To Carpenter, somnambulism was the intensified version of ‘reverie’ and ‘abstraction’, whose ‘automatic actions’ allowed reasoning processes begun in waking life, such as Anodos’s quest for social and philosophical identity, to be ‘carried-on during sleep with unusual vigour and

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[97] Kingsley, *Madam How and Lady Why*, p.3.
[98] Brewster, *Optics*, p.447.
[99] Carpenter, *Principles*, p.591.

success,' to provide even 'perplexing difficulties' with 'explanations'.[100] The effectiveness of this specific unconscious process, which Anodos's dream in *Phantastes* had enacted in its phases and their respective functions is proven in the conclusion of the frame narrative.

The dream's complex psychological functions indeed adjust Anodos's practices. A 'few days' after he has returned to his duties' at the estate, he feels 'somewhat instructed [...] by the adventures that had befallen me in Fairy Land', remaining, however, unsure how he could 'translate the experience' into 'common life' (271). But the effect of his dream has changed his waking thought: having looked after his business, but having encountered a problem that put him in a state of unrest, he suddenly catches himself '*unconsciously* almost, *looking*' for the ideals that guided him in Fairy-Land (272; my emphasis). He, then *consciously* embraces this new thinking into his everyday life and thought: he sits, reclines and drifts into reverie, and the voice of the White Lady, who seems to appear 'between the branches of the tree overhead', signifying the natural law she represents, announces 'A great good is coming – is coming – is coming to thee, Anodos' (272). As his 'active eye' had been acting in the final dream vision of synthesis, his unconscious gaze guides him to the reverie that first evoked the state of 'phantastes' in his father's study, a principle manifesting in the White Lady. His dream has taught Anodos to seek counsel in his imagination, and let the unconscious mind participate in the solution of the practical problems in life.

The chapter epigraph from Novalis, 'our life is no dream; but ought to become one and perhaps will', readjusts the proportional significance of the dream to waking life and its rational thought, to counterbalance it, and the mode of thinking simulated in Anodos's dream as a model (269). Anodos is self-conscious of this model role: he has returned with

[100] Carpenter, *Principles*, pp.544;584.

a feeling of being a 'ghost', 'sent into the world to minister to my fellow men', as the spectre of the white lady did to him. MacDonald lifts his tale onto a meta-narrative level. As Anodos's psychological conversation occurred through a fairy tale, *Phantastes* is manifestly an encouragement to its readers to let it act upon them in the same way Anodos's dreamed fairy tale had acted upon him: a manifesto for how MacDonald envisaged the dream, and imagination could find application in the improvement of mental culture and society (271).

The 'baptised imagination': A catharsis based on science

Reframing *Phantastes* within its scientific history highlights the origin of this first fantastic novel in the scientific discourse, as reflecting, engaging in, and furthering it. MacDonald began to write literary fantasy in a period in which 'Victorian psychology', as Rylance notes, 'was clearly overwhelmingly rationalistic' in 'methodological demeanour', and 'made little of apparently irrational experience' and 'sermonized on the passions'.[101] The dream, MacDonald's main literary device, was treated with suspicion. This expressed itself in scepticism, such as Carpenter's, who merely believed the memories retained from dreams are 'too vague to allow their being turned to good account'.[102] In 1871 Frances Power Cobbe still remarked with horror upon the immoralities occasionally revealed by dream and dismissed them as 'untruths'; and Wigan warned that 'the intermixture' of the 'two synchronous trains of thought' was a feature observed 'in the insane'.[103] MacDonald incorporates the features of dreaming thus identified, such as the confrontation with unconscious immoralities and different patterns of thought, rather than dismissing them.

[101] Rylance, *Victorian Psychology*, p.148.
[102] Carpenter, *Principles*, p.587.
[103] Cobbe, 'Dreams', p.521; Wigan, *Duality of the Mind*, pp.26-7.

Investigating the sources of scientific ideas in MacDonald's literary imagery illuminates the innovative contribution of the fantastic to psychology. MacDonald's fantastic explorations of science did not cease where experimentation could not progress. Aided by the dialectic paradigms of *Naturphilosophie* – a feature much remarked upon in early reviews – MacDonald combines modern scientific findings with philosophies of the mind which were at the brink of becoming obsolete in an increasingly materialistic discourse, through scientific analogies and metaphors, that were becoming marginalised in its writing.[104] Embracing tentative ideas such as the dream phases, and applying them in 'rationalistic' discourse, MacDonald showed how this enabled him to respond to pressing philosophical questions, even when their science was still tentative. While Carpenter still speculated whether all dreams 'really take place in the momentary passage between states of sleeping and waking', or are 'trains of thoughts' passing 'through the mind' with extreme 'rapidity', Anodos's journey realises their potential: he explicitly experiences the synthetic vision of his life in a period of waking, in which he is also sentient of the world around him, thus adding to the sleep onset and alternating light-dark deep sleep phases which were only to be theorised on the basis of empirical scientific data a century after MacDonald's novel appeared. And MacDonald adapts such findings as Carpenter's that visions of 'intensely-rapid successions of Thoughts', of 'the whole previous life of the individual seeming to be presented instantaneously', particularly occurred in 'danger of Death', in a figurative sense in Anodos's metaphoric death, from which he rises having gained access to normally inaccessible imagery, that facilitates cathartic insight.[105]

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[104] 'Phantastes: A Faerie Romance for Men and Women', *Athenaeum* 6 November 1858, p.580; This review remarked that *Phantastes* read as if 'it had been written after supping too plentifully on German Romance' and 'negative philosophy'.
[105] Carpenter, *Principles*, p.588.

That *Phantastes* exerted this cathartic effect is most notably recounted by C.S. Lewis, in an often-quoted, but equally often sanitised passage, that removes the parenthetically inserted sensation of death crucial to the work's underlying psychology:

> [T]he whole book had about it […] quite unmistakably, a certain quality of Death, good Death. What it actually did to me was to convert, even to baptise *(that was where the Death came in)* my imagination.[106]

Tolkien had written that death was the topic that 'most inspired' MacDonald, that he was a 'master' of what was, to Tolkien, the aim of fantasy: the restoration of clarity of mind. *Phantastes*, it is evident in its effect on a subsequent generation of writers, did serve a psychologically curative function. The dream itself is a discursive space, liberated from restrictions of other available discourses, harnessed the dream's own potential of abstraction, through which MacDonald carried problems from the reality of the narrative frame into a problem-solving vision, to gain clarity, identity and purpose that, which, he felt, the scientific discourse could not (yet) yield.

[106] Lewis, *Anthology*, p.xi.

1.3. ‘The mind of the child transfused into narrative’: *Alice’s Adventures in Wonderland*, dreaming, psychiatry and satire[1]

‘In an age of imitation, I can claim no special merit
for this slight attempt at doing what is known to be so easy. […]
I must beg the candid reader to confine his criticism
to its treatment of the subject’.
Lewis Carroll, ‘Hiawatha’s Photographing’[2]

Lewis Carroll is more frequently than George MacDonald named as the ‘landmark’ author of the ‘golden age’ of children’s literature.[3] He has been almost unanimously praised as a children’s writer who is ‘virtually entirely on the child’s side’, as Peter Hunt asserts, and who ‘served children by discarding moral and didactic fetters’.[4] Anne Clark argues similarly that *Alice’s Adventures in Wonderland*’s ‘total absence of worthy purpose’ and ‘restraints’ are the reason why both Victorian children and modern adults have received it with ‘enthusiasm’.[5] Almost as unanimous as the agreement on its lack of moral motivations has been the consensus that its plot centred around ‘the pragmatic and generally *stoic* Alice mov[ing] through a world of mad adults’, ‘generally puzzled about them more than anything else’.[6] *Alice*[7] has become synonymous with a narrative of liberation from narrative conventions, historical context and its *status quo* or even ‘anarchy’ – statements that sit oddly against the moralistic purposes to which other Victorian authors, such as indeed MacDonald, applied the literary dream.[8]

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[1] Anon., ‘Alice’s Adventures in Wonderland’, *The London Review*, 286 (23 December 1865), p.675.
[2] Lewis Carroll, Hiawatha’s Photographing’, in *Jabberwocky and other Nonsense: Collected Poems*, ed. by Gillian Beer (London: Penguin, 2012), p.129.
[3] Peter Hunt, *An Introduction to Children’s Literature* (Oxford: Oxford University Press, 1994), pp.78-9.
[4] Hunt, *Children’s Literature*, p.79.
[5] Anne Clark, *Lewis Carroll: A Biography* (New York: Schocken Books, 1979), p.139.
[6] Donald Rackin, ‘Alice's Journey to the End of Night’, *PMLA*, 81 (1966), p.319.
[7] This chapter will adhere to the following commonly-used contractions of the book titles: *Wonderland* for *Alice’s Adventures in Wonderland* (1865); *Looking-Glass* for *Through the Looking-Glass and What Alice found There* (1871), and *Alice* when referring to both novels.
[8] Hunt, *Children’s Literature*, p.82.

It is noteworthy in this context that contemporary reviews struck a chord entirely dissonant to this modern consensus. *The Press* praised *Wonderland* as a work to 'inculcate good principles' in child readers; *The Spectator* underlined its 'profit to the little folks', as 'Alice's story may be considered as strictly moral as it is exquisitely amusing'.[9] These reviews are, further, far more in tune with the author's own ambitions. In the often-ignored letter 'An Easter Greeting to every child that loves "Alice"', which was appended to reprints of *Wonderland* and later also *Looking-Glass* and *The Hunting of the Snark* (1876), Carroll had explained that *Alice* was to be part of the body of literature of 'healthy amusement'.[10] He is, however, self-aware of the dissonance between perceptions of *Alice* as carefree amusement and the purpose that he had envisaged for his book. When his letter cites morning prayer, God's grace, and the inevitability of having to walk through the 'valley of the shadows', he interjects: 'Are these strange words from a writer of such tales as "Alice"? And is this a strange letter to find in a book of nonsense?'. Anticipating his aim might get lost in 'mixing together things grave and gay', he asserts that grave things should not only be spoken about 'in Church on a Sunday', remaining 'sure', that his book will nevertheless be read by 'some' in the 'spirit in which I intended it'. Although this line of thought is, if at all, mostly linked to Carroll's 'later years', such views on *Alice* indicate a more consistent presence of moral concerns in Lewis Carroll, or indeed Charles Lutwidge Dodgson's writing.[11]

Criticism has only very recently, and hesitantly, begun to turn away from what Gillian Beer calls an 'orthodoxy' of regarding Carroll as a children's author who wrote for 'mere entertainment' – a problematic angle from which persistent tensions in the portrayal of

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[9] Anon., [no title], *The Press*, 25 November 1865 [n.p.]; Anon., 'Children's Books', *The Spectator*, 2008 (22 December 1866), p.1436.
[10] Lewis Carroll, 'An Easter Greeting to Every Child that loves "Alice"', *Through the Looking-Glass* (London, Macmillan: 1876), p.227.
[11] Carroll, 'Easter Greeting', p.226.

Carroll's life and works have arisen.[12] Most commonly, his professional occupation as cleric and mathematician, often assumed to have occurred 'isolated in his Oxford college', is pitched against this characterisation as a *pathological* opposite.[13] Resulting ideas of a 'split personality' have continuously tempted speculations of hidden, and more unorthodox meanings of *Alice* – especially in psychoanalytic criticism, and in the popular imagination, almost exclusively of sexual nature.[14] Preconceptions about *Alice*'s apparently innocent simplicity have contributed to pre-emptively and artificially limiting the remit of children's literature, and, moreover, distort the rich intellectual preoccupations of an author whose religion, mathematics, his significant engagement with science, especially psychology, and his writing for children were interlinked and interdependent.

A historical revision of Carroll's interest in the psychology, and especially the phenomenon of dreaming which structures his narrative shows that *Alice* indeed facilitates insight into the Victorian psyche as well as Lewis Carroll's life and philosophy as a writer, but in a way entirely different to that psychoanalytic criticism has suggested. Carroll's so far little-studied, burgeoning pursuit of the sciences of the mind around the time of writing *Wonderland* thus sits tantalisingly alongside contemporary praise of his *accurately* 'reproduc[ing] the unconscious in waking hours' and the '*admirable* appearance of wondering belief, as if the mind of the child were somehow transfused into the narrative' in *Wonderland*.[15] And while some modern critics considered the dream a 'rather weakly' framing device, Victorian reviews were curious 'what the great advocates for the progress

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[12] Gillian Beer, *Alice in Space: The Sideways Victorian World of Lewis Carroll* (Chicago: Chicago University Press, 2016), p.3.
[13] Beer, *Alice in Space*, p.3.
[14] Clark, *Lewis Carroll*, p.16; Morten N. Cohen, *Lewis Carroll: A Biography* (London: Macmillan, 1995), p.xxi; A.M.E Goldschmidt's now notorious, yet still often-cited, '*Alice in Wonderland* Psychoanalyzed' saw *Alice*'s imagery, its tunnels and curtains as 'primarily erotic in their nature' (*Aspects of Alice*, ed. by Robert Phillips (London: Penguin, 1971), p.330).
[15] Anon., 'Alice's Adventures in Wonderland', *The London Review*, 286 (23 December 1865), p.675 [my emphasis].

of scientific knowledge will say to this book', suggesting that *Alice* may have stood in dialogue with public scientific discourse.[16] Reconsidering *Alice*, the dream-narrative, as a contribution to 'healthy amusement' points toward an underlying and psychologically-founded trajectory, which is, in turn, further illuminated by Carroll's equally unexplored interest in psychology's applications for curative purposes in psychiatry and performance science. Reframing *Alice* thus as not *merely* a children's entertainment, and its author as not *merely* a children's writer and amuser gives further critical depth to understanding it as a mirror and critic of the cultural, moral and scientific environment which shaped a work which, rather than abandoning the traditional dream-narrative, radically redefined it.

'Comedic catharsis': ***Alice*** **as a satirical katabasis for children**

Considering the literary structure of *Wonderland* as a dream-novel before criticism which generally emphasised the 'chaotic' and 'anarchic' nature of the narrative, it is striking that the same katabatic structure as in *Phantastes* is immediately, and far more unambiguously apparent in the novel's imagery, structure and plot than previously acknowledged. As in the Classical underground journey, Alice falls not only asleep but also 'down, down, down' into what she thinks to be 'a very deep well' on a river-bank – a scene comparable to Anodos's plunge into the well in his bedroom that marks the transition from one world to the other (8;9). Alice's journey progresses also, like Anodos's, with the crossing of water – the 'pool of tears' – as its name indicates, originates, like the underground river Styx crossed in classical mythology, from tears.[17] Alice next passes an 'enormous puppy', a caricature of the underworld's guard dog Cerberus, hoping to reach a paradisiacal garden, as Jackie Wullschläger notes, 'one of the oldest traditions in literature' (30).[18] The

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[16] Anon., 'Alice's Adventures in Wonderland', *The Publishers' Circular*, 677 (8 December 1865), p.686.
[17] Dante Alighieri, *Dante's Inferno: The Indiana Critical Edition*, ed. by Mark Musa (Bloomington: Indiana University Press, 1995), p.114.
[18] Jackie Wullschläger, *The Lives and Fantasies of Lewis Carroll, Edward Lear, J.M. Barrie, Kenneth Grahame and A.A. Milne* (London: Methuen, 1995), p.43.

guide-character of the Cheshire Cat is akin to, but, as Louis James notes, a rather more 'evanescent evangelist' than Christian's in the *Pilgrim's Progress*, or Dante's Virgil in the *Divine Comedy* (49).[19] While Wullschläger suspects Carroll included these images 'probably unconsciously', the evocation of these structures is as precise as it is omnipresent. As *Alice* underwent a rigorous editing process that enhanced rather than eliminated such katabatic structures, it is more likely deliberate, anticipating a coherent narrative progression, orientating the reader, as the topographical stages illuminate the meaning of the events occurring in them.

The traditionally cathartic ends of such a narrative invite a reconsideration of *Alice*'s 'stoic' protagonist, which must, however, also acknowledge its evident *unlikeness* to such a cathartic katabasis as in *Phantastes*, as a primary aspect of Carroll's multifaceted text is that it is a work of humour, of satire, and nonsense. While it may seem contradictory that one narrative form would support the ends of that which it mocks, the dream's aim of revelation and reform correspond to the ends of humour and satire. Humour, as Fowler clarifies, has the 'motive or aim' of 'discovery' about 'human nature', and *satire* heightens and redirects these components with its chief 'province' being 'morals and manners' and its motives the 'amendment' of its audience of the 'the self-satisfied'.[20] Its main purpose, as Peter Berger adds, was to 'attack' institutions, 'notably political and religious ones'.[21]

This foregrounds, firstly, the difference from such dream-narratives as *Phantastes*, as their aim was the amendment of what is internal: the individual self, rather than external collectives. The comedic tradition is what *Alice* seems to be, at first glance, more naturally akin to, and the ridicule of the 'attacked', the externalised subject of reform, which

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[19] Louis James, *The Victorian Novel* (Oxford: Blackwell Publishing, 2007), p.174.
[20] H.W. Fowler, *A Dictionary of Modern English Usage*, 2nd edn, ed. by Ernest Gowers (Oxford: Oxford University Press, 1983), p.253.
[21] Peter Berger, *Redeeming Laughter: The Comic Dimension of Human Experience* (New York: De Gruyter, 1997), p.18.

constitutes the first part of this process of comedic catharsis is immediate and absolute, as Alice's first satirical interaction at the Caucus Race makes clear. An obscure, circular race with neither finish line nor winners – it imitates, but simultaneously defeats all purposes of a race. The institution, based on strictly hierarchical but entirely ineffectual, decision-making, it imitates is rendered unquestionably ridiculous. While a Lory dismisses Alice as it 'must know *better'* as it is '*older*' – a familiar experience for a child – the flawed logic is revealed by *reductio ad absurdum* as the party endorses the decisions of a Dodo because it is not just older but extinct, and must, therefore, know *best* (23).

The hierarchical systems portrayed in *Alice* are as specific as they are symptomatic, and therefore representative. The work emerged from the educational environment which both Alice Liddell, the daughter of the Dean of Christ Church, and Carroll inhabited, and Carroll's condemnation of outmoded forms of education and the underlying intellectual hierarchies governing them is epitomised in *Alice* through inversion of their self-professed aims. How this perspective is sympathetic to the child in its mockery of adult structures is immediately evident, and has as such been much remarked upon, but the imagery's connotations also reach beyond the familial context, bearing evidence to Carroll's wider intellectual engagements.

Through the Dodo, Carroll levelled criticism at the University of Oxford, as he had done throughout his career in satirical pamphlets and literary parodies such as the *Vision of the Three T's* (1873) or *Euclid's Modern Rivals* (1879). Daniel Brown notes the linguistic significance of the Dodo as an indicator of a wider, representative scope of Carroll's criticism: an oxymoron of a 'flightless bird', 'both grossly corporeal and extinct', the Dodo in 'metaphoric use' had come to 'describe a redundant person or institution', having

gained currency in criticism of the Royal Society 'as a bastion of aristocratic class and privilege', dedicated to, but ultimate 'ill-equipped' to 'facilitating scientific research'.[22]

As Beer further highlights, the evolutionary irony of the Dodo as rule maker, judge and 'magisterial chairman among the current creatures', pointed to the context of 'natural selection [in which] by no means *everybody* has won, certainly not dodos', which conveys another layer of significance.[23] The advice Alice is given by adult figures is not only, as Beer states, useless for her journey's progress, but in fact more sinister, as it points her to the same end as the Dodo's. Whenever Alice attempts to recall such 'lessons' which she 'had learned in the school-room', as when she recalls her 'mathematics' and 'geography' to orientate herself during her fall, they yield not only dangerous, but lethal conclusions, such as thinking 'nothing', meaning not caring, after falling from 'the top of a house', which the narrator comments, 'was very likely true', but for other reasons (8). Death becomes a recurring theme in *Alice*, signifying the utmost opposite to progress, growth and transformation, marking the unfitness of the purveyors of the teachings that lead to it. Victorian education, its structures and philosophies, are thus shown to be detrimental to the developing mind on a biological level: the first indication that *Alice* stands in dialogue not only with the child reader, but the wider contexts of science, its relation to society, via psychology, through metaphors with currency in both discourses, not unlike *Phantastes*.

It is worth noting that despite such characters as the Dodo appearing as external to Alice, she encounters them in *her own* dream, which means they, and what they embody, are also part of her. The way in which Carroll implements his satire directed at principles external

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[22] Brown, *Victorian Scientists*, pp.94;96; The Dodo has almost exclusively been linked to Lewis Carroll's alleged stutter, which would have rendered the author's name as Do-do-dodgson. As Edward Wakeling, however, clarifies Carroll in fact suffered from a 'speech hesitation' which prevented him from uttering a sound altogether. The presentation copy for Robinson Duckworth, who was present at the first telling of the story, was, however, signed by Dodgson 'The Duck, from the Dodo' (cf. Lewis Carroll. 'Alice's Adventures Under Ground', Facsimile 2, MS EL3.D645al 866, Rosenbach Archives, Philadelphia).
[23] Beer, *Alice in Space*, p.137.

to Alice via her psyche indicates a psychological process: a bifurcation of her and them which is informed by and illuminated through his reading of contemporary psychology. The dream acts as a separating agent in Alice's mind, as it was described for instance in Henry Holland's *Chapters on Mental Physiology* (1852), which Carroll owned. Holland conceived the dream as a state of gradual dissolution of consciousness, will, and self:

> Let any one close his eyes, when in easy posture and quiet place […] while yet retaining enough of waking consciousness to note the fact, images will be felt to steal upon realities, and ideas to blend more confusedly together, with less power of retaining them, or regulating their succession. […] This carried further becomes dreaming.[24]

Holland adds that 'the powers of volition diminished and misdirected; *the consciousness of personal identity*, essential *as an exponent of reason* in its sound state, [is] lost or greatly obscured', just as it is portrayed in the opening of *Wonderland*.[25] The opening line 'Alice was *beginning* to get very tired' signals that she gradually drifts into dreaming on a 'hot day' that '*made* her *feel* very sleepy and stupid', that she is losing her rational intellectual grasp of the world when 'suddenly' the White Rabbit appears (7; my emphasis). Alice's dream is the first stage of a dissolution of a self that has been shaped and governed by principles the ideas of 'identity', 'will' and 'reason' conveyed to her through education.

As a loss of will and reason, dreaming was considered akin to 'madness' – Wonderland's trademark status quo. As Holland indicated, if a dreamlike 'state of the sensorium exist[ed] from other causes and for a longer time […] we have a condition scarcely to be distinguished from many forms of mental derangement'; a 'dream 'put into action […] might become madness'.[26] The Cheshire Cat's exclamation 'we're all mad here' thus becomes plausible as all characters appear in a dream. The dream is therefore also the plausible space for Carroll to dissolve what is mad from Alice's mind, to show that it is

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[24] Holland, *Chapters on Mental Physiology* (London: Longman, 1852), p.123.
[25] Holland, *Chapters*, p.124.
[26] Holland, *Chapters*, p.126.

these 'mad' influences that had shaped it into what we encounter at the begin of her journey. 'Madness' was, however, figurative and pathological. Carroll not only mocks, but pathologises what appears as nonsense. Laura Otis notes how literature amplifies sanity and insanity through figures of motion with 'deep-set roots' in 'Judeo-Christian culture', and a mind showing a 'circling' motion, such as the Caucus Race, had 'negative associations' such as selfishness and insanity, rather than 'emotional growth' suggested by 'progressive linear motion'.[27]

Madness fulfils numerous analogous functions in the text, Carroll's understanding of it in moral and medical terms illuminates its fictional applications. Pathological 'madness' was the opposite of 'healthy amusement' for developing minds, rendering 'insanity', that which is unhealthy, morally reprehensible. The interactions of dreaming, madness, and morality preoccupied Carroll greatly, as a diary-note from 1858 shows.

> Question: When we are dreaming and, as often happens, have a dim consciousness of the fact and try to wake, do we not say and do things which in waking life would be insane? May we not then sometimes define insanity as an inability to distinguish which is the waking and which the sleeping life? We often dream without the least suspicion of unreality. "Sleep hath its own world" and is often as lifelike as the other.[28]

How could sanity and insanity be separated in the mind? Sewell states the 'assumption' of knowing 'what sense is' and 'consequently what nonsense is' depended on the 'adoption of certain mental relations': the hierarchies Alice encounters in her dream. As nonsense, in turn, debunked all 'pretension', the humour of Carroll's dream dissolves it in what is *adapted* as sanity, but is really madness, thus redefining these concepts.[29]

As psychological literary patterns expose questionable policies, hierarchies and societal features threatening, as Carroll believed, the developing mind, Alice's narrative is a

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[27] Laura Otis, 'What is at Stake in Judging the Health and Pathology of Emotions' <https://www.youtube.com/watch?v=4kcnHzwKqLM> [Accessed: 08 May 2017].
[28] Carroll, *Diaries II*, p.38.
[29] Elizabeth Sewell, *The Field of Nonsense* (London, Chatto & Windus, 1952), pp.1;5.

Fig.6: Alice and the Caterpillar

journey of cathartic separation and development. The ability to change, and comprehension of change thus also becomes a marker of sanity, morality and health; unchangeability or mere lack of progress as in the Caucus Race, markers of what is insane, immoral and unhealthy. This psychological and moral developmentary trajectory is expressed through the same caterpillar-butterfly metaphor employed by MacDonald and Victorian educational texts, which Carroll, characteristically, adapts as well as undermines. Carroll's Caterpillar, in its teacher-like, superior portrayal initially displays the same attributes of nonsensical imitation of institutionality as the Dodo, and the undermining of its position is immediate. First of all, by its very nature, the Caterpillar and Alice are not separated by maturity, despite the insect's pretences: as a child and a caterpillar, the larval stage of the butterfly, they are respectively juvenile forms of their species. Further, both are exactly 'three inches' high, and Carroll relentlessly stresses the artificiality and hypocrisy of the Caterpillar's position of authority (40). Its elevated position is supported only by a mushroom – a parasite, not encouraging but consuming growth – a hookah, a status symbol in the Victorian Imperialist discourse: all markers of adulthood and social superiority which bear, however, no relation to the insect's actual maturity (Fig.6).[30]

As her exchange with the Dodo had alienated Alice from embodiments of un-healthful hierarchies and systems, the encounter with the Caterpillar most clearly segregates her

[30] In informal conversation, Robert Douglas-Fairhurst and Sophie Ratcliffe have observed the similarity of the Caterpillar's hookah also to Victorian feeding-bottles for children, although Tenniel's depictions of them are consistently distinct, and in Carroll's own illustration resembling a pipe (cf. Appendix VIII).

from a specific means of education: its narrative forms. In their exchange, the Caterpillar assumes the pedagogic in a mockery of the dialogic tradition's teacher-pupil relationship. It begins with the philosophical question – 'Who are you?' – and Alice's truthful answer, which evokes growth and development, immediately collapses the insect's philosophy.

> 'I hardly know, sir, just at present [...] I know who I was when I got up this morning, but I think I must have been changed several times since then.' (34)

No mind-growing discourse ensues: Alice finding 'being so many different sizes' '*queer*' clashes with the insect's position of fixity as it cannot, as symbol of transformation, conceive of transitional stages, unaware of the irony of this situation (35). As it thus cannot understand the transformational processes leading to its future form, it is unable to understand the 'psyche' which it symbolises. Its ignorance of natural development, and the educational needs based thereupon, makes it as unfit to instruct the mind and soul in its formative period as the educational methods it represents. The educational rhyme it demands from Alice to 'repeat', school-girl-like, "*You are old Father William*"', exposes this: it comes out 'wrong from the beginning to the end' as a parody of Robert Southey's 'The Old Man's Comforts and how he gained them', undermining Southey's assertion of the superiority of age in 'the parent-child relationship' (35;40).[31]

Through this metaphor Carroll conveys that he considers the influence the dream is dissolving from Alice's mind not only figuratively mad, or immoral, but unnatural. The Caterpillar was a common protagonist in the then-popular children's Natural History[32] narratives: pedagogical science literature for children, in which fairy-tale 'insect metamorphoses' modelled the ideal moral-psychological development, or indeed *natural*

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[31] Sewell, *Nonsense*, p.142.

[32] Carroll owned numerous books of this genre, several by popular author Rev John Wood alone, as well as scientific publications on entomology and woodland populations, including that of Gatty and her husband. He subscribed to *The Entomological Intelligencer*, had read Charles Kingsley's *The Water-Babies*, and George MacDonald's *Phantastes*, which both use insect metamorphoses as moral, spiritual and psychological metaphors. Gatty was also the editor of *Aunt Judy's Magazine* in which Carroll published 'Bruno's Revenge', shortly after *Wonderland*, in 1867, with which she was enchanted.

growth of the child, as in Margaret Gatty's 'A Lesson of Faith' from *Parables from Nature* (1855).[33] Gatty introduces a 'would-be-wise Caterpillar', who like Carroll's creature, appears in a mature position – being put in charge of the offspring of a butterfly, while unable to conceive of becoming a butterfly itself one day. A Lark teaches the insect that it will transform into another shape: a lesson which also provides the spiritual understanding that when it 'was a Butterfly', and neared its 'chrysalis grave', 'to die again', it could 'trust even now for what shall come next!'[34] Taught by Nature, what it learns is truth, so its natural development, bringing wisdom, follows.

As Beer explains, 'growth is an invisible process, registered only in retrospect' and 'expressed only as narrative'. Fairy-tale metaphors could thus 'express intellectually' and seemingly unambiguously in manifest form physiological, cognitive and spiritual stages, of what was otherwise guided by invisible, and therefore ambiguous forces.[35] As in MacDonald's evocation of the butterfly in *Phantastes*, Nature itself reveals truth and through it spiritual guidance: Gatty's Caterpillar tale is an 'allegory of eternal life' and the child's spiritual development.[36] As deacon, mathematician and logician, Carroll was concerned with a *truthful* portrayal of growth towards spiritual and natural *truth*: a point at which his religious convictions, his mathematical profession – his 'work for God' – his satire of moral hypocrisies, and his children's fiction converge.[37]

Carroll revises such natural history narratives to frame Alice's dream journey as a quest for truth, in which truth is conceived as being that which is naturally healthful for the child-mind. That he revises it at all is noteworthy. The Caterpillar metaphor which is

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[33] Melanie Keene, *Science in Wonderland* (Oxford: Oxford University Press, 2015), p.62.
[34] Margaret Gatty, 'A Lesson of Faith', in *Parables from Nature* (London: George Bell & Sons, 1901), p.8.
[35] Beer, *Darwin's Plots*, p.99.
[36] Gatty, 'Lesson of Faith', p.7; Keene, *Science in Wonderland*, p.62.
[37] Letter to Mrs. S.F. Rix, 7 July 1885, in Morten N. Cohen, ed., *The Life and Letters of Lewis Carroll,* 2 vols *(London: Macmillan, 1979)*, I, pp.585-5.

applied by Gatty or MacDonald in 'its traditional application as a means of knowledge-production', and thus developed into an analogy of a mental process, to present a moral conclusion that was truly analogous with God's law. To the logician Carroll, there was, however, 'no more fertile source of error […] than a "false analogy"'.[38] As he believed logic would 'help young people to think clearly and draw sound conclusions', he believed accordingly that every argument which rests on analogy ought to be 'very carefully and critically tested' – as he does in *Alice*.[39] The revision of existing analogies therefore condemns their original iterations.

Analogies of Christian-naturalist narrative tropes are thus already debunked at the novel's very beginning, when Carroll unmasks Watts's hymn 'How does the Little Busy Bee', which Alice, similar to the poem asked for by the Caterpillar, involuntarily unmasks. The apparently benevolent voice of Watts's poem, which encourages the child to 'make use of every shining hour' like the bee, is exposed as an attempt of a 'shining Crocodile' to 'improve its golden tail', welcoming 'little fishes', the children it educates, into 'its gently smiling jaws' (16). Consistent with the lethal threats to the child mind in Alice's dream the Caterpillar and the Crocodile are a false analogy, a fallacy, and thus, as Carroll shows, a 'deception' and a 'lie', being a threat to their lives.[40] Not only does Alice through the reversed roles and inverted poems become the teacher of truth, she becomes its metaphor. As Rasheed Tazudeen points out, as Alice journeys from sea to land, and consumes the Caterpillar's mushroom to grow a 'long neck', and rises '*like a stalk* out of a *sea* of green leaves that lay far below her' into the *air*, Alice, as a more universal metaphor of growth,

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[38] Lewis Carroll in Sally Shuttleworth, 'Spiritual Pathology: Priests, Physicians, and *The Way of All Flesh*', *Victorian Studies*, 54 (2012), p.637.
[39] Mark Richards, 'Charles Dodgson's Work for God', in *Mathematicians and their Gods: Interactions between mathematics and religious beliefs*, ed. by Snezana Lawrence and Mark McCarthy (Oxford: Oxford University Press, 2015), p.206; Carroll in Shuttleworth, 'Spiritual Pathology', p.637.
[40] Lewis Carroll, *Symbolic Logic and the Game of Logic* (New York: Dover, 1958), p.81.

seemingly embodies Darwin's metaphor of the 'great Tree of Life' (41).[41] Alice's journey *is* the paradigm of natural development.

Situating Carroll's novel in the comedic tradition is helpful for clarifying this double function of *Alice*. *Mimesis*, its guiding principle, the 'imitation of men *worse than average*', like Nonsense 'mimic[ked] the activities' of meaning-making institutions, 'only in an excessive and subversive way', which transformed them into '*madness*' – like the grotesques of Classical comedy.[42] Mimesis relied on the principle of *ek-stasis*: 'the standing outside, that is, looking at society from an outsider's perspective, which shifts the narrative focus towards the external, but sides with, and is 'sympathetic' towards, the one who *stands outside*.[43] In *Alice,* this is facilitated through the positioning of the child as outsider to the object under attack and the target of reform. *Mimesis* and *ek-stasis*, as Berger states, act alongside each other in favour of a '*moral* good', representing thus a danger to 'established order' as the primary 'usefulness of comedy is that it *corrects the vices* of men' that appear through its depiction as mad.[44] As the child is in *Alice* affected by 'the vices of men', its position of sympathy is not rigid. Instead, it is the subject of the cathartic formation of such sympathy, the stage upon which the realisation of the 'madness' of others is enacted: a developmental process in twelve acts.[45]

Carroll revises Victorian educational narratives so that the child becomes the lens through which madness, as moral hypocrisy, and a violation, as Carroll believed, of God's laws, is made visible, and its journey embodies the healthful psychological development logic

[41] Rasheed Tazudeen, 'Immanent Metaphor, Branching Form(s), and the Unmaking of the Human in *Alice* and The *Origin of Species*', *Victorian Literature and Culture* 43 (2015), p.540.
[42] Jean-Jacques Lecercle, *The Philosophy of Nonsense: The Institutions of Victorian Nonsense Literature* (London: Routledge, 2002), pp.5-6 [my emphasis].
[43] Berger, *Redeeming Laughter*, p.18; Berger elaborates on the origin of the comedic genre in Greek drama in the bacchanalia (ekstasis and grotesque). Carroll owned a copy of Aristotle's *Poetics*.
[44] Berger, *Redeeming Laughter*, pp.22-3;16;18.
[45] Berger, *Redeeming Laughter*, pp.157;16.

would facilitate. As this journey comprises the book Carroll wrote, it is clear how it itself was meant to be healthful, and, by extension, the curative to the effect of unhealthful 'education', at the same time as its comedic imitations, grotesques and reversals were also 'entertainment'. Carroll's *Wonderland* did thus not have *no* moral purpose, but a *double* moral purpose, targeting two audiences embedded in its structure: the 'self-satisfied', 'attacked' by its satire, and those affected by their influence, the 'outsider' to which the narrative is 'sympathetic'.[46]

Exposing Madness: Conversion and cure in *Alice*'s photographic portrayal of insanity

Albeit entertaining, the deconstructive narrative anticipated a cathartic re*form*ing. The grotesques in *Alice* produce their comedic and cathartic effect not only in isolation and through the external audiences they mirror, but especially in the way in which they affect Alice. This little-explored, but in fact comprehensive, developmental trajectory is facilitated through allusions to medical discourses that give insight into Carroll's engagement with scientific progress, its applications and cultural reception. These, in turn, illuminate his largely unexplored innovative scientific thought and what role fantastic literary writing played in developing it, acting itself like a scientific instrument.

With Alice's shrinking into Wonderland and the novel subsequently exposing obscured realities, Carroll's narrative acted to society, as Keene notes, almost like a microscope fulfilling an analogous revelatory and diagnostic function to society and the mind as its equivalent application in science.[47] Sales catalogues of Carroll's estate indicate he amassed a collection of optical instruments, and a diary note on his first 'observation' as a twenty-

[46] Fowler, *English Usage*, p.253.
[47] Keene, *Science in Wonderland*, p.107; Keene notes that, *Alice* has since frequently been re-imagined as a microscopic journey in scientific literature.

year old student of ‘live animalcules’ in a ‘large microscope’, reveals what fascinated him about them:

> this is a most interesting sight, as the creatures are most conveniently transparent, & you see all the organs jumping about like a complicated piece of machinery, & even the circulation of the blood.[48]

As the young Carroll’s microscopy reveals the constituent organs and mechanisms of an individual bacterium, Alice’s fall, analogously, dives below the surface of the visible world. Her dream-vision exposes the organs, the ‘*forces* that might *shape* our *thought*’, by which Lewis Carroll ‘appears intrigued’, as James Williams observes, throughout his works.[49] Alice acting, simultaneously, like the distorting effect of the magnifying lens, also ‘magnified’ into ridiculous but also ‘terrifying proportions’, is what creates its grotesques.[50]

As the process of scientific exploration was a learning experience, and thus mind-changing, the revelatory and diagnostic encounters of Alice’s dream affect her as such: a path of progression towards truth through emotion mapped by the course of her dream-journey. The ‘Mad Tea-Party’ chapter makes this particularly clear. As the middle chapter of the novel it stands out in Alice’s journey as the dynamics between the characters in it are the most clearly different from the encounters in the preceding episodes. The nature of the exchanges appears initially like earlier ones in theme and character. When Alice joins the Hare and Hatter’s tea party, figurative madness, and the effect it produces on Alice are both evident. Under mad cries that there is ‘no room’, despite there being ‘plenty’, and an offer of wine where ‘there isn’t any’, and admonitions that her ‘hair wants cutting’, Alice, however, now sighs ‘wearily’, responds ‘indignantly’, and finally ‘*very* angrily’ (52-3;54). The scene, finally, marks its turning point in Alice’s engagement with Wonderland

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[48] Carroll, *Diaries I*, p.47.
[49] James A. Williams, ‘The Private Life of Words’, *The Review of English Studies*, 266 (2013), p.656.
[50] Docherty, *Friendship*, p.367.

characters. Earlier, Alice had *endured* the Caucus Race, a game she neither liked nor comprehended, and *complied* with its rules; when it is declared that ‘all have won’ and everyone, therefore, ‘must have prizes’, she even provides the prizes – only to be deserted (22). Despite being a confrontation in which Alice talks back, ‘Advice from a Caterpillar’ ends similarly with her partner in conversation vanishing. The Tea-Party, however, is ‘more than she could bear’: ‘*in great disgust*’, she ‘walked off’ from the ‘*stupidest* tea-party I ever was at in all my life’, and, retracing her steps for the wood, she now finds a third path leading her into the desired garden (58; my emphasis).

This is consistent with what could, according to Alice’s katabatic structure, be expected at this stage of the work. The chapter is placed in the middle of the twelve chapters of *Wonderland*, as with MacDonald, with mathematical accuracy, as the first and last are half-chapters are spent in the waking world. It marks the *volta*, the cathartic moment of her dream, as a clear change in Alice’s engagement with Wonderland’s rules and authorities can be observed afterwards, developing into the new direction here indicated for the remainder of her dream. It is *because* of her realisation of the characters’ madness that Alice walks away, making her *change of mind* manifest in the course of her path. For the first time in the novel, she retraces her steps, and returns to the wood whence she came, and overcomes the obstacle posed to her by being subjected to the hypocritical educational adult world, stopping her from getting where she wanted to in the first place. As MacDonald had shown, the wood externalised the soul in a state of confusion. There she had met the apparently-guiding Cheshire Cat that perched on a tree that had given her a choice that was none, stating she ‘can’t help’ going ‘among mad people’. Following through, however, on her *own* actions, rather than a mad character’s guidance, a door manifests in the Cat’s tree where there previously had not been one (49). ‘Once more’ she finds ‘herself in the long hall’, and, realising that she will ‘manage better this time’, a path

opens to the rose garden, which the false and reverse growth of following the pre-fabricated instructions on cakes and bottles could not facilitate (59). Soto and Docherty highlight the metaphorical significance of the reprise of the 'hall of many doors' scene, in the framework of the katabatic dream. Resembling the 'megaron' in Greek mythology, the hall had psychological significance, and a new door opening becomes equivalent of developing a new line of thought, a new insight.[51]

Further, the imagery of the scene supports its significance as 'cure', a reversion to what is 'sane', thus 'healthy'. The 'Mad Tea-Party' is not only situated in the middle of the novel, but is also in itself symmetrical, containing at its centremost and lowest point a fairy-tale-within-a-fairy-tale, as in Anodos's journey as Cosmo, or *Heinrich von Ofterdingen*'s 'Klingsohr Märchen'. Although, again, simultaneously a mockery of this narrative feature, the Dormouse's tale of the three girls Elsie, Lacie and Tillie who live '*at the bottom* of a well' acknowledges all typical characteristics of it (57). Having reached the deepest point – the bottom of the 'well' into which Alice had believed herself to have fallen at the beginning of her dream, it is specifically a 'treacle well' – a pilgrimage site sought for healing – and the Dormouse confirms the three girls were 'very ill' (8;56).[52] The anticipation of catharsis is implicit in structure *and* imagery, with the Norn-like three sisters at the bottom of a well, further pointing towards a junction in fate (56).[53]

Finally, "the *explicit* presence of insanity (in contrast to other chapters), portrayed accurately in imagery popularised by its socio-historical referential discourse – the

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[51] Soto, 'Chthonic Aspects', p.36; Docherty, *Friendship*, pp.122;132.

[52] Elsie (L.C.) stood for the initials of Lorina Charlotte, Lacie is an anagram of Alice, and Tillie the short form of Mathilda, the middle name of Alice's then youngest sister Edith Mathilda. The Treacle Well was based on the Treacle Well at St Margaret's Church, Binsey, near where the story of *Alice* was first told; a pilgrimage to it is depicted in a stained-glass window in the Cathedral of Carroll's and Alice's college.

[53] In Norse mythology, the Norns were three sisters, equivalents of the Moirai or Fates, living at the bottom of a well where they spin the past, present and future, but also draw water from it to water the world-tree Yggdrasill to ascertain the continuation of life, parallel to the rejuvenating journey of the child to bring new life in *Alice*.

treatment of insanity in Victorian lunatic asylums – makes explicit also the nature of her psychological journey as a curative process for Alice. Although the topic of insanity and its treatment was popular at the time and enjoyed much attention in historical and literary scholarship *Alice* has not been extensively explored from a medico-historical perspective in this context.[54]

This is striking, not only as Victorian psychiatry was undergoing significant, and much-noted, reforms with the so-called non-restraint system of 'moral management' being widely rolled out in Victorian pauper lunatic asylums and generating significant public interest at the time Carroll was writing *Wonderland*, but especially because these reforms were driven chiefly by Lunacy Commissioner Robert Wilfred Skeffington Lutwidge: Lewis Carroll's uncle. Sarah Wise had thus tantalisingly, wondered 'whether Uncle Skeffington discussed official business with his nephew', and Elizabeth Fuller Torrey concluded assertively that Carroll's works, such as 'Hunting of the Snark', *must be* a 'parable of the Lunacy Commissioners', due to the mention of that 'dear uncle of mine (after whom I was named)'.[55] The knowledge Carroll acquired through the profession of his uncle therefore sheds light on his fictional use of clinical insanity and its stereotypes.

Particularly close to him, Carroll assisted Skeffington with his duties on occasion and visited asylums himself, meeting also fellow commissioners, for instance in 1865 in a lunch at Oxford after his uncle's inspection of the Littlemore Pauper Lunatic Asylum.[56] The measures in whose implementation Skeffington was involved attracted the attention of

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[54] *The Annotated Alice,* ed. by Martin Gardner (New York: Norton, 2000), p.65.
[55] Sarah Wise, *Inconvenient People: Lunacy, Liberty and the Mad-Doctors in Victorian England* (London: Vintage, 2013), pp.80-81; Elizabeth Fuller Torrey, *The Invisible Plague: The Rise of Mental Illness from 1750 to the Present* (New Brunswick, NJ: Rutgers University Press, 2001), p.90; Lewis Carroll, 'The Hunting of the Snark', in *Jabberwocky and other Nonsense: Collected Poems*, ed. by Gillian Beer (London: Penguin, 2012), p.244.
[56] Carroll, *Diaries V*, p.79; A more detailed reconstruction of this background is published in Franziska E. Kohlt, 'The Stupidest Tea-Party in All My Life': Lewis Carroll and Victorian Psychiatric Practice', *Journal of Victorian Culture*, 21 (2016), 147–167.

numerous Victorian writers. The reward-based system of ‘moral management’, for instance, which introduced ‘innocent pleasures’ believed ‘to exert a great influence in restoring the patients to health of body and of mind’ into asylums, including ‘amusements’ such as lunatic dances that provided ‘a very sad and touching spectacle’ were visited and reported for instance by Charles Dickens.[57] In his article ‘A Curious Dance round a Curious Tree’ (1852) in *Household Words*, Dickens’s tongue-in-cheek description of the ‘quadrille’ executed with ‘great decorum’ highlights how these measures became a vehicle for satirists, putting into a different light the, again circular, ‘Lobster Quadrille’ in *Alice’s Adventures in Wonderland*.[58] With similarly curious bewilderment Alice notes that the spectacle of two ‘mad things’ – a Gryphon and a Mock-Turtle – accompanied by a ‘curious song’, was certainly ‘an ‘interesting dance to watch’ – as it is juxtaposed to their school-like ‘lessons’ and ‘ordering about’ (76;78).

References to this discourse recur throughout *Wonderland*. Another popular amusement was indeed tea parties, as Samuel Tuke, superintendent of the York ‘Retreat’ asylum, grandson of William Tuke, the father of this system of ‘moral management’, and author of many books on the subject which Carroll owned, describes:

> The female superintendent […] occasionally gives a general invitation to the patients, to a tea-party. All who attend, dress in their best clothes, and vie with each other in politeness and propriety. The best fare is provided, and the visiters [sic.] are treated with all the attention of strangers. The evening generally passes in the greatest harmony and enjoyment. It rarely happens that any unpleasant circumstance occurs; the patients control, in a wonderful degree, their different propensities; and the scene is at once curious, and *affectingly* gratifying.[59]

That Carroll, however, had particularly profound insight into the psychiatric practices is evident the detail of his Mad Tea-Party, especially the Hatter’s story over the course of the

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[57] Charles Snape, *Superintendent’s Report to Committee of Visitors*, Surrey County Lunatic Asylum, 1854, SHC QS5/6/1/22, Surrey History Centre, Woking, [n.p.].
[58] Charles Dickens, A Curious Dance round a Curious Tree’, *Household Words* (17 January 1852), p.386.
[59] Samuel Tuke, *Description of the Retreat, an Institution near York, for Insane Persons of the Society of Friends: Containing an Account of its Origin and Progress, the Modes of Treatment, and a Statement of Cases* (York: W. Alexander, 1813), p.178 [my emphasis].

two *Alice* novels, which correspond accurately to typical conditions at Pauper Lunatic Asylums.

The Hatter himself appears a typical pauper lunatic. His 'nervous' disposition is explicit: he 'fidgeted' and 'trembled', when agitated, indeed so violently that he 'shook his shoes off' (113). When identifying himself in court in the novel's penultimate chapter, he does so by two features: his profession and his poverty, one reinforcing the other. When asked to take off his hat, he states: '"It isn't mine," the Hatter added as an explanation; '"I've none of my own. I'm a hatter"' followed by reiterating three times 'I'm a poor man' (114). The details surrounding him narrate a typical pauper asylum narrative – such as the accusation of stolen sweets. The only food and drink at Carroll's tea-party is 'bread-and-butter' and tea, which, compared to the dietary of Littlemore Pauper Lunatic Asylum, was an everyday standard, while wine and other treats were kept in storage as rewards. When he reappears in *Through the Looking Glass* (1871) imprisoned and restrained, he has presumably been convicted of cake-theft, as upon his release he immediately appears in a renewed attempt to help himself to baked goods in 'The Lion and the Unicorn' (173). He appears as a repeat offender, possibly explaining the absence of cakes from the tea-party in the first place, as of other pleasures 'moral management' offered for 'the improvement of a patient', such as 'a liberal supply of wine', 'there is none' to be found either (70). Thus technically qualifying as a 'Criminal Lunatic' (in a measure appropriate for a children's novel), the Hatter's detainment would have been a legitimate measure at Littlemore, where restraint and reclusion were deemed an 'essential part of the treatment' in such instances.[60]

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[60] Snape, *Superintendent's Report 1854*, [n.p.].

Carroll makes use of imagery which, as Elaine Showalter points out, had been 'assimilated by satirists' specifically 'to mock aloof Victorian intellectualism' and moralising'.[61] Asylum management was compared to 'nursery schools', as 'moral management' as 'an attempt to re-educate', promoting values such as 'industry, self-control, moderation and perseverance' which made the treatment of lunatics comparable to that of children which Carroll mocked throughout *Alice*.[62] These treatment methods, Showalter stresses, epitomised to Victorians like Carroll the 'contradictions and apparent hypocrisies' of 'Victorian reformers [who] were inevitably reproducing structures of class and gender that were "moral" by their own standards'. This is satirically extended to the hierarchies of childhood education. Defining 'madness, not as a loss of reason, but as a *deviance from socially accepted behavior*', the term 'moral insanity', and its imagery, was borrowed by Carroll and others to portray what was to them unacceptable for moral reasons.[63] Asylum-based imagery was a historically particularly plausible choice for Carroll's purposes.

But it is not only the reiteration of popular imagery, but the curative effect which the visual encounter with madness was believed to have, that bears evidence of thorough engagement with underlying scientific psychological theory. The awareness of this theory, it being a structuring feature of *Alice*, and the accurate portrayal of madness upon which it depended, is apparent, firstly, in the characters of the Mad Tea-Party being unambiguously mad. When Alice first hears of the Hatter and Hare from the Cheshire Cat, it describes them as 'mad', triggering Alice's famous exclamation 'but I don't want to go among mad people!' (49). A closer examination of her reaction indicates that Alice *understands*, and *fears* them as mad; the tea-party is not only a figurative, but an actual experience: she is as the visitor

[61] Elaine Showalter, *The Female Malady: Women, Madness and English Culture 1830–1890* (New York: Virago Press, 1987), p.34.
[62] Showalter, *Female Malady*, p.29.
[63] Showalter, *Female Malady*, p.29 [my emphasis].

Fig.7: Caius Gabriel Cibber, 'Figures at Bethlem Gate' (Melancholy and Raving Madness)

to a tea-party like that in Tuke's report. Carroll echoes a commonly evoked stereotype, which, as Simon Cross explains, perpetuated the '*dangerous* nature' of madness, especially in relation to children: a popular song, for instance, warned that 'Mad Tom', the stereotypical madman, carried knives to 'slice mince pies from children's thighs'.[64] Alice's relatively nuanced understanding of the implications of two characters' madness guides her initial consideration of which of the two to visit, which was the greater risk. She opts for the March Hare, hoping, that 'as this is May, it won't be raving mad – at least not so mad as it was in March' (50). But she remains uneasy, fearing 'it should be raving mad after all!' and wishing she had 'gone to see the Hatter instead' (51). Alice's decision which of the two to visit is based on the popular distinction of madness as either raving or melancholy, allegories of which flanked the entrance of Bedlam Asylum (Fig.7), evidencing her rational engagement and emotional response to madness.[65]

Secondly, Carroll's engagement with psychiatric theory supports that he was familiar with the belief that visual exposure to lunacy, and the intellectual engagement and emotional

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[64] Simon Cross, *Mediating Madness Mental Distress and Cultural Representation* (Basingstoke: Palgrave Macmillan, 2010), p.46.
[65] Cross, *Mediating Madness*, p.43.

response it elicited, were themselves curative. He knew Victorian psychiatric photographers who promoted this theory, such as Hugh Welch Diamond (1809–86), a 'father figure of early photography' and also Surrey County Pauper Lunatic Asylum's superintendent. Diamond had promoted the new medium through its application in psychiatry, in which the camera acted as a device of optic enhancement comparable to microscopes and telescopes, as a diagnostic device.[66] As he explained in a lecture to the Royal Society, he believed photography could reveal with '*unerring accuracy* the external phenomena of each passion' of his patients, 'as the *really certain* indication of internal derangement'. Photographs made visible 'to the eye the well-known sympathy which exists between the diseased brain and the organs and features of the body'.[67] The chief 'value of portraits of the insane', however, lay in 'the effect they produced upon the patients themselves': As 'faithful monitors' of 'moral truth', the images elicited 'interest', 'pleasure' and '*amusement'*, but together with 'frequent conversation' about them, such self-confrontation constituted 'the first step' in a process of 'gradual improvement' and cure.[68] In this lay the parallel to the amusing, yet curative mad characters of *Wonderland*, who imitate the process of depiction, exposure, and 'making visible' of moral madness in their artistic reproduction in *Alice*.

The analogy between psychiatric photography and dream-narrative is not coincidental. A lifelong and acclaimed photographer, Carroll was not only familiar with, but, moreover, had himself applied, as well as mocked, these functions in works preceding *Wonderland*. He would have encountered this idea when he visited the display of Diamond's 'Types of Madness' at the Royal Academy's Photographic Exhibition in 1855–56 together with

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[66] Grace Seiberling, *Amateurs, Photography, and the Mid-Victorian Imagination* (Chicago: Chicago University Press, 1995), p.129.
[67] Hugh Welch Diamond, 'On the application of photography to the physiognomic and mental phenomena of insanity', in *Face of Madness*, ed. by Sander Gilman (New York: Brunner/Mazel, 1976), p.20.
[68] Diamond, 'On the Application', pp.21;23 [my emphasis].

Skeffington, which would have introduced him to the application and context of these photographs.[69] Two weeks later, he came into direct contact with the discipline for the first time in 1856; he recorded in his diary to have 'visited […] Dr. Diamond of the Surrey Lunatic Asylum'.[70] It is precisely in that function it performed in psychiatry, that the fantastic, 'visible-making' device of photography had first appeared in Carroll's fiction in 'Photography Extraordinary' (1855), an article for the *Comic Times*. It reports the recent discovery that by connecting the mind of a sitter to photographic apparatus through 'mesmeric rapport', even though the sitter thought of 'nothing', 'varying exposure' could produce novels and poetry of varying degree of mastery from their mind.[71] It mockingly concludes by anticipating the 'stupendous addition' this discovery will make to science and politics.

The article was published one year before Carroll met Diamond, and one year after it, photography recurs, again to expose the mind, in the sharper satirical tone in which Dodgson dealt with matters of morality, foreshadowing the adaptation of psychiatric practice in *Alice*. In 'Hiawatha's Photographing' (1857) the camera exposes the notions of virtue enacted by an upper middle-class family as hypocrisies. All attempts to capture their 'perfect likeness', their 'grand, heroic' poses, enactments of 'pensive meaning', 'passive beauty', fail until their 'most unpleasant' character is revealed in their 'strange expressions' on paper.[72] Carroll had considered Arthur Frost's illustration of the son of the family a great 'success' as his 'intellectual weakness' was so convincingly 'written in his face'.[73] Carroll's literary photography acted as a diagnostic device, whose fantastic,

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[69] Carroll, *Diaries II*, p.83.
[70] Carroll, *Diaries II*, p.24.
[71] Lewis Carroll, 'Photography Extraordinary', *Comic Times*, 13 (Nov 1855), [n.p.], *Lewis Carroll Scrapbook*, Library of Congress <http://memory.loc.gov/service/rbc/lchtml/lc001/0010.jpg> [Accessed: 13 Mar 2017].
[72] Lewis Carroll, 'Hiawatha's Photographing', pp.130;131;132;133.
[73] *Lewis Carroll and his Illustrators: Collaborations and Correspondences 1865-1898*, ed. by Morton Cohen and Edward Wakeling (Ithaca, NY: Cornell University Press, 2003), pp.71;75.

visible-making capacities were maintained in the dream narrative of *Alice*, which shared the aim of the exposure of moral hypocrisy with the parody of Longfellow's 'Song of Hiawatha', being, however, an 'amusement'.

Photography, light-writing, and Fantasy, in literary writing, performed complementary functions in exposing, diagnosing and 'making visible'. *Alice* traces the processes of psychiatric photography in its narrative trajectory, from diagnosing, equivalent to the first stage of this photographic process, to its cathartic effect: a form of writing already common in scientific writing. Reproducing photographic imagery in narrative and illustration, as Carroll did together with his illustrator John Tenniel in *Alice*, was at this stage already common practice in medical writing for a wider public in whose imagination it would have also become associated with its equivalent narrative aim. Diamond's photographs, for instance, were recreated as engravings and published alongside John Conolly's essays on the *Physiognomy of Insanity* in 1858, showing how their therapeutic potential was believed to be transferable.

'Typical representations' of passions, character and morality, which were speaking from physical features, were amplified through the engravings, served as moralising narratives: the narrative imitating the diagnostic power of photography. Thus, the 'vulgar' face of 'suicidal melancholy' (Figs.10;11), 'examined more closely […] becomes *affecting*' – as Tuke had described the effect of the asylum tea-party.[74] Features are imbued with meaning and a narrative to become representative, affecting and thus curative. As neither an 'educated or refined' citizen from those 'of the poorer ranks of life', her features reveal the '*typical* privation of all indulgences and amusements', resulting in the 'lowered character of the grey and white substances of the brain', and a lack of 'integrity' of the 'mental and

[74] John Conolly, 'Physiognomy', in *Face of Madness*, ed. by Sander Gilman (New York: Brunner/Mazel, 1976), p.37.

moral faculties'. Synonymous with loss of morality, insanity derived from a detailed chain of causalities allowing the onlooker to recognise tendencies in themselves.

Figs.8,9: Religious Melancholy

To support and amplify the effect of the morality tales extrapolated from the medical photograph, the engraving reduced shade to lines, *drawing out* signifiers of 'painful emotion' adding detail not originally contained in the photographs for emphasis, as a comparison of photograph and engraving of 'Religious Melancholy' shows (Figs.8;9). The sitter's posture changes from open to closed; religious tracts and a cross are added to emphasise the nature of the condition. Words and drawn lines performed together the diagnostic process of photographing. The analysis of 'suicidal melancholy' (Figs.10;11) foregrounds the 'excessive integuments of the forehead' almost unnoticeable in the photograph, and the chaotic '*dishevelled* hair', which is *asymmetrically* 'parted with no care', and '*straggles* in sympathy with the tortured brain'.[75] The '*curved* wrinkles in the brows', the 'equally *curved* eyebrows' indicate 'no ordinary trouble', but '*tell the story* of intense and painful emotion' conveying to the audience an 'image of fear'.[76]

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[75] Conolly, 'Physiognomy', p.37.
[76] Conolly, 'Physiognomy', p.38.

Comprehending insanity aesthetically, curved and irregular, works like Conolly's shaped public ideas of what madness and immorality *looked like*, and thus the visual language found in Tenniel's engravings of the Hatter. With his large wrinkled forehead and curved eyebrows, his wide open, gazing eyes, straggling hair and clasped hands, the Hatter, strikingly, performs the morality tale of the pauper lunatic' vice of Conolly (Fig.12). Carroll, again, inverts the audience of such imagery, maintaining its purpose: rather than, like Conolly, targeting the lower classes, Carroll's imitation directed criticism at the immorality of the upper, and most likely, his reading, classes.

Figs.10;11: Hugh Diamond, 'Suicidal Melancholy' **Fig.12: John Tenniel, Imprisoned Hatter**

The popularity of *Alice* outlasted the age in which such imagery would have resonated, the work, in turn, created a language that has since served as a language – visual and literary – for coming generations through which to diagnose and expose the madnesses of society, especially noticeable in the embellishments added to amplify insanity, now anachronistic but nonetheless reliably reproduced.[77] Tenniel added 'wisps of straw' to the March Hare's, and originally also in on the Hatter's head, of which there is not mention in the text

[77] Cf. Franziska E. Kohlt, '*Alice* and Satire, *The Lewis Carroll Review*, 56 (2018), pp.1-4 ; *Alice* has served as satirical medium for every societal and cultural field, especially politics from its publication to the present.

(Figs.13;14).[78] The wreath of straw that originated in Bedlamites sleeping on hay had become a potent signifier of insanity in art and on the stage, where Shakespeare's Ophelia, a prominent subject of Pre-Raphaelite artists, many of whom Carroll knew, was portrayed with straw in her hair; it also signifies loss of sanity in *King Lear*, who is 'crown'd with rank fumiter and furrow weeds'.[79]

That the much-praised liberating power of *Alice* arises from integrating the scientific theories and theological philosophies which guided Carroll's writing allows a fresh and more complex perspective on past critical stances on the work as a children's

Fig.13: Alice at the Mad Tea-Party

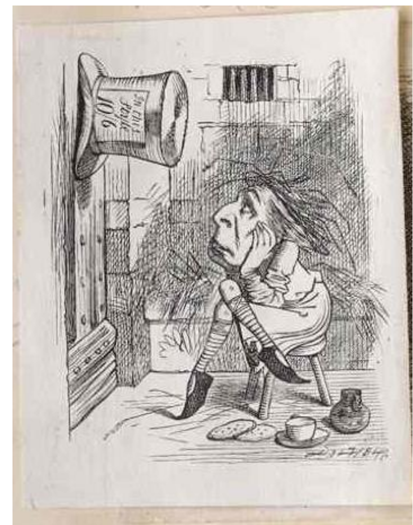

Fig.14: Hatter (Discarded engravers' proof)

bildungsroman. Beer, for instance, summarised that while Alice was 'firmly active' throughout the novel but 'undergoes *no* transformation *of the self*', and although she '*learns a lot*' what she learns is 'inconsequential' as 'it is not driving [her] toward *adulthood'*, which Beer defines as a 'desire to become a lady'. Thus, Beer asserts, 'unlike *Phantastes*, the *Alice* books are not quest stories'.[80] Alice's progress, however, is more

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[78] A crown of straw was also added to Carroll's only other explicitly mad characters, the Mad Gardener in *Sylvie and Bruno,* in Harry Furniss's illustrations, without there being any mention of it in the text.
[79] Lewis Carroll, *Nursery Alice* (Macmillan: London, 2015), pp.37-8; William Shakespeare, *King Lear*, iv.4.5; Michael Hancher, *The Tenniel Illustrations to the "Alice" Books* (Columbus: Ohio State University Press, 1986), p.48.
[80] Beer, *Alice in Space*, pp.18-9 [my emphasis].

differentiated, in the way that what she learns is of consequence because it does not drive her to *a certain kind* of adulthood – namely that which Carroll criticised – but another form of growth. Alice is not at the beginning who she is at the end – she *performs* the process of liberation, which is often attributed to the Alice books, but it is a liberation from adulthood which, crucially, has at the start of her tale begun to take hold of her. Alice *is* on a quest for *true, natural* growth, to become Carroll's version of the 'childlike' ideal state of the soul. From the timid encounters ending in abandonment at the beginning of the novel, to changing the course of her journey, Alice gains the confidence to contradict the highest executive organ of Wonderland, the Royal Court, whom she scolds and interrupts, calling its rules 'stuff and nonsense' and the court 'nothing but a pack of cards' when they pronounce the sentence of her beheading (95). Alice *does* undergo a concentric growth as 'she had *grown*' to her *natural* height and having overcome the curative fear, she then 'wasn't a bit afraid' (95). *Alice* thus does not offer *no* moral, but one *alternative* to that available in the world from which Alice enters Wonderland.

The process embodied in Alice's progression through the dream-journey is analogous with that of photography (Fig.15). *Alice*, like in the photographic process, turns the society it depicts on its head, shrinking Alice to the size of a rabbit, then a caterpillar. Her psyche is dissolved, as in Holland's description of the dream, but also as through the chemicals of developing fluid, and thus similar also to MacDonald's and Novalis's ideas of electrolysis and the psychological processes of dreaming, separating out who she is, and who she is not.[81] This process is not only parallel to the exposure of immorality in 'Hiawatha's Photographing', but was one with which Alice Liddell was so familiar that she even in old age recalled the thrill elicited by observing it:

[81] Carroll described this process of chemical dissolution in a later-added opening stanza of 'Hiawatha's Photographing'.

> What could be more thrilling than to see the *negative gradually take shape* as he gently rocked it to and fro in the acid bath? […] There were all the joys of preparation, anticipation and realisation, besides the feeling that we were assisting at *some secret rite usually reserved for grown-ups*!

Being 'allowed into the dark room', like diving into the darkness of the rabbit hole, to 'watch [Carroll] develop the large glass plate' – herself taking shape, after being shrunk from her real to plate size – Alice added, 'was so mysterious, and we felt that any adventure might happen there!': an adventure allowing the child into the space for adults.[82] Darkness produced a negative as her 'adventures' crystallise an opposite of the place she usually occupied in the power hierarchies of her world in the process of exposure. Things are finally turned their normal way round, after undergoing a process of development. As the use of nonsense had indicated, *Alice* is what Carroll believed photography and parody to have in common as an act of 'imitation' that revealed more than was visible, the essence of photography and fantasy: diagnosis, making visible, and curative exposure.[83]

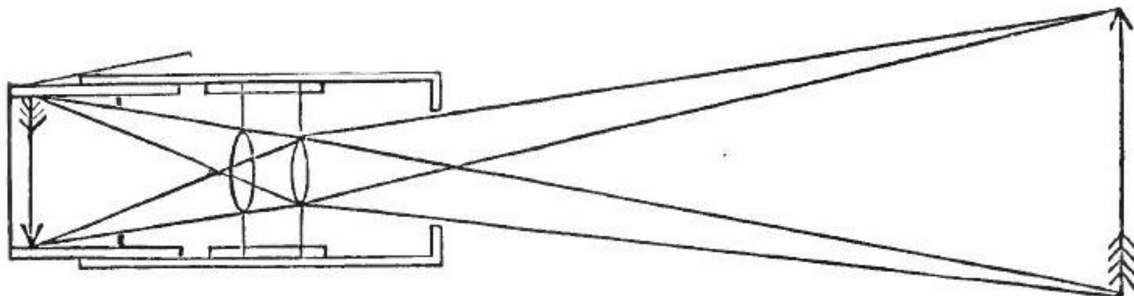

Fig.15: Portrait Camera of the 'sliding type' Carroll owned, demonstrating the inversion and diminution of the photographic process from the photography

'Healthy amusement' as play: Carroll's enacted catharsis

The psychiatric and psychological subtext of *Alice* indicates that what was *enacted* in Alice's psychological journey – a photographic product replicated in fantastic writing – was, once bound into a book, intended to convey, like a psychiatric photograph, the morally curative 'healthy amusement' to its readers – as indicated in Carroll's 'Easter

[82] Caryl Hargreaves, 'Alice's Recollections', p.6.
[83] Carroll, 'Hiawatha's Photographing', p.129.

Greeting'. This is not only conveyed in *Alice*'s characters, in its imagery and subtext of madness, and comedic origins - but especially also in its dramatic form. It is telling that critics writing about the cognitive and emotional changes staged in *Alice* consistently find themselves drawn, as Gubar does, to stage-related terms like 'dramatizing'.[84] Beer, likewise, notes that the 'fascination with the threshold between imagining and *acting* out runs deep through the *Alice* books', but it does so to certain ends, as Otis notes language '*stages* reality' as a first step to 'processing experience'.[85]

Thus, finally, Carroll's theoretical and practical understanding of the Victorian stage, reveals stage elements in *Alice* as the final crucial, and consciously-chosen means necessary for conveying the anticipated effect of his book, and illuminates how they contributed to shaping its imagery and narrative structure. The theatre was Carroll's second great passion besides photography, but due to its highly contested cultural position, especially with regard to its role in influencing public morality, it was far from an intuitive pastime for a cleric. A life-long lover of the stage, however, the way in which Carroll harnessed dramatic elements throughout his own literary writing reveals a radically modern understanding of it, informed by its emerging psychological context in performance science. This, in particular, sheds light on the little-studied conclusion of *Alice'*s frame narrative, its effects, and meaning for the overall work.

To understand how the dramatic discourse specifically, uniquely and decisively complements the other facets of *Wonderland*'s referential context, it is first necessary to highlight the contentious role of the theatre and its role in Carroll's life, in order to also comprehend the significance of its influence on his fantasy writing for children. What was

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[84] Marah Gubar, *Artful Dodgers: Reconceiving the Golden Age of Children's Literature* (New York: Oxford University Press, 2009), p.95.
[85] Laura Otis, *Rethinking Thought: Inside the Minds of Creative Scientists and Artists* (Oxford: Oxford University Press, 2015), p.30 [my emphasis]; Beer, *Alice in Space,* p.9 [my emphasis].

at stake with Carroll's understanding of the theatre, and how it was radical is initially best illustrated by how much it differed from that of his family and professional background. Carroll's father, as Violet Dodgson recalled, 'had firmly 'set his face against theatre going and none of his 7 daughters ever went inside a theatre'.[86] Charles Dodgson senior had translated the works of Tertullian, which were to him like gospel in this regard, and stated the theatre itself was a place of 'innate evil'; actors were falsifiers of identity: 'a deadly sin'. On this basis, Tertullian proclaimed: 'I shall fall from God, as also if I enter [...] the theatre as a spectator'.[87] Cohen speculates that Carroll's love of the theatre was ultimately prevented him from taking full holy orders, because, as his nephew Stuart Collingwood noted he would have defied the 'Bishop's pronouncements' that 'to attend theatres or operas was an absolute disqualification for Holy Orders'.[88]

To Carroll the theatre was, much to the contrary, a medium of Christian moral education, as Cohen notes, nothing short of a 'deeply moving, religious experience' – and one which he, as a man of God, was, therefore, keen to facilitate for his child friends.[89] He was aware of the contentious nature of this belief, and explains his alternative view on the theatre in a letter. Stating 'I hope all Christians agree' that 'we ought to abstain from evil, and therefore all things that are *essentially* evil', which were 'quite different' from abstaining 'from anything, merely because it was *capable* of being put to evil uses' – such as 'the use of wine', 'reading of novels or other works of fiction' or 'the attendance at theatres'. Thus, as parents would let their children read 'good novels', 'carefully keep[ing] out of reach the

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[86] Richard Foulkes, *Lewis Carroll and the Victorian Stage: Theatricals in a Quiet Life* (London: Routledge 2017), p.7.
[87] Charles Dodgson, ed., *Tertullian: Apologetic and Practical Treatises, Library of Fathers of the Holy Catholic Church*, 10 vols (Oxford: Parker, 1842), I, p.198.
[88] Cohen, *Lewis Carroll*, p.361; Collingwood, *Letters I*, p.74.
[89] Cohen, *Lewis Carroll*, p.361.

bad ones', he took his 'young friends' to 'good theatres, and good plays', 'carefully avoid[ing] the bad ones' to share this religiously moving experience.[90]

Amusement and laughter, which *Alice* sought to elicit through its comedy, were paramount, as he explained to his friend the actress Ellen Terry. He took children to the theatre for the pleasure of his child friends, as he believed the laughter elicited by *good* dramatic entertainment affected the child psyche according to God's will; 'I am very sure', Carroll states, 'that God takes pleasure in seeing his children happy'.[91] Like the amusements employed in his uncle's reforms, which included plays and theatre, Carroll's letters express a belief in this beneficial character-changing effect of the stage, which should be harnessed for improving the children's inner life. The moral concern with regard to childhood entertainment is in criticism more frequently sourced from Carroll's later life, and such publication plans as that of a *Shakespeare for Girls* 'absolutely free from objectionable matter' because the edition then recently produced by Bowdler was not 'sufficiently expurgated to suit children'.[92] This is subsequently pitched against the playfulness of *Alice*. Yet when in 1855, at a time Carroll began writing, he expressed the concern about many 'existing plays' were not 'fitted for children'. This was because they were so 'overpoweringly dull' they would fail to rouse the emotions of the child necessary for generating that healthful change of psyche towards the better.[93] Carroll's understanding of play as interrelated and interdependent with morality, places both at the heart of *Alice*.

As with the images and essays from psychiatry, the process of dramatizing entailed the translation of emotion into an artistic medium to become affecting, and in the stage

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[90] Lewis Carroll, *Letters II*, p.902.
[91] Lewis Carroll, *The Selected Letters of Lewis Carroll, Anniversary Edition*, ed. by Morton Cohen (Basingstoke: Palgrave Macmillan, 2015), p.200.
[92] Carroll, 'Alice on the Stage', *The Theatre*, 9 (1 April 1887), p.207.
[93] Carroll, 'Alice on the Stage', p.182.

equivalent of writing or image, these emotions had to be embodied and enacted – which is precisely how Carroll understood the process of creating the *Wonderland* characters and plot progression. Writing about *Alice*'s conception with hindsight, he refers to his characters as 'my puppets'; each of them made to represent a 'type', a passion, like Diamond's 'types of insanity'.[94] The White Rabbit served as 'contrast' to Alice, her 'youth', 'audacity', 'swift directness and purpose', as he was 'elderly', 'timid', 'feeble' and 'nervously shilly-shallying'. The Queen of Hearts was an 'embodiment of ungovernable passion', the Red Queen 'another type': a 'passion cold and calm'.[95] It, first of all, makes *Alice* consistent with both Aristotelean dramatic traditions simultaneously: of comedy's with its 'comic catharsis' and its 'purging without fear', and its tragic counterpart to the principle of purging through fear.[96] But secondly, the way in which the catharsis is enacted through a psychological understanding and embodying of human emotions, points towards the context of performance science.

An interdisciplinary field in which Carroll, too, was well-read, performance science involved actors and writers, clerics and psychologists, such as G.H. Lewes – an 'author Carroll much admired', as Beer points out.[97] 'Typical for the professionalization of the nineteenth century' and the 'increasing scientific scrutiny' the field reflected the acknowledged moral influence of the stage. As authors of fiction, Grant believed, possessed the 'power of *commanding* the passions, and *throwing* the soul into every degree [they] please[ed]', the stage that was home to 'the art of exciting the passions in the audience', the actor '*rais[ing]* the effect intended by them': the power to 'delude the

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[94] Charlie Lovett, *Alice on Stage: A History of the Early Theatrical Productions of Alice in Wonderland together with a Checklist of Dramatic Adaptations of Charles Dodgson's Work* (Westport, CT: Meckler, 1989), pp.209-10.
[95] Lovett, *Alice on Stage*, p.211.
[96] Berger, *Redeeming Laughter*, pp.22-3.
[97] George Grant, *The Science of Acting* (London: Cowie and Strange, 1828), p.1; Beer, *Alice in Space*, p.32.

imagination and affect the heart'.[98] As 'emotions', Joseph Roach clarifies, were 'the crux of the *actor's* art', acting required a profound understanding of psychology: a 'very great depth of enquiry', 'force of reasoning', and 'understanding' of human emotions so to embody, 'the changes of mind', revealing down to 'the degree of the passion'.[99]

Carroll's profound understanding of the science of the human emotions, thus, in turn shaped *Alice*'s characters as *embodied* human emotions, making them 'actors' in Grant's and Lewes's sense. Lewes explained, acting 'sublimate[d]' feelings in a 'manner typical and pictorial', 'purified' them from the everyday. This was a process analogous to the reduction of Diamond's photographs to their engraved reproductions, to convey like the 'painter', or the 'poet', 'in a few lines' the 'a prospect of a very extensive […] multitude of different expressions', but with greater power to affect than both poetry and picture: *Alice*'s dramatic frame, therefore, amplifies through animating its poetic and elements and their effects.[100] The 'actor's *art*', Lewes concluded, 'express[ed] well-known *symbols* of what an individual man may be supposed to feel', 'follow[ing] nature sufficiently to select symbols that are *recognized as natural*, he fails to touch us', to throw spectators 'into a state of sympathy', to 'raise their effect'.[101]

That the emotional changes Alice undergoes in response to engaging with embodied passions were enacted truthfully would have been critical to Carroll. As this concerned specifically sinful passions, or vice, it is interesting to note that Lewes noted that as the audience, he believed, 'really' had 'so little experience' to 'estimate fidelity 'copying the actual manner of murderers, misers, avengers', and other 'such characters', therefore, 'the

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[98] Michael Baker, *The Rise of the Victorian Actor* (London: Croon Helm, 1978), p.157; Grant, *Science of Acting*, p.5.
[99] Joseph Roach, 'G.H. Lewes and Performance Theory: Towards a 'Science of Acting'', *Theatre Journal*, 32 (1980), p.315; Grant, *Science of Acting*, pp.4;2.
[100] Lewes, *On Actors and the Art of Acting* (New York: Holt, 1880), p.30; Grant, *Science of Acting*, p.7.
[101] Lewes, *Art of Acting*, p.112 [my emphasis].

actor is forced to be as *typical* as the poet is'.[102] That Carroll is more radical than Lewes in this point, reveals his interest in the progressive science-based theological discourse that favoured theatre as a religious means of moral and social improvement that was expressed in such books as the Reverend James Panton Ham's *The Pulpit and the Stage* (1878) which Carroll owned.[103]

Rather opposite to Carroll's father, Ham asserts the stage as more truthful than other art forms and even reality itself, as when 'folly and vice strut […] on the stage' they did so 'without any concealment' so that 'we are not decoyed and betrayed […] as we too commonly are in the experiences of real life'. The actor, like literary fantasy, makes visible and 'imparts on us the secret of himself […] that we may loathe him as the villain he is'. The actor enacts this revelation so that there was 'always' on the stage, but 'not often in real life', what 'is called poetical justice': a 'very necessary moral expedient […] to save us from the danger of wrong conclusions and false admirations'.[104] Thus, the 'calling of an amuser is a sacred calling', Ham states, because 'he addressed himself most searchingly to the conscience and most intimately to the heart': the examination of the human psyche and its cure were the stage's essence and purpose.[105]

This is the stance Carroll backed – and which he ultimately enacts in *Alice*. In newspaper contributions like 'The Stage and the Spirit of Reverence', he writes, that as a 'man who recognises […] that there is a distinction between good' – 'all that is 'brave, manly and true in human nature', and evil' – that which causes 'much, if not all, of the sorrow of life' – he believed the stage play should be a force for good. For this purpose, 'serious'

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[102] Lewes, *Art of Acting*, p.112.
[103] Lewes, *Art of Acting*, p.112.
[104] James Panton Ham, *The Pulpit and the Stage: Four Lectures, With Illustrative Notes by Frederick Whymper* (London: [n.p.], 1878), p.111.
[105] Whymper in Panton Ham, *Pulpit and the Stage*, pp.vii;113-4.

allusions to sin served ‘a worthy purpose […] *entirely healthy in [its] effect*’ – as the effect he anticipated *Alice* to exercise decades earlier.[106] The most successful example Carroll cites, was the ‘picture […] Irving gives us of “Mephistopheles”’, which possessed a greater power to *cure* evil in the onlooker than that of the sermon: ‘Few preachers could rival’ the ‘vividness’ of the enacted image of ‘Sin’ in ‘all its *native hideousness*’: no one, ‘evil’ as their ‘own lives might be’, could help to ‘shudder at [its] sight’, ‘and not *realise*’ its ‘utter hatefulness’.[107] Using the same vocabulary that describes the cathartic psychological transformation of Alice, depictions of Irving’s Mephistopheles (Fig.16) resembles strikingly in its features that of Tenniel’s Hatter. *Alice* is *play*ful in that sense, as it exposed, not actors dressing themselves up in falsehoods, but real-life actors, who, full of vice, disguised themselves in virtue – like the governor in ‘Hiawatha’s Photographing’, whose sin is exposed by the photograph.

Fig.16: Henry Irving as Mephistopheles

In this spirit, *Wonderland*’s rarely-discussed ending does not conclude with Alice’s departure and awakening, but an epilogue, in the place which children’s tales traditionally reserved for a Moral that conveyed the tale’s lesson and thus its anticipated effect. As the child, however, has already departed the stage, this part of *Wonderland* is firmly aimed at its adult readers.[108] Having listened to the account of Alice’s ‘strange dream’, Alice’s

[106] Carroll, ‘Stage and Reverence’, p.286 [my emphasis].
[107] Carroll, ‘Stage and Reverence’, p.292 [my emphasis]; Irving’s portrayal of Mephistopheles was iconic, inspiring Bram Stoker’s Dracula and haunting the MacDonald family; Carroll’s close friend the actress Ellen Terry writes it was praised by the German Goethe Society together with his similarly iconic King Lear’s portrayal of insanity (cf. Ellen Terry, *The Story of My Life* (Woodbridge: Boydell Press, 1982), p.241).
[108] Lewes, *Actors and Acting,* p.112.

enigmatic older sister enacts its intended effect: she closes her eyes, as Holland instructed, 'in easy posture' by 'leaning her head on her hand', and next images 'steal upon' her reality (96). She 'dreamed' about Alice, 'and listened, or seemed to listen' to the 'place around her' becoming 'alive with the creatures of Wonderland', until she '*half-believed herself* in Wonderland' – almost fully having established this mental synchrony and sympathy with this better state of mind, not unlike Anodos by the time he has rejoined the waking world (96). This new state of mind makes her recoil from the idea that 'dull reality' that awaited her upon opening her eyes, and in a self-reflective conclusion she herself provides the lesson of *Wonderland*, which the experiencing of its dream provided to her. '[L]astly', she 'pictured to herself how this same little sister' who had had this subversive dream, would be 'a grown woman':

> *how* she would keep […] the simple and loving heart of her childhood: and how she would gather about her other little children, and make their eyes bright and eager with many a strange tale […] *how* she would *feel* with all *their* simple sorrows, and *find a pleasure* in all *their* simple joys, remembering her own child-life. (97; my emphasis)

The sympathetic vision making the 'grown woman' question her own ways was achieved through Alice sharing 'the dream of Wonderland' – coming full circle with the narrative aim outlined by Carroll himself (97). In the light of this ending, it becomes clear why Carroll was adamant that *Alice* should 'not [be] a pantomime', a form tied to the expectation of a 'glorious restoration of the status quo', but insisted it must be called 'a dream-play', a term evoking a radically different meaning, as the images displayed, and conclusions drawn were there not for *mere* amusement, but 'healthful amusement'.[109]

In the context of Carroll's engagement with contemporary psychology *Alice*'s playfulness thus appears in a new light, as play and game were employed by Carroll as novelistic

[109] Lovett, *Alice on Stage*, p.43; Kirsten Shepherd-Barr, *Theatre and Evolution from Ibsen to Beckett* (New York: Columbia University Press, 2015), p.36.

imitation of these activities, and their formal frameworks, as a means of learning. As Alice Liddell's favourite game was reportedly 'let's pretend', Carroll's *Alice* plays 'let's pretend' with its readers, in the same way Alice's dream does with her sister. The tale plays with, and eventually dismantles their certainties, and learning to form a new mindset without them, and its hypocrisies: a process of cure. Sigmund Freud believed that 'play is the most intensive occupation of the child': through playing 'adult', the child could 'reorder the constituent parts of its world into a new, more satisfactory order', a process he believed the poet imitated in the creation of worlds through 'fantasizing'.[110] With *Wonderland*'s evocation of the card-game hierarchy of the King and Queen of Hearts and their playing-card court, it imitates a game, but *is* itself a game. It *is* thus entirely consistent with the work of Dodgson the deacon, mathematician and author of educational entertainments such as the *Game of Logic*: a game that entertains while exposing 'fallacy', 'lies' and 'deception committed by illogical argumentation.[111]

By borrowing James Secord's notion of 'knowledge in transit', Martin Willis has foregrounded the central role the stage, which Alice imitated, played in 'mobilising science', transforming it 'into performance and vice versa', as an alternative to traditional top-down 'movement of scientific knowledge from one group to another'.[112] The way in which Carroll deploys dramatic elements throughout his writing disperses and thus evidences his knowledge of theoretical scientific ideas and their critical discourses, as well as participating in them through his text. In the same way *Alice* references Christian educational narratives and structures, while being itself a Christian educational narrative, informed and structured by logic and modern scientific thought equally. Rackin's summary of the work which is to him encapsulated in the 'surprisingly prophetic' original

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[110] Sigmund Freud, *Der Dichter und das Fantasieren* (Stuttgart: Reclam, 2010), p.101.
[111] Carroll, *Game of Logic*, pp.81-2.
[112] Willis, 'Imaginative Mobilities', pp.3-4.

title of the tale. He suggests that 'even the final version would be more appropriately called *Alice's Adventures Under Ground*', as it is 'above all else a comic horror-vision of the chaotic land beneath the man-made groundwork of Western thought'.[113] To complement this chaotic land, Carroll constructed a curative system of thought, akin to that the dream, as conceptualised in contemporary psychology, which could provide a cure for all who partook in the 'healthy amusement' of his 'dream of Wonderland'. For those who would not, Carroll, finally, wrote, in the last republication of the tale in the author's lifetime, the 'child's mind', and thus their own, 'is', and would remain, 'a sealed book'.[114]

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[113] Rackin, 'Alice's Journey', p.313.
[114] Lewis Carroll, 'Who will Riddle me the How and the Why?', in *Alice's Adventures Under Ground, Being a Facsimile of the Original MS. Book Afterwards Developed into "Alice's Adventures in Wonderland"* (London: Macmillan, 1886), p.v; Carroll alludes to the same questions MacDonald and Kingsley had allegorically embodied in their fictions – both of which Carroll had read – by then.

2. Between Worlds: Morbid Visions and the *fin de siècle*

By the time Lewis Carroll's *Sylvie and Bruno* (1889) and *Sylvie and Bruno Concluded* (1893) appeared, the *Alice* novels had become an international success. There was much anticipation of the new novel by the author of the 'marvellously grotesque, fantastic and humorous' *Alice*, who had since published 'nothing […] worth mentioning in the same breath as his first two works'.[1] All the greater was the perplexity at the 'muddle' of the *Sylvie and Bruno*[2] novels: they were 'too long', 'too hard to understand', too 'serious', and, as contemporary and modern critics agree, apparently 'altogether lacking' narrative structure.[3] This sentiment was echoed in the reception of George MacDonald's *Lilith* (1895).[4] All three novels were fragmented and non-teleological, with an 'endless ending', and many believed, like John Docherty and Rolland Hein, that a 'two-world structure', like that of MacDonald's first novel, would have been 'less confusing'.[5] *Sylvie and Bruno*'s and *Lilith*'s meaning was to many critics further obscured by the novels', in Carroll's case, *unexpectedly*, and in MacDonald's case, overwhelmingly 'biblical' content. Both works remain a paradox to critics, who note them as, simultaneously, atypical and the authors' 'definitive' works.[6]

Most apparently, the different flavour of these novels arises from them responding to very different periods in the writers' lives. The *fin-de-siècle*, with its 'mood [of] deeper

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[1] Anon, 'Our Booking-Office', *Punch, or the London Chariv*ari (4 Jan 1890), p.10.
[2] *Sylvie and Bruno* was intended to appear as one volume but, due to its length, was split in two; the novel's first instalment was released with many readers not expecting a second volume. The text will refer to *Sylvie and Bruno* as both the overall work and the first instalment and use *Concluded* for the second volume.
[3]Anon, 'Our Booking-Office', p.10; Denis Crutch, '"Sylvie and Bruno": An Introduction', *Jabberwocky: The Journal of the Lewis Carroll Society*, 4 (1975), pp.47-8; Marah Gubar, 'Lewis in Wonderland: The Looking-Glass World of Sylvie and Bruno', *Texas Studies in Literature and Language*, 48 (2006), p.372.
[4] Docherty, *Friendship*, p.366; Tom Shippey, 'Liminality and the Everyday', in *Lilith In a New Light: Essays on the George MacDonald Fantasy Novel*, ed. by Lucas H. Harriman (Jefferson, NC: McFarland, 2008), p.19.
[5] Docherty, *Friendship*, p.364; Rolland Hein, 'A Fresh Look at *Lilith*'s Perplexing Dimensions', in *Lilith in a New Light: Essays on the George MacDonald Fantasy Novel*, ed. by Lucas H. Harriman (Jefferson, NC: MacFarlane, 2008), p.73.
[6] Docherty, *Friendship*, p.364; Hein, 'Dimensions', pp.71;73; Anon, 'Booking-Office', p.10.

uncertainty', it seemed, demanded a different, more complex novelistic framework than the linear cathartic 'mid-century fantasies'.[7] The *fin de siècle* was, as Roger Luckhurst and Sally Ledger note, an 'epoch of endings and beginnings', a 'time fraught with anxiety and with an exhilarating sense of possibility'.[8] What was hailed scientific progress in the middle of the century, now dissolved into uncertainty about the nature of that progress. Darwin's evolution by natural selection gave rise to multitudes of more sinister notions of degeneration which prefigured the end of civilisation and of humanity itself. Anxieties about a loss of control arose in psychology through the 'notion of reflex action' of the mind, which Roger Smith names the field's 'key' advance which threatened to undermine free will and morality.[9] A 'turning point' had been reached at which 'scientific definitions' in psychology directly challenged 'prevailing philosophical and theological paradigms'.[10] Continuous attempts to reinstate divine control and purpose in psychological theory fuelled ever-diversifying transcendental epistemologies, and popular revivals of mesmerism and spiritualism. These, in turn, entered, as Alison Winter illuminates, 'a new intellectual phase […] deeply concerned with the psychological and psychical origins' of 'manifestations of the supernatural', in search of the 'fulfilment of the mind's greatest potential', and counteracting modern science's 'alarming' materialism.[11] Moreover, inter-theological quarrels opened up purgatory to scientific investigation: a process during which theological concepts of the soul became intertwined with more disparate ideas of environmental influence in evolutionary psychology. Sin, as man-made destabilising factor within society, came under scrutiny of the emerging social sciences.

The philosophical discourses of the *fin de siècle* were at constant risk of 'dissolving

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[7] McGillis, 'Femininity and Freedom', p.33.
[8] Ledger and Luckhurst, *Fin de Siècle,* p.xiii.
[9] Smith, *Free Will*, p.18.
[10] Rylance, *Victorian Psychology*, p.70.
[11] Winter, *Mezmerized*, p.3; McCorristine, *Spectres of the Self*, pp.103;104.

without some organizing framework': a framework which the unwieldy visions of *Sylvie and Bruno* and *Lilith* attempted to create.[12] Martin Willis emphasises the significance of 'fictional interventions' of such works which unravel and negotiate scientific theory as an important 'form of communicative action' of scientific 'knowledge-making' which eradicated 'the distinction between the *making* and the *communicating* of knowledge'.[13] Thus these novels synthesised multitudinous strands of the psychological discourse to find their common denominator, and propose solutions which they believed were not afforded by the separate disciplines. Both novels harnessed the fantastic elements of the transcendental interceptions of this period that tried to enhance stalled scientific enquiry, refuting the 'influential view' that 'by the end of the nineteenth century the sciences and the imaginative disciplines had parted company never again to meet'.[14] Carroll exploits the revived interest in fairies to trace interactions between man, mind and environment to test the possible coexistence of fate, free will and morality in *Sylvie and Bruno*; in *Lilith,* MacDonald draws on the optics of spectral apparitions and theories of speculative mathematics to construct a comprehensive 'experimental physics of the mind'.[15] With both spectres and fairies linked to death, both novels imitate psychological processes and visions produced by physiological disease and mental unrest – instead of dreams – reflecting how the malaise and intellectual unrest of the *fin-de-siècle* that was felt as an existential threat. Coinciding, further, with the death of the 'hegemonic vehicle of Realism, the three-volume novel', these novels were not merely weaker versions of their literary predecessors, but pioneering proto-modernist fantastic narratives that transcended the boundaries of both the scientific and literary.[16]

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[12] Ledger and Luckhurst, *Fin de Siècle*, pp.xiii;xxii.
[13] Martin Willis, *Vision, Science, and Literature, 1870-1920: Ocular Horizons* (Pittsburgh, PA: University of Pittsburgh Press, 2014), p.58 [my emphasis].
[14] Willis, *Ocular Horizons*, p.7.
[15] Daiber, *Experimentalphysik*, p.17.
[16] Ledger and Luckhurst, *Fin de Siècle*, p.xiv.

2.1. 'The interesting, if somewhat erratic genius': Lewis Carroll, late-Victorian psychology, and transcendentalism[1]

The response to Carroll's *Sylvie and Bruno* novels divides its critics and readers, broadly, into two classes who highlight the novels' difficulty and potential, respectively. Drawing on the same preconceptions that had distorted the reception of *Alice*, through the extrapolated persona of Carroll as author of carefree children's literature purely for the sake of entertainment, readers most commonly criticised *Sylvie and Bruno* as a 'failed *Alice*', because it was not, as Marah Gubar states, 'a contribution to *children's* fantasy' – only one of the fragmented halves of the books is dedicated to a fairy-story.[2] Others, like Carroll's nephew Stuart Dodgson Collingwood, asserted that, even though the novel's format and structure was a 'mistake', it was 'the best thing he ever wrote' as it was 'the publication of all the ideals and sentiments he held most dear'.[3] Stephanie Lovett, similarly, states that 'for the reader interested in Dodgson's feeling and ideas […] they are a treasure', highlighting their value as a key to Carroll's intellectual world, which shines through the other half of the novel. Revolving around the romance between Arthur, a country-doctor, and his lover Lady Muriel, they reflect on the other characters' gentlemanly but ultimately shallow discussions of current matters of intellectual concern, from Herbert Spencer to fate, from Free Will to vivisection. Encounters in the novels' realistic part acquire metaphoric character as they embody and enact the 'odd ideas', 'fragments of dialogue', and 'passages that occurred in dreams' which the author had 'jotted down' to ultimately make up his work (ix-x).

Their content, in turn, illuminates the purpose of the narrative structure – and highlights the value of the work as an attempt at navigating the complexities of the intellectual

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[1] Harry Furniss in Collingwood, *Life and Letters*, p.320.
[2] Denis Crutch, '"Sylvie and Bruno": An Introduction', *Jabberwocky: The Journal of the Lewis Carroll Society*, 4 (1975), pp.47-8; Gubar, 'Lewis in Wonderland', p.372 [my emphasis].
[3] Collingwood, *Life and Letters*, pp.288-9.

landscape of the *fin de siècle*.[4] It is crucial, firstly, to look at Lewis Carroll's[5] 'ideals' in the context of the *fin de siècle* whose complexity emerged from his 'rule of life' which Collingwood summarised in the words of Ecclesiastes, '"Whatsoever thy hand findeth to do, do it with all thy might"', and their depth from what Mark Richards adds the 'simple question' that guided any effort in his life: 'How *best* to serve God?'[6] Carroll pursued his versatile interests and occupations as fully and conscientiously as possible for that reason. This first manifested in his study and teaching of mathematics. A 'promising pupil' with a 'love of precise argument', he obtained the best mathematics degree at Oxford in his year and was appointed mathematical student in 1852, a life-long teaching position at his college, Christ Church.[7] And although seemingly contradictory, it was this life philosophy which prompted his decision not to join the priesthood despite the condition of the post being that he 'prepared for holy orders', for which reason he had been ordained deacon in December 1861. His doubts over whether he should become a minister intensified after he failed to convince his brother Wilfred that the duty to serve God was subordinate to personal desires, leaving him uncertain of his ability to convince a congregation. He withdrew from a clerical career in 1872, shortly after the publication of *Through the Looking-Glass*, and dedicated himself to teaching mathematics and logic, which, as he wrote to his sister, 'I do *really* regard […] as my work for God'.[8] His sense of obligation also pervaded his leisure. Writing about photography in his diary, he notes 'it is my one recreation and I think it should be done well'.[9] Consequently, when Dodgson found himself writing *Alice*, he made it the best he could. Sparing no expense, he hired the best

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[4] Stephanie Lovett, *Lewis Carroll and Alice: New Horizons* (New York: Thames & Hudson, 1997), p.158.
[5] For practical reasons, I will from here onwards refer to the man as 'Lewis Carroll', unless a distinction to the private person Charles Dodgson is necessary.
[6] Collingwood, *Life and Letters,* p.292; Ecclesiastes 9:10; Richards, 'Work for God', p.197.
[7] Robin Wilson, *Lewis Carroll in Numberland: His Fantastical Mathematical Logical Life* (London: Penguin, 2008), p.46; the term 'student', in the context of Christ Church, denotes a tutor of a subject.
[8] Richards, 'Work for God', p.208.
[9] Roger Taylor and Edward Wakeling, *Lewis Carroll, Photographer: The Princeton University Library Albums* (Princeton: Princeton University Press, 2002), p.22.

illustrator for his tale as he shared with him, as Cohen and Wakeling highlight, an 'insistence on the *indissoluble* tie between art and morality'.[10]

It was also with this frame of mind that Charles Dodgson had embarked on his, so far under-explored, study of science, medicine and psychology. Unlike MacDonald, Carroll had not received professional scientific training. Oxford only reformed its degrees, renamed into '*Scientiis Mathematicis et Physicis*' in 1853, including 'honours in natural science' after Carroll had completed his degree.[11] Instead, he gained his knowledge autodidactically through a self-devised 'system' to ensure he did so thoroughly and comprehensively. He notes in his dairies: 'I have now a regular plan of reading arranged, and have been working on it for some days. It embraces besides mathematical reading, History, Science', in addition to classics and divinity, Philosophy, De Quincey and Shakespeare.[12] While he took this 'plan' extremely seriously, he also found it a source of enjoyment.[13] He records on 9 March 'got from Parker's at Rolleston's recommendation, Kirkes' *Handbook of Physiology* (1869), and began reading it through. I find it *very* interesting'.[14]

He immersed himself in the subject, and wrote on 25 March '[I]n these last few days I have begun reading Physiology, beginning with Kirkes' *Handbook* [...]. To this I have *found it necessary* to add Knox's *Handbook of Anatomy*'.[15] That he 'found it *necessary*', that is, essential for a complete grasp of the subject, highlights Carroll's desire for completeness in obtaining knowledge, and that his reading was as much for self-improvement as it was intended for 'useful' application, an aim he shared with his friend

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[10] Wakeling, *Carroll and his Illustrators*, p.1 [my emphasis].
[11] Keith Hannabus, 'Mathematics in Victorian Oxford', in *Mathematics in Victorian Britain*, ed. by Raymond Flood, Adrian Rice and Robin Wilson (Oxford: Oxford University Press, 2011), p.37.
[12] *Diaries III*, p.156.
[13] *Diaries III*, pp.130-1.
[14] *Diaries III*, p.165; Rolleston was tutor in anatomy, and Carroll photographed his classes (cf. Appendix V).
[15] *Diaries III*, p.169; Robert Knox, *Handbook of Anatomy* (London: Henry Renshaw, 1852).

George MacDonald. Eager to add a practical dimension to his knowledge, Carroll had even asked his friend Reginald Southey[16] for permission to attend an operation at St Bartholomew's Hospital in London, a leg amputation at the sight of which he 'fully expected to turn ill'. Having been able to 'bear it perfectly well', because it was performed under chloroform and he was convinced the man 'felt nothing', he records: 'This is an experiment I have long been anxious to make […] to know whether I might rely on myself in cases of emergency. And I am very glad to believe I might'.[17]

As Carroll regularly notes that 'the reading scheme is going well', often followed by remarks such as 'I have bought several new books in these last few days', his scheme shaped a systematic and comprehensive library that testifies to the specialist level of knowledge he accrued over the years, and, further, maps the progress in these fields.[18] W. John Smith judges from the collection's 'professional character' that it must have provided Dodgson with a 'formidable medical knowledge'.[19] Sally Shuttleworth highlights specifically the author's 'deep interest in medical theories of the mind' that stood out through the 'impressive collection of medical and psychiatric works'.[20] Among his books were physiological works, such as William Benjamin Carpenter's *Principles of Human Physiology* (1869) and Austin Flint's *Physiology of Man* (1875) which explained also the nervous system, sleep and dreams. These overview works were complemented by those with a more clearly psychological focus, such as Henry Holland's *Chapters on Mental Physiology* (1852), the third edition of Benjamin Brodie's *Psychological Enquiries* (1856),

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[16] Reginald Southey was a close friend of Carroll, and companion in photography. The nephew of Robert Southey, the poet laureate, and son of Henry Herbert Southey, a Lunacy Commissioner and colleague of Carroll's uncle Skeffington, Reginald later himself became a Lunacy Commissioner.
[17] *Diaries III*, pp.138-9.
[18] *Diaries III*, p.158; Carroll's library has been catalogued and reconstructed from sales catalogues, his accounts, diaries and letters, but no complete record of his reading exists. He cites books, at length, in letters to periodicals which are not recorded in any known catalogues.
[19] W. John Smith, 'Dodgson's Scientific Interests with Reference to the Books in His Library', *Jabberwocky: The Journal of the Lewis Carroll Society*, 14 (1984), p.8.
[20] Shuttleworth, 'Spiritual Pathology', p.640.

Herbert Spencer's *Principles of Psychology* (1855), Henry Maudsley's *Physiology and Pathology of the Mind* (1867), the second edition of Carpenter's *Principles of Mental Physiology* (1874), and James Sully's *Illusions* (1881). In addition to studies of consciousness, Carroll owned numerous psychiatric treatises, which dealt with its morbid states, such as Jean Étienne Esquirol's *Observations on the Illusions of the Insane* (1833), Forbes Winslow's *On Obscure Diseases of the Brain, and Disorders of the Mind* (1863) and Allan Hamilton's *Nervous Diseases* (1878). Handbooks, such as Daniel Hack Tuke's and John Charles Bucknill's *Manual of Psychological Medicine* (1879) supplemented his structured reading.[21] His diaries indicate that some of his medical books were acquired from his uncle, and were left after Carroll's death to his nephew, the medical doctor Bertram Collingwood, Stuart's brother, which highlights their professional value and ongoing validity in the medical discourse.[22]

While his diaries document the thoroughness of his reading, his library and reading lists map the scope and the development of his own medical and psychological knowledge, from physiology to psychiatry, to psychology, and later spiritualism and transcendentalism. Supplemented throughout by theological texts addressing the same areas of interest, they simultaneously trace the 'crucial' development of 'physio-psychology' during the period of Carroll's increasingly profound interest in psychology. Such authors as Tuke, Maudsley and Carpenter ventured from a medico-physiological context into the terrain of psychology, via the psychiatric treatment of insanity, with which Carroll was familiar, and '[M]edical, physiological and psychological concerns', as Allan Collins stressed, became increasingly understood as fully 'interdependent' towards the end

[21] Carroll owned handbooks and encyclopaedias on nearly every subject in which he was interested, such as photography, theology or astronomy.

[22] As Bertram Collingwood's house was bombed during the Second World War, the library was burned and no record of the books it contained is known; Bertram James and Stuart Dodgson Collingwood were the sons of Carroll's sister Mary Charlotte Dodgson, he corresponded with them frequently on philosophical subjects.

of the century.[23] Psychology began to embrace the idea 'that humans were a product of the same natural laws as all other creatures', and that as 'some psychological functions were a product of those laws' the 'nervous system itself was seen as embodying evolution'.[24] The idea of the mind as a decentralised, dynamic network, adaptable, like animal physiology, to environmental influences and thus prone to uncontrollable reflex actions, superseded ideas of associationism and faculty psychology accepted at the time of Alexander Bain's first major works.

Thus, the period bookended by Herbert Spencer's *Principles of Psychology* of 1855 and William James's book of the same title of 1890 was also one of 'beginnings and endings' for psychology. Theory expanded from a concern primarily with internal dimension to social dimensions and what connected the two; from moralising to theorising the actions. Reflex actions of the unconscious within a dynamic psychological system also redefined dreaming.[25] The sources of Carroll's scientific education reveal the core conflicts of the three decades of memory fragments *Sylvie and Bruno* attempted to navigate. The fundamental nature of these changes in the period is epitomised in the hard-fought debate around Free Will which questioned the 'behavioural feature' which 'most clearly distinguished humans from other species' and the very 'possibility of human order' or indeed any form of 'control'.[26]

'Exhilarating possibility' and 'anxiety' were constantly pulling the *fin-de-siècle* mind into opposing directions. Radical attempts to drive forward psychology as a positivist discipline gave rise to 'automaton theories' of the mind and fatalism.[27] Such ideas reverberated in the

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[23] Allan F. Collins, 'The 19th Century and the Emergence of Psychology in England', in *The Oxford Handbook of the History of Psychology: Global Perspectives*, ed. by David Baker (Oxford: Oxford University Press, 2012), pp.185-6; Rylance, *Victorian Psychology*, p.70.
[24] Collins, 'Psychology in England', pp.183-4; Rylance, *Victorian Psychology*, p.70.
[25] Ledger and Luckhurst, *Fin de Siècle*, p.xiii.
[26] Collins, 'Psychology in England', p.183; Rylance, *Victorian Psychology*, p.70.
[27] Ledger and Luckhurst, *Fin de Siècle*, p.xiii.

language of T.H. Huxley, who called physiology 'the mechanical engineering of living machines', and compared the mind to a 'factory', and was read by both Carroll and MacDonald.[28] Although Huxley had disagreed with Descartes on whether animals were merely 'unconscious machines', he instead asserted they were '*conscious* automata', and, as animal brains were the precursors of those of humans, the human brain and consciousness were dynamic and merely more complex mechanisms than the animal ones, challenging the notions that had formerly distinguished man from animal: reason, morality, free will and the soul, which facilitated the preceding three.[29] Although Huxley granted free will, he presents a determinist framework in which human actions were 'none the less parts of the great series of causes and effects, which in unbroken continuity, composes that which is, and has been, and shall be', and thus the human mind was ultimately unfree, the existence of the soul questionable.[30] In *Sylvie and Bruno Concluded* (1893) an aged aristocrat remembers that 'putting Man on the level of the lower animals' and ceasing to 'draw a sharp boundary-line between Reason and Instinct' a 'generation ago' marked the moment 'the truth of Religion seemed ready to stand or fall', which highlights the significance of such debates with regard to Carroll's personal beliefs.[31]

As physio-psychology challenged will and reason, and presented mankind as the result of molecular changes in the brain that arose from interaction with the environment, it also challenged the very possibility of morality. Theory therefore shifted towards investigating the mechanisms by which influences were acting within such a dynamic system, what precisely these influences were, how, and if, they could be controlled. Focusing, firstly, on

[28] Thomas Henry Huxley, 'Autobiography', in *Charles Darwin and T.H. Huxley: Autobiographies*, ed. by Gavin de Beer (Oxford: Oxford University Press, 1983), p.103; T.H. Huxley, *Sensation and the unity of structure of sensiferous organs* (London: Clowes & Sons, 1879), p.8.
[29] Thomas Henry Huxley, 'On the Hypothesis that Animals are Automata, and Its History', *Fortnightly Review*, New Series, 95 (1 Nov 1874), p.558.
[30] Huxley, 'Automata', p.577.
[31] Lewis Carroll, *Sylvie and Bruno Concluded* (London: Macmillan, 1893), pp.296-7.

the internal dimension, and defending the place of morality, William Carpenter's concept of 'unconscious cerebration', which became a major influence on Carroll and MacDonald preserved both reflex action and free will, claiming that '*a large part* of our Intellectual activity—whether it consist in reasoning processes or in the exercise of the imagination—is essentially automatic'.[32] The unconscious, being only *one* of two 'trains of mental action […] carried out simultaneously' was automatic and therefore uncontrolled.[33] Frances Power Cobbe imagined their relationship like that of a horse and its rider: 'just as the actions of a horse are some of them spontaneous and some done under the compulsion of his rider', suggesting that although unconscious and uncontrolled thought existed, control over it can ultimately be regained.[34]

Both Carpenter and Cobbe also believed that, as the unconscious mind was receptive and adaptive to environmental and moral influences unbeknownst to it, it also exerted moral influences upon the conscious mind unnoticed – making the control of the unconscious ever more pressing. Secondly, therefore, to theorise the mechanisms of such inherently ungraspable external influences, models of the in-between dimension through which they acted, such as George Henry Lewes's 'Bioplasm', were conceived. The latter represented 'the sum of the organic conditions that determine the biological existence of the organism' and served as the basis for Lewes's analogy of the 'Psychoplasm', which determined the psychological constitution of the individual. The 'whole' human 'organic' condition, Lewes asserted, was shaped by a spectrum of influences, from internal 'hereditary factors' to the external 'varying *pressures* of social life', thus presenting a fully physical and physiological model of psychology.[35] Accommodating influences from every theoretical

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[32] Collins, 'Psychology in England', p.186.
[33] Carpenter, *Principles*, p.526.
[34] Cobbe, 'Unconscious Cerebration', p.36.
[35] Rylance, *Victorian Psychology*, p.275.

aspect of Victorian life and philosophy, such models lent themselves to treatment by the fantastic, that made visible, graspable, the ramifications of their interactions.

Such dynamic evolutionary thought in psychology meant that the discipline, thirdly, 'could not be isolated from wider social and political issues because it blurred the distinction between what was *natural* and what was *right* to do'.[36] And thus, as Elaine Showalter points out, through its more materialist and physiological framework, challenges to the 'dominant social values of the time' came to permeate all theoretical literature.[37] Carroll entered this public discourse of the social dimensions of modern psychological theory with confidence clearly enabled by his autodidactically-acquired medical and psychological knowledge to comment upon numerous specific problems, his full opinion on which he provides in *Sylvie and Bruno*. He put forward scientifically founded arguments for the case of vaccinating children in newspapers, and even corrected some periodicals' portrayal of medical phenomena.[38] Articles such as 'Hydrophobia Curable' (21 October 1885) and 'The Fasting Man' (10 April 1890) published in *St James's Gazette* were reprimanded for their inaccuracies, and corrected with lengthy passages from Daniel Hack Tuke's *Influence of the Mind upon the Body* (1884), Francis Edmund Anstie's *Stimulants and Narcotics* (1864) and George Henry Lewes's *Physiology of Common Life* (1859) respectively.[39] Carroll did not shy away from sensitive subjects, especially not when matters of children and childhood were at stake. Carroll followed the application of psychology in the legal profession and frequently arranged unsolicited expert statements from Lunacy Commissioners through his uncle Skeffington's contacts in relation to legal decisions. He wrote to exhort Judge George Denman to revise his sentence of a child servant. 'It seems

[36] Collins, 'Psychology in England', p.184 [my emphasis].
[37] Collins, 'Psychology in England', p.187.
[38] Lewis Carroll, 'Is it all well to have children vaccinated?', *The Eastbourne Chronicle* (18 Aug 1877), p.3.
[39] That these books are not listed in the catalogue of Carroll's library makes clear that Carroll's reading was even more extensive as the physical library and his diaries documented.

so dreadful', he wrote, 'that this poor creature, if really insane, should have received such a punishment, that I venture to call your attention to a book, Maudsley's *Responsibility in Mental Disease*', pointing out that he had himself 'read a good deal on the subject' and was 'struck by the parallelism between this and other cases'.[40]

Using the weight of the pseudonym 'Lewis Carroll' to gain attention for his opinions in high-profile public debates, he applied his knowledge hoping to improve eventually not only his own moral life, but that of others, which was to an even greater extent than *Alice*, the aim of *Sylvie and Bruno*. The author of *Alice's Adventures in Wonderland* in this way cut through moral hypocrisies he scorned in current scientific discourse, which he had already mocked in his most famous work, when he took a lively part in the most prominent ethical battleground through which psycho-physiology maintained a 'prominent place in public attention: the debate around unregulated vivisection'.[41] Cobbe, a chief anti-vivisection campaigner, with whom he corresponded, helped him publish his essay 'Some Popular Fallacies About Vivisection' (1875). In it, he intervenes with Carrollian wit and the logician Dodgson's sharp mind, well-versed also in physio-psychology and psychiatry to disqualify as a 'false axiom' justifications of vivisection that maintained 'man is infinitely more important than lower animals'.[42] His non-fiction thus displays the same dedication to fulfilling every occupation to the highest possible standard, for the improvement of self and society as had applied to his profession and literary writing, and the same compassion for the weaker and disdain for the powerful.

Beyond the individual perspective of internal, in-between and external dimensions, the evolutionary kinship of animal and mankind, and its links to morality and social biology,

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[40] Carroll, *Letters I*, p.246.
[41] Rylance, *Victorian Psychology*, p.72.
[42] Lewis Carroll, 'Some Popular Fallacies about Vivisection', *Fortnightly Review*, 23 (1 June 1875), p.848.

gave 'a new urgency' to ongoing debates over the 'physical and mental state of the national population'. Practical concerns, for instance about the social effects of alcohol and alcoholism – a common measure for social degeneration and interesting in relation to Carroll's position as Curator of his Oxford college's Senior Common Room's Wine Committee – are reflected also in Carroll's library to which he added such works as Carl Marx's *On the Decrease of Disease Effected by the Progress of Civilisation* (1844) to understand the workings of body and mind in the context of society.[43] The preoccupation with degeneration, yet another aspect of the *fin-de-siècle* 'fear of the uncontrollable' that originated, as William Greenslade highlights, in the perceived 'lack of synchrony between the rhetoric of progress and the facts on the ground', takes centre stage in *Sylvie and Bruno,* George MacDonald's *Lilith*, and many other *fin-de-siècle* works to solve new questions generated by evolutionary psychology in the climate of anxiety about the survival of the individual, society, and the species.[44]

The sociological dimension was therefore intimately intertwined with the philosophical one. In scientific discourse, social and psychological ideas 'cross-fertilised', and 'ethical, political, and scientific concerns [became] inseparable' through the 'idea of universal natural law', and 'questions about cosmic order were always being opened', 'prowl[ing] in the background of all discussion', as Rylance foregrounds. But psychology encountered the dilemma of scientific progress in the question whether a 'raw', 'expansionist' science could 'really offer the prospect of total knowledge', of producing sufficient progress to approximate answers to questions of cosmic order in any Victorian's lifetime, or in fact ever.[45] Despite their urgency, it remained questionable whether 'complex psychological

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[43] Collins, 'Psychology in England', p.184.
[44] William Greenslade, *Degeneration, Culture, and the Novel, 1880-1940* (Cambridge: Cambridge University Press, 1994), p.15; Ledger and Luckhurst, *Fin de Siècle*, p.1.
[45] Rylance, *Victorian Psychology*, p.77.

entities—like consciousness or the will' could 'be generated from what was known of the biological conditions of the organism alone', addressing the 'unknowable' parts of the human psyche that were intimately linked to the questions about 'cosmic order'.[46] All this created the extraordinary pressure that would have to be borne by any attempt at creating an organising framework.

Thus, the tension between the vastness of implied questions, and the potential impossibility of a proximate or possible solution weighed also on the relatively young discipline of psychology. The psychological works Carroll owned all struggled with the limitations of empiricism in the addressing of philosophical questions, and attempt, to differing degrees, to distance themselves from it by excluding such questions from their discipline, or indeed scientific enquiry in general. Henry Holland lamented that 'the topics treated [in Psychology] are of such nature as perpetually bring us to the confines of metaphysical speculation' and vows that he will 'carefully avoid passing over this boundary'. Yet, while concluding that such universal questions were outside the remit of psychology, which 'must be satisfied by classing the facts generally', he adds that a clear distinction between what phenomena should or should not be included in this was not possible, and that this classification must occur 'without drawing those arbitrary lines which nature does not recognise and which observation perpetually belies'.[47] Lewes therefore condemned those who 'treat mental facts simply as the manifestations of a Psychical Principle', which resulted in an imprecise conception of it as an 'at once unknowable, and intimately known mysterious agent revealed to consciousness'. Scientists had to admit in frustration, as Lewes, that 'no such line *really* exists', as 'all states of consciousness were, themselves, imperfect'. Establishing a clear cut-off line between the

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[46] Rylance, *Victorian Psychology*, pp.76-7.
[47] Holland, *Chapters*, p.xi.

realm of psychological and metaphysical enquiry consistently seemed to escape psychologists' grasp.[48] Premature exclusions from the remit of psychology, he suggested, were the main reason for the 'utmost discordance' on the 'cardinal points' of what, how and why psychology should be studied, which significantly inhibited the progress of the discipline.[49] The epigraph of Lewes's *The Study of Psychology* (1879) epitomises the fact that, at the time *Sylvie and Bruno* and *Lilith* was conceived, the field was almost synonymous with its limitations: '[T]here is barely a science', Wilhelm Wundt proclaimed, 'over which there are more disputes and contradictions as that of the Sciences of the Soul'.[50]

The dilemma of Victorian psychology was, on the one hand, a professional one, wanting, paradoxically to draw a line between the phenomena considered within the remit of psychological science without wanting to limit the subject of enquiry. On the other hand, it was also a struggle against revived interest in supernaturalism, which was felt further to derail efforts towards a unifying framework. Furthermore, Nicola Bown points out, it was also personal. While psychologists from 'the 1830s onwards through to Holland and G.H. While psychologists such as Lewes sought to combat popular "superstitious" beliefs about the supernatural origin of dreams', aiming to 'replace' superstition with an 'empirically-based material theory of mind', they were, however, due to the imprecise boundaries of the discipline, themselves 'sometimes prey – to preserv[ing] the possibility of dreams, and the mind, as supernatural' in their own writings.[51] What filled the voids created by the rapid rationalisation and professionalisation of psychology throughout the 1870s and 1880s

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[48] Lewes, *Physiology of Common Life II,* p.53.
[49] George Henry Lewes, *Problems of Life and Mind. Third Series. The Study of Psychology, its Object, Scope and Method* (London: Trübner, 1879), p.3.
[50] Lewes, *Study of Psychology*, p.3.
[51] Nicola Bown, 'What is the stuff that dreams are made of?', in *The Victorian Supernatural*, ed. by Nicola Bown, Carolyn Burdett and Pamela Thurschwell (Cambridge: Cambridge University Press, 2004), p.165.

attracted not only those unfulfilled by scientific progress. As Shane McCorristine notes, the membership of the Society for Psychical Research, founded in 1882, ‘resembled a *Who’s Who* of the *fin-de-siècle* world’, and included ‘major personalities’ from ‘literature and psychology’ and other social circles, including Lewis Carroll and George MacDonald, but also an emerging new generation of psychologists: William James, Sigmund Freud and Carl Gustav Jung.[52] Carroll owned a significant collection of works related to spiritualism including Catherine Crowe’s popular *Night-Side of Nature* (1847), and the Reverend Frederick Lee’s *The Other World* (1878) and *Glimpses of the World Unseen* (1878), which examine supernatural phenomena alongside their medical preconditions and equivalent religious concepts. These books show that Carroll through them investigated avenues not pursued by kindred disciplines. Again, his interest was also practical: he attended a dozen séances, including one in June 1876, following which he purchased Dale Owen’s *Debatable Land Between this World and the Next* (1874); Carroll already owned Owen’s earlier *Footfalls on the Boundaries of Another World* (1860).[53]

Although he was a member of the Society of Psychical Research from its foundation to his death, and acquired many more similar works, published mainly between 1860 and 1880, Carroll was hardly a spiritualist when he was writing *Sylvie and Bruno*. His scepticism is evident in a letter to Langton Clarke from 1882, in which he writes about ‘the first report of the Psychical Society’, suspecting Zöllner’s proof of the existence of a fourth dimension to be ‘trickery’, believing, nonetheless, in the fundamental truth of the experiment’s subject. He clarifies that ‘of all the phenomena of table-rapping, thought-reading, etc. […] I am more and more convinced. At the same time, I see no need as yet for believing that

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[52] McCorristine, *Spectres of the Self*, p.104.

[53] An inscription in Carroll's copy of Owen’s book, which is in the collection of Mark and Catherine Richards, London, reads ‘C.L. Dodgson, June 1876’, confirming the sequences of event and purchase, illuminating further Carroll’s urge to educate himself once a new a subject had caught his attention.

disembodied spirits have anything to do with it'. Carroll hoped that the 'evidence' that had been 'most carefully taken' during the experiment, and the bolder questions raised by spiritualism would eventually contribute to advancing the seemingly stalled sciences. Spiritualism's main merit, to Carroll, was that it pursued questions current science could not yet answer: 'I think we are close on the day when [the explanation of the supernatural phenomenon] shall be classed among the known natural forces, and its laws tabulated', so that 'the scientific sceptics, who always shut their eyes, till the last moment, to any evidence that seems to point beyond materialism, will have to accept it as a proved fact in nature'.[54] In the question of what should comprise psychological study Carroll's view was more akin to that of Lewes, and he followed every promising strand of enquiry, carefully examined its findings, and took forward the facts that stood up to scientific scrutiny. Studying spiritualism alongside, rather than instead of other fields of knowledge, he hoped it to enhance, rather than replace scientific enquiry.

This effort is narrativized in such works as *Sylvie and Bruno* and *Lilith*, which sought to create narratives of science, wondering beyond the empirical. Aware of, but unconcerned by limitations of the increasingly professionalised scientific disciplines, they interrogated actual and potential implications of scientific theory, and its applications in the context of society, not only seeking answers to scientific questions, and ways to scientific progress, but, more widely, what constituted 'progress', and the forms of discourse which could lead there. It is in this setting that Carroll came to a 'definitive conclusion' to resign from his mathematical lectureship in 1881; the 'chief motive for holding on [had] been to provide money for others'. Aware of his advancing age, he dedicated his time to 'worthy work in writing', 'partly in the cause of innocent recreation for children, and, partly, I hope (though

[54] Carroll, *Letters II*, p.697.

so utterly unworthy of being allowed to take up such work) in the cause of religious thought'.[55]

It is of paramount importance in discussing a writer known primarily for his contribution to 'children's fantasy' and 'entertainment', to reiterate that the crux of *all* of Carroll's pursuits was *truth*, and that he had, as Cohen notes, spent a lifetime devising ways in which complex problems could be logically broken down, and 'guiding pupils towards their resolution' and thus toward truth.[56] In 'classify[ing]' the 'unwieldy mass' of fragments over the course of 'ten years, or more', 'stringing together, upon the thread of a consecutive story', 'to see *what sort of story they indicated*', *Sylvie and Bruno*, in the light of Carroll's early trust in the guiding potential of the unconscious, was his quest for truth (*SB*, x). Spencer had asserted that '[E]very artist, in the course of his education […] accumulates a stock of maxims by which his practise is regulated', and if one were to '[*T*]*race* such maxims *to their roots*', they would '*inevitably lead* you down to *psychological principles*', to reveal their causes and mechanisms. This truth could be discovered by the study of the psyche. Spencer also added that 'only when the artist *rationally understands* these psychological principles and their various corollaries, can he work in harmony with them' – in imitating psychological processes, *Sylvie and Bruno* itself sought to uncover scientific truth not currently accessible to any single discipline.[57]

Carroll and MacDonald pursued this task not only in response to a personally perceived problem, but one stated clearly in *fin-de-siècle* psychological literature. William James outlined his take on the remit of psychology almost simultaneously with the publication of *Sylvie and Bruno* in his *Principles of Psychology* (1890) as 'the science of finite individual

[55] Cohen, *Lewis Carroll*, p.415.
[56] Cohen, *Lewis Carroll*, p.455.
[57] Herbert Spencer, 'What knowledge is of most worth', *Education: Intellectual, Moral, and Physical* (New York: Appleton, 1861), p.80.

minds', theorising as 'its data'. He is emphatic that psychology 'can go no farther […] as a natural science', stressing, also that 'these data […] must some time be *overhauled*'. While this fell 'outside' the remit of his book, it was vital to the advancement of the field.[58] 'The effort to *overhaul them clearly and thoroughly'* James stated, was that of a new 'metaphysics', which 'can only perform her task well when distinctly *conscious* of its great extent' and 'alive to the weight of her task', as being '*unconscious'* of it would spoil 'two good things' the moment 'she *injects* herself *into* a natural science'. In the ongoing interplay between science and its overhauling, advancing counterparts, an 'unfinished-seeming front' was, in the meantime, 'the best mark of health that a science can show.'[59] This incompleteness is what underlies the character of *Sylvie and Bruno* and *Lilith*, texts which take on, self-conscious of the 'great extent' of their task, the fragmentary sources of intellectual unrest that longed for resolution.

MacDonald's and Carroll's biographies provide evidence for their faith in this endeavour though the personal significance of fictional medical explorations. As MacDonald had experienced the works of Novalis and Goethe as informative and stimulating, Carroll had found de Quincey's works 'perfectly delightful reading', 'full of information of all kinds'.[60] Rather than *failing* to replicate his earlier work Carroll *consciously* decided to 'strike out a new path' in *Sylvie and Bruno*, to create 'useful' literature in a new age of uncertainty. And rather than being dismissed exclusively, the idea of such a narrative psychological experiment was taken up almost immediately: Docherty suggests, it was 'the publication in 1889 of the first volume of *Sylvie and Bruno'* that 'provoked' MacDonald into writing *Lilith*, a novel he knew would 'not be a financial success'.[61] While the value

[58] William James, *The Principles of Psychology* (London: Trübner, 1890), p.vi.
[59] James, *Principles*, p.vii.
[60] Carroll, *Diaries II*, pp.130-1.
[61] Docherty, *Friendship*, pp.365-6.

of *Sylvie and Bruno*'s contribution may not be found in its entertainment capacity, its conscious and purposeful engagement with, and advancement of a seemingly stalled progress responded to the latent gap in scientific discourse warranting a revision of the role of Fantasy in the intellectual and scientific developments of the *fin de siècle* and what narrative patterns they created for fantasists inspired by them.

2.2. ‘A mirror of the Victorian mind in flux and in contention with itself’: The *Sylvie and Bruno* novels, evolutionary psychology and the fairy-world[1]

‘—and then all the people cheered again, and one man, who was more excited than the rest, flung his hat high into the air, and shouted (as well as I could make out) “Who roar[2] for the Sub-Warden?”’ (*SB*, 1).[3] Thrown into the novel mid-sentence, the reader of *Sylvie and Bruno* shares, from the beginning, the disorientation which the first-person narrator experiences throughout the novel. Witnessing a nonsense fairy-tale of the fairy siblings Sylvie and Bruno one moment, the narrator suddenly finds himself, again mid-sentence, in a railway carriage *en route* to a coastal town in the North of England, engrossed in the reading of a medical textbook and a friend’s letter, both at once, while simultaneously hearing his own voice engaged in a discussion of the question ‘Do you believe in fate?’ (*SB*, 21). As if to apologise to the reader for this jumble of his own perceptions, the narrator, for the first time in a coordinated act of thought leading to speech ‘stammered out at last’: ‘I was dreaming’ (*SB*, 56). Rather than clarifying anything, this raises the question as to which of these fragments the narrator is referring to as a dream, or, whether he means everything preceding this remark, including the railway journey into which he has apparently awoken. The reader, it seems, has been thrown precisely into the middle of the ‘train of thought’ of the author Lewis Carroll – Bain’s metaphor of the nervous system as railway system Carroll had already adapted in *Through the Looking Glass*, cum-text – attempting to negotiate a jumble of fragmentary information from text, memory and environment, to reconcile them with reality.[4]

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[1] Cohen, *Lewis Carroll*, p.452.
[2] [sic.], the word ‘roar’ appears thus printed. The scene and the line structurally resemble Handel’s Coronation Anthem ‘Zadok the Priest’ [HWV 258]: ‘And all the people rejoic’d, and said: God save the King!’; Carroll, as Edward Wakeling points out, was a great lover of Handel, cf. Edward Wakeling, *The Man and his Circle* (London: I.B. Tauris, 2015), p.197.
[3] The parenthetic *SB* and *SBC* denotes the book titles *Sylvie and Bruno* and *Sylvie and Bruno Concluded*.
[4] Alice travels the chessboard-like, dialectic Looking-Glass-landscape by railway, in which her thoughts become embodied.

'Unconscious cerebration' and 'algebraic reasoning': *Sylvie and Bruno*'s structure

As the narrative structure of the two novels has been most frequently mentioned as the most confusing aspect of the work, untangling its structural dynamics is vital for interpreting its content. This is most easily done by first considering familiar structuring elements. As *Sylvie and Bruno* attempts to digest twenty years of snippets, these also include reworkings of fragments of *Alice*, drawing on the same underlying theory. The opening scene in the fairy-court (Fig.17) thus resembles the Mad Tea-Party (*SB*, 25; my emphasis). Uncannily like and unlike *Alice* this is also echoed in the attendants: the sub-

Fig.17: The Fairy-Professor demonstrates the Active Tourist's Portable Plunge-Bath

warden, a prominent hat-wearer with a bird, a symbol of lunacy, perched on top, or the Lord Chancellor, whose facial features recall that of the Mad Hatter (cf. Fig.13). The scene centres around the demonstration of the Fairy Professor's invention of the '*necessity* of *this Age*—the Active Tourist's Portable Plunge-Bath'. Having solved the pressing 'problem in Hydrodynamics' of how to provide a 'plunge-bath every morning', the Professor presents a contraption which merely requires his patient 'to spring from the floor to about twice his own height, gradually turning over as he rises, so as to come down again head first', 'a little bruised', perhaps, 'but having had his plunge-bath' (*SB*, 25).

As in *Alice*'s Mad Tea-Party, Carroll draws on a hyperbolic representation of a treatment method for lunacy in the plunge-bath, which points to the eccentric bathing and shower devices that had outgrown their use in lunatic asylums to become popular treatments for the overworked. Edward Wakeling notes Carroll's interest in hydropathy and the related field of homoeopathy in the 1880s, whose methods were explained in books he owned, by such authors as Charles Routh, or the pioneer of hydropathy, John Smedley.[5] Smedley conjured up therapies such as the 'plunge bath' and such portable bathing devices as the 'ladies sitz' and the 'ascending douche' – profitable, but dubious and at times obscure mechanisms which had already been widely caricatured (Figs.18;19).[6] Routh's recommendation of his 'shower-bath' resembles closely the Professor's words noting the 'shock so produced is not always pleasant, but […] has an exhilarating and bracing' and a 'most useful effect'.[7]

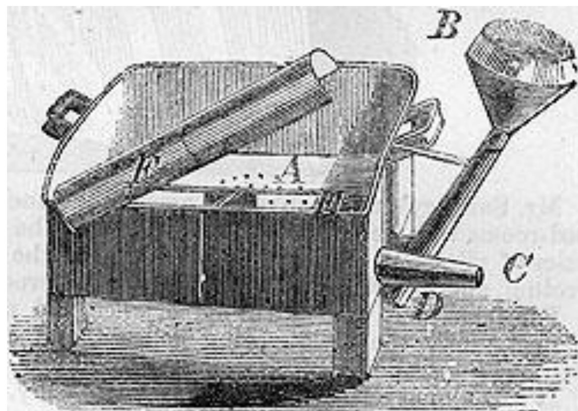

Fig.18: Smedley's 'Ladies' Sitz'

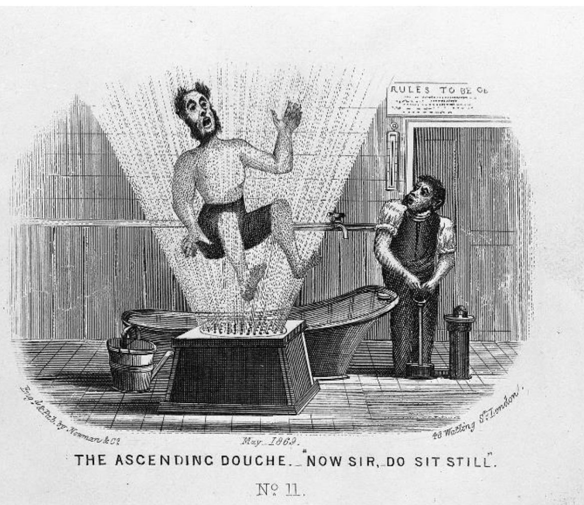

Fig.19: 'The Ascending Douche. 'Now Sir, Do Sit Still'

As in *Alice*, this reference blurs the boundaries between the psychiatric realm and that of society, and that the plunge-bath is noted as a 'necessity' in the *author's own* day and age highlights how its use widens also the scope of his novels from an individual to a societal

[5] Wakeling, *Man and his Circle*, p.287.
[6] Jane M. Adams, *Healing with Water: English Spas and the Water Cure, 1840-1960* (Manchester: Manchester University Press, 2015), p.110.
[7] Charles H. F. Routh, *On Overwork and Premature Mental Decay: Its Treatment*, 1876 (London: Balliere, Tindall and Cox, 1886), p.93.

perspective. Different from *Alice*, which descends from the realistic frame into the mad vision, *Sylvie and Bruno*'s narrative moves outward. As such baths were recommended as cure for its 'effect of diminishing cerebral congestion' by Routh and as treatments for 'irritation of the heart and brain' by Smedley, they captured the popular knowledge of the connections made in physio-psychology and point towards a physiological condition, and external triggers which correspond, as it emerges, to Carroll's frame.[8]

Smedley notably states that 'many patients came to my establishment', located, like the narrator's journey's destination, at the North-East-English seaside, and that they did so under the impression they 'had a disease of the heart, some have been told so by their medical attendants (as was the case with myself some years ago, when I consulted an eminent surgeon in London)'.[9] This is the case also with Carroll's narrator. Once he finds himself in a train carriage, his fellow passenger, Lady Muriel, remarks upon the title of a book he is reading, *Diseases of the Heart*, and identifies him as part of 'the class of readers […] yet more deeply interested' in 'medical books' than doctors namely that of 'patients' (*SB*, 21). The book contains a letter in which Arthur, a medical friend of the narrator, agrees with a previous diagnosis that his ailment originates in overwork from his occupation as a barrister in London, which has affected the heart: 'all your *symptoms point that way*' (*SB*, 19).

The medical literature Carroll owned, like also Hugh Campbell's *Nervous Exhaustion and Diseases Induced By It* (1873) claimed such heart diseases occurred often in the 'successful and overworked professional man' and 'brainworkers generally', and of 'truly nervous origin' manifested 'without any organic lesion of the heart' but instead through

[8] Routh, *Overwork*, p.93; John Smedley, *Practical Hydropathy* (London: Blackwood, 1872), p.123.
[9] Smedley, *Practical Hydropathy*, p.123.

'loss of mental faculties'.[10] Carroll's narrator is a London barrister, which echoes Carroll's familiarity with the legal profession through his two uncles, Hassard Hume and Skeffington, both London barristers, the health of the latter having been particularly severely affected by his work. Carroll was himself no stranger to these symptoms: during the intensely straining period of completing *Sylvie and Bruno* he developed 'a form of neuralgia that affected his face' which caused vision blurred by spectral illusions. He subsequently began to suffer from unclarified 'fainting fits', seizures which he noted 'may have been epilepsy'.[11] Heart ailment and visions were linked, according to Kirkes's *Hand-Book* which Carroll had read. This was 'explicable from the connection of [the heart]' to the 'nervous system', which was 'proved in a much more striking manner by the phenomena of disease than by any experimental or other physiological observations'.[12] Similarly, Austin Flint in his *Diseases of the Heart* stated 'symptoms denoting cerebral disorder […] are observed, sooner or later, during the progress of cardiac disease'. Among them were 'fainting fits', 'phases of lacking responsiveness', 'losses of consciousness' and often 'talking under delusions & delirium' – particularly frequently observed 'prior to death resulting from the illness' – just like Carroll's aged narrator.[13]

The contemporary currency of the narrator's condition is plausible individually as it arises from an educated mind under strain, but the disease itself gains symbolic meaning. Linking the narrator's mind to his social environment via his physiology, the visions are situated on the intersection, tracing the influences between psyche and environment. And as the

[10] Hugh Campbell, *Nervous Exhaustion and Diseases Induced by It* (London: Longman, 1873), pp.2;125-6; Routh, *Overwork*, p.19.
[11] Wakeling, *Man and his Circle*, p.271; Possibly due to the stigma of epilepsy being linked to masturbation, Carroll was never formally diagnosed but recorded several such 'fits', which often entailed injury.
[12] William S. Kirkes and W. Morran Baker, *Hand-Book of Physiology* (London: James Walton, 1869), p.142.
[13] Austin Flint, *A Practical Treatise on the Diagnosis, Pathology, and Treatment of the Diseases of the Heart* (Philadelphia: Blanchard and Lea, 1859), pp.166; 305-312; 98; Several books entitled *The Diseases of the Heart* were in circulation from 1867 to 1889, when Carroll was writing *Sylvie and Bruno*, none of them have been identified as part of the author's library, but he owned Flint's *The Physiology of Man*.

sudden visions are the only symptom displayed throughout the novel, they echo the endeavour of the novel expressed in the preface to trace the origin of the fragments that 'flashed' to his mind to the story they 'indicate', through which Carroll sets the stage for an interrogation of population's moral health, as he had done in *Alice*.[14] As the critical focus on the novels' differences from *Alice* has overshadowed an analysis of its continuities, it is crucial to highlight that the much-needed framework is in fact implicit in the numerous *re*workings of fragments, including those from *Alice*.[15] Thus, *Sylvie and Bruno* does not *lack* structure, it is, rather, a conscious evolution from the introspective narrative of *Wonderland* and *Looking-Glass*, expanding gradually from the individual mind to its examination within a more complex and dynamic framework.

Carroll constructs a literary work *as* an organic model so that *Sylvie and Bruno*'s structure acts, simultaneously, as a functioning system and *thus also* as object of study. As the initial intersection of the two worlds reveals, the narrative is itself sustained by a psychological phenomenon: in the train compartment, in which the realist narrative commences, Muriel identifies the narrator's confused utterances as 'a case of what you Doctors call "unconscious cerebration"' (*SB*, 21). With this process, as Francis Power Cobbe stated, occurring unawares, unconscious cerebration 'unravelled the tangled skeins of thought and laid them all neatly out' just as Carroll's narrative disentangles and traces lines of thought.[16] As William Carpenter noted, this mental phenomenon brought the '*intellectual products*' of unconscious action of the mind to consciousness via 'the nerves of the internal senses'.[17] In a structural imitation of this phenomenon, the novel itself 'thinks' the

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[14] Indicate is from Latin, 'indicare', 'to point towards', 'to make known'.
[15] Other such reworkings include the Mad Gardener, who is occupied in garden work, a common therapeutic measure in Victorian asylums, and unable to leave his designated abode, like the Hatter, sings a nonsensical song, crowned with a wreath of straw. A Royal baby turns into a porcupine at the end of *Concluded*, just as the Duchess's baby turns into a pig at the beginning of *Wonderland*, and the escalating dinner at the end of the fairy strand in *Concluded* resembles the finale of *Through the Looking-Glass.*
[16] Cobbe, 'Unconscious Cerebration', p.25.
[17] Carpenter, *Principles*, p.517.

conclusions unconsciously synthesised from fragments of memory fed into its psychologically-informed structure, seemingly on the author's behalf, in the way Maxwell had believed analogy constructed on a scientific foundation could produce true results.

While unconscious cerebration illustrated *how* the narrative psychology worked, another guiding principle, revealed in the same scene, indicated *to what ends*. In addition to the unravelling and unifying functions of unconscious cerebration, which to a degree were already present in the embodying and synthesising forces of the earlier dream, the fluctuating morbid visions of *Sylvie and Bruno* further have a special *refining* function. Following their exchange on unconscious cerebration, Muriel and the narrator ponder the most efficient methods of refining knowledge from all existing science books and scientific thought: a process which would be '[r]ather like one of the Rules in Algebra' (*SB*, 22). To make publicly available knowledge 'gain in quality', one only had to find, the narrator suggests, 'the Least Common Multiple of all the minds [which] contain[ed] that of all the books' (*SB*, 21). Thus, if 'thoughts' were considered 'as factors', one had to

> strike out a quantity wherever it occurs, except in the term where it is raised to its highest power […] to erase every recorded thought, except in the sentence where it is expressed with the greatest intensity. (*SB*, 22)

While here it is Carroll who aligns psychological function with mathematic rule, psychologists as Herbert Spencer believed 'algebraic and allied processes' to be the foundation of 'compound quantitative reasoning', which explained also the 'evolutions of higher forms of rationality out of the lower': a core hypothesis of his evolutionary psychology in situating human reason on the evolutionary ladder. This 'algebraic reasoning', Spencer explained, was applied to 'abstract magnitudes', such as 'space, time,

force, value', which, 'treated algebraically', were reduced by the mind 'to the common denomination'.[18]

As a mathematician, Carroll would certainly have been familiar with the meaning of the term algebra, 'the restoration of something that is missing', 'the reunion of broken parts', and as a reader of MacDonald, with its metaphorical potential, as algebra functions in MacDonald's novels as Romance, bringing together what is intended to be one.[19] Indeed, when MacDonald suggests in his essay on 'The Imagination' that the formation of scientific knowledge, the indication of 'what direction to make the new inquiry' arose from the imagination which 'often gets a glimpse of the law itself long before it is or can be ascertained to be a law, he further suggests in a footnote on this passage:

> This paper was already written when, happening to mention the present subject to *a mathematical friend, a lecturer at one of the universities*, he gave us a corroborative instance. He had lately guessed that *a certain algebraic process* could be shortened exceedingly if *the method which his imagination suggested* should prove to be a true one—that is, *an algebraic law*. He put it to the test of experiment—committed the verification, that is, into the hands of his intellect—and found the method *true*.[20]

MacDonald and his 'mathematical friend' Carroll, indeed a lecturer at 'one of the universities' had become close friends by 1867, the time this essay was written and Greville remembered that at the time his father could 'laugh till tears ran' at 'Uncle Dodgson's […] ridicule of smug formalism', but equally shared the 'sadness' and 'weariness of heart' so 'very natural in spiritual pilgrims' as well as 'sober talk' with the 'learned mathematician' who 'loved to question the very multiplication-table's veracity' – suggesting that scientific conversation was among their subjects in the period of 1864-68.[21]

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[18] Herbert Spencer, *The Principles of Psychology* (London: Longman, 1855), p.86.
[19] 'algebra', Oxford English Dictionary Online, <http://www.oed.com/view/Entry/4919?redirected From=algebra#eid> [Accessed: 23 Aug 2017].
[20] MacDonald, 'Imagination', p.13.
[21] Greville MacDonald, *MacDonald and his Wife*, pp.343-4.

This 'algebraic principle' is what underlies also the 'experiment' of *Sylvie and Bruno* that searches for this true law. Based on such multitudes of psychological theories the work oscillates between the worlds with a purpose: to refine, by 'algebraic reasoning', the common denominator of truth indicated by the disparate and incomplete theories of the fragmented *fin-de-siècle* discourse. The psychological basis of the narrative structure endorses what favourable critical evaluations, such as Morton Cohen's, have emphasised, seeing the novel's value as

> a store of issues that gripped most thinking Victorians, not least the science-versus-fate dilemma that Charles Lyell, Robert Chambers, and Darwin posed [and] a myriad of other topical concerns, offering us a mirror of the Victorian mind *in flux* and *in contention with itself*.[22]

Cohen adds that regarding the books not as literature but as 'a treatise on art, science, technology, religion, society, and other subjects' could provide modern readers with 'an encrusted mirror of nineteenth-century life and thought'.[23] As *Alice* had emulated a child's experience of digesting the discourses of mid-Victorian social mores; *Sylvie and Bruno*'s mind had matured, with its underlying theory. The resulting dynamic narrative structure re-constructs the experience of how *fin-de-siècle* mind, body and society were being affected by these significant debates and their ramifications, leading to the much-noted 'malaise' of the period. What is encapsulated in the narrator's symbolic heart ailment is thus the heartfelt longing for resolution of epistemological insecurity to which this novelistic experiment aims to provide a cure.

'Spirits twain have crossed with me': Fairies, Fate and Free Will

The challenge of reproducing multiple simultaneous unconscious processes in fiction is that they are *made* conscious: not a natural experience, and therefore a confusing one, which it is, however, possible to demystify by following the development of one specific

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[22] Cohen, *Lewis Carroll*, p.452 [my emphasis].
[23] Cohen, *Lewis Carroll*, p.455.

strand of argument – for instance, the question of 'fate'. *While* the train is in fact in the process of bringing together the protagonists and the different standpoints they represent, unconscious cerebration produces the question from text, to contemplation, into discussion in the realist frame, where different standpoints are displayed (*SB*, 20). The narrator is doubtful of the implications of his friend having 'become a Fatalist'; Lady Muriel is plainly dismissive, answering the question 'Do you believe in Fate?' with '"No, I don't!"' (20). Thus they oppose the determinism and fatalism suggested by Huxley, who conceived of the world as a complex but purely mechanical system: 'the great series of causes and effects which, in unbroken continuity, compose that which is, and has been, and shall be – the sum of existence' – which, he stated, would also imply 'atheism'.[24] Both unconscious cerebration, through its uncontrollable nature, and fate, through its determinism, were considered potential challenges to Free Will.

The question is thus raised to produce more theoretical fragments, instead of an answer, *while* the narrative's 'train of thought' continues to *move towards* a reconciliation – the narrative enacting the process of considering competing theoretical approaches. In the chronological succession of the narrative, the train stops for more conversations with other characters to occur, which embodies ever more problems flooding the mind on considering this question, complicating finding a solution. But putting aside these diversions for the purpose of the present analysis, the narrative after the digression returns to consider a practical manifestation of the question, in the potentially *fate*ful first Romantic encounter of Muriel and Arthur, at which point the two narrative strands first intersect.

Arthur and the narrator are walking towards the coast when the latter is 'startled to see Sylvie and Bruno' whom he had only encountered in his solitary visions, standing behind a

[24] Huxley, 'Automata', p.577.

thistle. In agitated conversation, Arthur attempts to beat back the thistle with his walking stick, when, in 'reflex' action, the narrator jumps to prevent him from doing so, realising however 'at once, that they were only visible to [him]': a fact visualised in their spectral appearance in Furniss's illustration (*SBC*, 47; Fig.20). Arthur, perplexed by the intervention, 'decides' to return home, and so, although seemingly arising from his own free will, his actions are *shown* to be the result of a chain of events, set into motion, involuntarily, via another mind's reflex, and thus unconscious and uncontrolled actions. The invisible forces intervene yet again, to alter the path upon which Arthur *decided*, when the narrator 'involuntarily' recites a quotation from Uhland's 'The Passage', which strikes the irritated Arthur as 'utterly inappropriate and irrelevant'. 'For, invisible to thee | Spirits twain have crossed with me' sums up the narrator's double-vision, which reveals how decisions arise from the intersection of internal and external principles, embodied in the fairy spirits. Sylvie 'gently' pulling Arthur towards Muriel, who was '*totally unconscious* that *any will but his own* was *acting* on the stick', and Bruno, with 'shouts audible to no one but Sylvie and [the narrator]' drive Muriel towards Arthur which, eventually, results in the couple fatefully crossing paths (*SBC*, 48; my emphasis). Carroll drew the attention of the reader to the enacted nature of this, thus not in fact realistic encounter in the narrator's aside, reflecting he might be like 'one of those

Fig.20: Arthur and Sylvie

subordinate characters' in a novel 'that only turn up when needed for the development of [the] destiny' of a 'fair lady' (*SB*, 17).

Tensions are thus produced between uncontrolled 'reflex action of the mind' leading to human action, and its opposition to 'fate', and the externally controlled and predetermined influence, which disenfranchises individual free will. Together, they raise the new problem, suggesting that what *seems* 'uncontrolled' may be controlled, either from an unknown force within, or from without. The situational evidence suggests that individual actions *are* guided from the outside, seemingly favouring fate and determinism, but also suggesting, actions might also not be predetermined, but are merely susceptible to any external influences. Despite the significance of the ramifications of a response to such an epistemologically explosive question, the philosophical, scientific and theological concepts underlying this scene remain freed from subject-specific terminology through being enacted by fairies. Producing *not* a static disciplinary treatise, but an open discourse, what the fairies enact *is* the least common multiple of competing theories.

As Nicola Bown notes, the subject-neutral device of the fairies through which 'Victorian ideas about science' were commonly 'refracted' clearly serves this function in Carroll's novel.[25] He was not, as was for instance Arthur Conan Doyle in his later life, a believer in the existence of fairies; he, conversely, stated that he 'did not care much for fairies'; Sylvie and Bruno were of the same kind as those employed by science popularisers as Arabella Buckley in her *Fairy-Land of Science* (1888), to embody unseen '*forces* around us, and among us', such as the evaporation of water, wind, temperature and gravity.[26] Fairy-metaphors had come to illustrate invisible forces acting *within*, as Francis Power Cobbe compared unconscious cerebration to a 'well-tutored sprite', 'servant', 'librarian', or

[25] Bown, *Fairies*, p.3.
[26] Buckley, *Fairy-Land of Science*, pp.2;6 [my emphasis].

indeed ‘fairy orders’ *ordering* the mind unbeknownst to their ‘owner’.[27] Other fairies, such as Charles Kingsley’s in *Madam How and Lady Why* (1869) and *The Water-Babies* (1862-3), which Carroll knew, embodied the philosophical and moral principles underlying nature as truth.[28]

Rather than being a superstition, or children’s fantasy for entertainment, these fairies were a serious means of scientific knowledge communication and production: ‘ten thousand times more wonderful, more magical […] than those of old fairy tales’, as they were ‘*true*’.[29] In a time in which Victorians were fearful and anxious of ‘the future and doubtful of the alloyed benefits of progress’, these feelings could not be ‘magicked away’, but ‘they can be given enchanted form’.[30] And although Bown states that their evocation at the time, and in modern criticism, elicited accusations of ‘escapism’, it was precisely this enchanted form that allowed authors to confront unsolved questions, as Bettelheim had stated, to be ‘confronted squarely’ and head-on.[31]

This is where Carroll’s fairies transcend the function of those of Cobbe or Buckley, as they do not only enact wholly within one invisible realm, but *translate* from one into another, acting in physiological and psychological function, transcending thus also the categories of forces ‘outside’ and ‘inside’. They enact fully, and thus unify, tentatively suggested physio-psychological theories. Thus, they are, for instance *almost* entirely accounted for by the scientific concept of unconscious cerebration, which Carroll had introduced at the beginning of the novel. As Carpenter notes, ‘ideas which have passed out of the *conscious* memory, sometimes express themselves not only in speech, but in *involuntary muscular*

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[27] Cobbe, ‘Unconscious Cerebration’, p.25.
[28] Carroll was friend and great admirer of Kingsley and owned several of his books including *Madam How and Lady Why* (1870), *Glaucus* (1855) and two editions of *The Water-Babies* (1864; 1885).
[29] Buckley, *Fairy-Land*, p.6.
[30] Bown, *Fairies*, pp.3;102.
[31] Bown, *Fairies*, p.1; Bettelheim, *Enchantment*, p.8.

movements'; 'impressions [which] may excite muscular movements through the "reflex" power of the Spinal Cord without necessary intervention of sensation', as in the case of Arthur's blow on the thistle.[32] Carpenter proceeds to explain that specific manifestations of unconscious cerebration were '"feelings" which we *unconsciously* entertain towards another', 'not becoming aware of them until some circumstance calls them into activity'.[33] This suggests that Arthur's pre-existing attraction towards Muriel, or the narrator's hope for their union, may have prompted the utterance triggering the chain of events that leads to their encounter.

Having created a medically accurate physiological basis, through the fairies Carroll added an equally well-founded physio-psychological agent to embody the forces acting between the worlds. Carroll, in fact, states up-front that in and through *Sylvie and Bruno*, he devised his own plausible 'theory on which this story is constructed', to show what would happen, supposing that *fairies really existed*' (*SBC*, viii; my emphasis). This theory has not, so far, been linked to the two fairies, who enact psychological processes in the tale, in the context of Carroll's theoretical psychological knowledge that fed into their portrayal: an omission chiefly responsible for the confusion the novels elicited. In a physio-psychological three-stage model of consciousness,

> the 'I' of the story goes through three stages of being, (1) real life, (2) the "eerie" stage, in which he can see fairies, (3) trance, in which, while his body remains apparently asleep, his spirit is free to pass into fairyland and witness what is going on there at the moment.[34]

After confusion about his first volume's structure persisted, Carroll elaborated on how the 'physical states' are linked, through the 'varying degrees of consciousness':

> (a) the ordinary state, with no consciousness of the presence of Fairies;
> (b) the "eerie" state, in which, while conscious of actual surroundings, he is

[32] Carpenter, *Principles*, pp.524;517.
[33] Carpenter, *Principles*, p.540.
[34] Carpenter, *Principles*, pp.64-65; Lewis Carroll, 'Sylvie and Bruno', *St James's Gazette* (10 January 1890), p.5.

> also conscious of the presence of Fairies;
> (c) a form of trance, in which, while unconscious of actual surroundings, and apparently asleep, he (i.e. his immaterial essence) migrates to other scenes, in the actual world, or in Fairyland, and is conscious of the presence of Fairies. (*SBC*, xiii-xiv)

This shows how Carroll, further, draws on such novel theories of gradient consciousness, as described by Lewes and Carpenter, who stated that 'a series of gradational states [exists] between ordinary profound sleep and the condition of the full activity of the animal and psychical powers', complicating such clear demarcations between conscious waking will, and unconscious influences.[35]

Carroll stressed on many occasions *Sylvie and Bruno*'s difference from his 'dream-novels', that 'there are no "dreams" in the book' and 'what seems like dreams, are meant to be "trances."'[36] Carroll even supplies a table specifying when 'abnormal' psychological states occur (*SBC*, xiv). As the context of Cobbe's, Carpenter's and Lewes's theories makes clearer, Carroll explicitly picks up his plot where the inconclusiveness of modern theory had left it stranded, to act out their logical continuation, making visible the forces between the worlds, *as if* they *were* really visible. The questions of free will and fate are thus resolved into a subset of the discourse of evolutionary psychology, in which Carroll intends to resolve them through the inclusion of other disciplinary strands, by fantastic means. While the *Alice* novels reflected Carroll's knowledge of early and mid-Victorian psychology and psychiatry, the *Sylvie and Bruno* novels are not only a reflection, but a participation in, extension of, and contribution to a scientific discourse.

'Enfant terrible' or *'homo noumenon'*: The possibility of morality as/and Free Will

The fairy-siblings Sylvie and Bruno are, however, not merely a medical concept. A comparison to other scientific fairies makes clear that what they did share with their

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[35] Carpenter, *Principles*, p.73.
[36] Carroll, 'Sylvie and Bruno', p.5; Carroll, *Letters II*, p.697.

counterparts from children's entertainment was their primarily moral pedagogical aim. Buckley intended her fairies to teach readers to *see* fairies by diverting their attention from their 'own petty troubles': an exercise in overcoming self-centredness.[37] Carroll's fairies are no exception. They go on to contemplate the wider societal implications of such novel psychological concepts as unconscious cerebration, its compatibility with free will and with morality and also whether incidents of moral action under unconscious cerebration can, in fact, be considered an enactment of free will. In of one of the novels' key scenes, the narrator is this time rather than suddenly overcome by the vision of the other world, '[l]ifted out of existence' by the fairies, to become in 'some mysterious way invisible, *free* to come and go *as disembodied spirits*', to migrate between the previously separate worlds like the fairies (*SBC*, 79; my emphasis). Where Alice experienced the refinement of her childlike mind, Sylvie and Bruno *are* the influence of this refinement in action, guiding the adult narrator through a much more complex and multidisciplinary dynamic system.

As the protagonists have symbolically enacted mental processes, the question of Free Will is also addressed in a symbolic incident of the aptly named worker *Will*ie overcoming alcoholism, to return home and look after his family instead of spending his money in the public house. Alcoholism had been prominently cited as evidence for the inherent, or even hereditary moral deficiency of the working classes in the Free-Will debate, which, while being fundamental to 'philosophical, moralistic and religious' fields, touched on the lives of 'all classes of society', as Smith notes.[38] Carroll draws on recognisable elements of this debate. Touching upon the discourse of moral contagion, the worker from the poorer, working class districts of the seaside town Elveston, in which the novel is set, is being taunted into drinking by his fellow workers. Sylvie and Bruno act as the worker's moral

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[37] Buckley, *Fairy-Land*, p.6.
[38] Smith, *Free Will*, p.1.

Fig.21: Sylvie, Bruno and Willie at the Public House

conscience, pushing the ‘simple-minded’ man ‘with all their strength’ away from the pub (Fig.21). Willie ‘took not the least notice of them’ he was ‘simply *conscious* that *something* had *checked* him’; consequently, ‘for want of any other way of accounting’ for the strange phenomenon, he ‘*regarded it* as *his own* act’, as Arthur had done (*SBC*, 82; my emphasis).

What is made visible to the narrator is how the fairies act as the same external influence that had affected Arthur. This, firstly, shows that such external influences affect both lower and upper social classes equally, and bring about moral, altruistic thought, then, action: instead of alcohol, the worker buys milk to save his ailing child. Moreover, as Willie arrives home proclaiming he would never touch the ‘devil’s own drink’ again, this influence effects a *permanent cure* of his alcoholism – and, as will become evident, as symbolic as the narrator’s heart disease. And finally, to complete the cycle of these in-between influences, Willie’s now changed moral mind turns, again, into environmental influence, to inspire kindness in others, as the dairyman gives more milk than needed – enacting how invisible influences affect not only individuals, but also effect social improvement (*SBC*, 87).

Carroll challenges popular socio-psychological presumptions by siding, as he had done in *Alice*, with the weaker party, here, not the child but the working class. He specifically enacts his contradiction to the theory of Free Will in the evolutionary psychology of Herbert Spencer. Spencer’s works occupied not only a major position in Victorian psychology, but, equally, in Carroll’s psychological repertoire: he owned, amongst others,

two editions of the two-volume *Principles of Psychology*, *Education: Intellectual, Moral and Physical* (1861), the *Study of Sociology* (1873), his collected *Essays* (1868-74), and *The Data of Ethics* (1879); this was the greatest number of works by one author in his library, excluding the Bible. Thus, challenging his theories is all the more important, as Spencer is not only the sole named scientist in the novel, but indeed provides its narrative framing. In his first encounter with Muriel, Arthur suggests '[t]alking of Herbert Spencer', attempting subsequently to explain 'algebraic cognizance' (*SB*, 258). Spencer had, crucially, negated free will, considering it a 'subjective illusion':

> To reduce the general question to its simplest form:—Psychical changes either conform to [natural] law or they do not. If they do not conform to law, this work, in common with all works on the subject, is *sheer nonsense*: no science of Psychology is possible. If they do conform to law, there cannot be any such thing as free-will.[39]

Ruling out free will, Spencer also eliminated the practical possibility of morality, as action was either *natural* or *unnatural*. When Arthur , however, asserts that 'we are to *assume* the existence of Free-Will' he echoes an identifiable fragment from Carroll's philosophy (*SB*, 258). Writing, for instance, to his nephew Bertram, '"I possess Free-Will, and am able to choose between right and wrong"' the 'existence of Free Will', Carroll states, was to be regarded as 'an Axiom'.[40] This is precisely what Arthur does, as there had not been 'anything already granted which could be used in proving [it]', which would make Free Will a 'theorem'.[41]

The Spencerian psychological framework for Willie's catharsis is laid out in a discussion-fragment on poverty and morality, which highlights the difficulty of the narrative structure once more: while adjacent in the present analysis, the theoretical discussion and its

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[39] Spencer, *Principles*, p.619 [my emphasis].
[40] Carroll, *Letters II*, p.1123.
[41] Cf. OED: 'axiom': 'A proposition that commends itself to general acceptance; a well-established or universally-conceded principle'; 'theorem': 'A proposition or statement which is not self-evident but is demonstrable by argument'.

narrative enactment are, in fact, more than 100 pages apart. The correspondence is clearer when the two fragments are considered alongside each other. To explain Spencer's theory, Arthur uses the examples of a virtuous man and a sinful man to explain how 'each man's condition' was due to 'two kinds' of influences: 'one acting from *within*, one acting from *without*'. The 'causes acting from *without* are his surroundings—what Mr Herbert Spencer calls his 'environment'; the 'causes acting from *within*, which make a man's character […] are his successive acts of volition' (*SBC*, 122). This *apparently* renders Willie's decision an act of free will, directing the focus of the discussion towards the nature and origin of morality in a dynamic system. Turning next to one of the chief contentions of such Evolutionary Psychology as Spencer's – the question of 'what is *natural* and what is *good*' – Arthur explains that in his view environmental influence is ultimately irrelevant for the question of guilt, concerning immoral action. While 'a man' is 'not responsible for his environment', he would be more easily coerced into sin by a sinful environment, yet as he *is* responsible for his own acts of choosing, sinners in both sinful and sinfree environments would be 'equally guilty in the sight of God' for their choice of sin (*SB,* 123).

In the case of Willie, sin is passive, as he had been corrupted by the habits of his fellow workers, and thus succumbed to alcoholism. However, this influence is ultimately kept at bay in *his* action. Thus, the narrative focus is shifted from the external, towards the internal dimension of sinful behaviour, tracing how an immoral, unnatural influence, such as coercion into alcoholism, was processed, and how it could be overcome. The socio-psychological discourse on alcoholism is paramount to Carroll's argument; as Collins foregrounds, alcoholism was one of the most frequently-discussed practical social dimensions of the free will debate, and 'habitual drunkenness' was treated either as synonymous with 'a lack of will, a moral failing', or as 'constitutional' but with a

'physiological basis', which could be 'weakened'.[42] Yet other early physio-psychologists had 'downplayed' the 'role of the will', such as Laycock, who believed that 'the origins of problems such as the excessive consumption of alcohol' were *primarily* 'constitutional' and only 'exaggerated by the conditions of the environment'. Seen as endemic, especially to the working classes, having evolved into part of their physical constitution in a way in which Conolly and Diamond had believed to be the case with insanity, the condition was considered incurable. This question was crucial in a social context, as Carpenter's consideration of 'criminal reform' and 'prevention of deviance' shows, which he considered 'both social and scientific issues'.[43]

Sylvie and Bruno was written as part of Carroll's 'useful' writing to address the 'graver cadences of life' (*SB*, xiii). Not only a theological concern, this also meant correcting such theories as Spencer's to prevent their misapplications in society. Carroll addresses alcoholism as a physio-psychological condition, which, while exacerbated by the environment, and maintained by it, was also reversible through moral re-education – and this is the chief contradiction with both Spencer and other theories considering the unconscious uncontrollable – a re-education of the unconscious. Willie's representative condition was not merely affected by choices enacted through active will, but also mediated by the unconscious, in which, Carroll believed, moral thought was organically contained. Willie only *consciously* turns away from drink, following the incident at the pub after his change occurs, not by *conscious* willed action, but through the same '*unconscious* cerebration' at work previously: an action of which Willie only becomes *conscious* when it is already happening, deciding that because it is *in* him, it is *his* active will. As the fairies show, it is neither his conscious action, nor the consequence of his immoral environment,

[42] Collins, 'Psychology', pp.186;187.
[43] Collins, 'Psychology', p.186.

therefore another theory must be at play.

Carroll's own theory takes as a point of departure what had been observed by William Carpenter, namely, that '*true* answers are often given to questions as to matters of fact, notwithstanding that there may be either entire cognizance or absolute disbelief in the statement of them'.[44] Cobbe had struggled with the similar notion that the 'character of unconscious cerebration tallies with the Kantian doctrine that the *moral will*' – a concept distinct from free will – 'is the true *Homo Noumenon*, the self of man'. This explained, to her, why 'a drunken man unconsciously blurts out the truth'.[45] She clarifies that 'intoxication never bring[s] new elements of nature into play, but only abnormally excite[s] latent ones'; the same was, accordingly, true for muscle action based on them: 'the unconscious mind, like an *enfant terrible*, is extremely veracious'.[46] The fairy-children, in Carroll's narrative *are* these *enfants terribles*.

What Willie's actions therefore appear to make visible is action in accordance with moral law according to which Free Will was action in accordance to God's moral law, whether occurring consciously or not. Thus, Carroll re-adapts the idea of a universal law of God's creation that was inherent in the unconscious mind, producing morality into consciousness, by aligning what he considered God's law with Spencer's natural law. Spencer and Carroll believed, in their own ways, that acting in accordance to this law would bring 'salvation', which clarifies, also, how contraventions are, in both Spencer and Carroll, referred to as 'nonsense': the opposite of sense, reason, or indeed morality.[47] Morality, sense and reason were thus redefined as action in accordance with natural law; this also being what

[44] Carpenter, *Principles*, p.524 [my emphasis].
[45] Cobbe, 'Unconscious Cerebration', p.23.
[46] Cobbe, 'Unconscious Cerebration', pp.31-2;33.
[47] Spencer believed that if mankind acted in accordance with this law, and modelled the rules of society on it, mankind would eventually proceed to perfection. This will be treated in extensive detail in chapter 3.2.

distinguished man from beast: a point to which Carroll would return at the novel's end.[48]

Spencerian theory is adjusted with approaches from Christian psychologists, who, working with a scientific, but fundamentally Christian concept of the soul, like Arthur, understood environmental influence as at least in part conditional. As Willie's moral action brings about moral and social improvement, they further believed this occurred through 'the existence' of a slightly different 'natural force', which Carroll had believed was 'allied to electricity and nerve-force', through which Carroll suspected 'brain can act on brain'.[49] This force had been theorised, for instance by Horace Bushnell, who Carpenter quoted, and who had outlined in *Nature and the Supernatural* (1862), also in Carroll's library, as the principle of 'unconscious influence' and 'the *moral atmosphere*': a concept similar to Spencer's, but of a more explicitly moral nature, as the in-between dimension populated by Sylvie and Bruno. Through it, Bushnell suggested, men were 'ever touching unconsciously the springs of motion in each other; one man, *without thought* or *intention* or even *consciousness* of the fact, is ever leading men after him' by an influence that 'flows out from us, unawares,' but – and this is the new element introduced into the already interdisciplinary Spencerian framework of Sylvie and Bruno's 'theory' – of which he is, crucially, '*properly responsible*'.[50] This illuminates Arthur's assertion that it was not the environment, but the individual who was to blame, ultimately, for sin. Declaring, therefore, each individual responsible for the moral fabric, the cultivating of their unconscious mind and thus the influence it exerts, Bushnell suggested that it is not only possible, but a duty to monitor, educate and thus shape this unconscious through self-reflection, not unlike that practiced by Carroll in his diaries, to direct one's actions and

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[48] Spencer, *Principles*, p.619.
[49] Carroll, *Letters II*, p.697 [my emphasis].
[50] Horace Bushnell, *Unconscious Influence: A Discourse* (London: Partridge and Oakey, 1852), p.3 [my emphasis].

unconscious influence in accordance with God's natural law. Because once this invisible influence has been emanated, its consequences are inevitable, they are *fated* to happen.

To test this theory, the narrator observes it acting within himself in *Concluded*, when he acts under the influence of his own unconscious while doing good. Just like '[C]losing one's eyelids, when something seems to be flying into the eye' he hears himself offering help to a 'lame girl', asking, '"May I carry the little girl up the stairs?"' without having considered it. In a reflectional aside, the narrator's voice, sounding more like the satirist and logician Carroll, however interjects:

> There are some things one says in life—as well as things one does—which come automatically, by reflex action, as the physiologists say (meaning, no doubt, action without reflection, just as 'lucus' is said to be derived 'a non lucendo'). (*SB*, 279)

The phrase 'lucus a non lucendo' refers to a 'paradoxical or otherwise absurd derivation; something of which the essence or qualities are the opposite of what its name suggests', a 'practice ascribed to ancient Roman etymologists of deriving words from their semantic opposites, as lucus ("grove") from lucēre ("to shine, be light") because a grove is not light'.[51] Carroll plays on what he believes to be a misconception, that unconscious cerebration is indeed the result of uncontrollable action ('action without reflection'), whereas, as his enactment of the principle has shown, it is rather the action proceeding from the unconscious that had been actively shaped by reflection, or lack thereof. He thus refutes the inevitability and lack of control felt to be implied by evolutionary frameworks in physiology and psychology.

It is worth noting in this exploration of the 'fairy influence', however, that Carroll still intended these fairies to act in a scientifically plausible framework, through the phenomenon of '"trances" as those of Esoteric Buddhists', an explanation which has by

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[51] OED Online, 'lucus a non lucendo' <http://www.oed.com/view/Entry/110922?redirectedFrom=lucus+a+non+lucendo&> [Accessed 17 Aug 2017]; Merriam Webster Online, 'lucus a non lucendo' < https://www.merriam-webster.com/dictionary/lucus%20a%20non%20lucendo> [Accessed 17 Aug 2017].

many critics, such as by Marah Gubar, been perceived as 'spectacularly unhelpful'.[52] Taking into account this non-scientific framework, likely drawn from Alfred Sinnett's *Esoteric Buddhism*, a book which, too, Carroll owned, 'disembodied spirits' fulfil a specific psychologically transcendent moral function not covered by other scientific theories Carroll referenced.[53] Sinnett explains that, according to Buddhist belief, seven principles constitute the human being: principles that in the pre-stages of death dissolve, as through the rivers of the Ancient Greek underworld, which Carroll had played with in *Wonderland*.[54] Suffering from a heart disease, the narrator, according to this theory, plausibly becomes their receptable and witness. While the higher principles belonged to heaven and the lower to earth, the fourth principle, the *animal* soul, was mobile within 'the earth's atmosphere' – during dying and even after death: as 'the seat of will and desire' and 'the receptacle' of 'that essentially moral consciousness', it facilitated the '*survival of volitional impulses imparted to it during life*'.[55] Disembodied 'strong unsatisfied desire' could through this principle take possession of a receptive mind in a 'state of insensibility' or 'during illness', as in the 'phenomena of spiritualistic mediumship', including trances.[56] This combination of the environmental influences in Spencer and Bushnell and *Esoteric Buddhism* shows, on the one hand, how it is immoral thought that perpetuates moral decline even in the absence of immoral action. It, in turn, also insinuates that it was Will in conjunction with divine and natural law that trained the unconscious to exude moral influence society for the better. The fairies enact the refined common denominator of brain-on-brain action theories within a scientifically sound framework, and despite, as of then, lacking scientific proof.

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[52] Carroll, *Letters II,* p.776; Gubar, 'Wonderland', p.379.
[53] Alfred Percy Sinnett, *Esoteric Buddhism*, 5th edn (London: Chapman and Hall, 1885), p.144.
[54] Cf. the discussion of the katabasis and the 'pool of tears' in chapter 1.3.
[55] Sinnett, *Esoteric Buddhism*, p.144 [my emphasis].
[56] Sinnett, *Esoteric Buddhism*, p.155.

‘Do you believe in Fairies?’: Faith, Fate and the Fortunatus Paradox

Having disentangled a single strand of argument makes clearer how the novels’ continuum between internal and external influences works. Moral or immoral impulses given at any point in the novel, like a drop in the water, create a wave in the ‘moral atmosphere’ which may only return to manifest its influence at a much later point, with its connection to the original impulse having become obscured, as a result of the distance between cause and effect in the narrative. Carroll noted in the preface that his novel aimed to trace the story indicated by its fragments to uncover the mystery of the ‘hopelessly illogical phenomenon an “effect without cause”’ (*SB*, viii). This frames how the second instalment’s perhaps ‘hopelessly illogical’ ending in fact connects to a cause, via disparate, fragmented incidences that indicate it, to, finally, suggest a conclusion on whether the complex, but theoretically graspable environmental influences, which were on the basis of cause and effect predetermined, indeed indicated the impossibility of free will or morality, as Huxley and Spencer had suggested.

The climax of the novel – the seemingly arbitrary outbreak of an unnamed plague in the working-class district of Elveston – is thus linked to an again seemingly unrelated fragment – a debate on vivisection – much earlier on in the novel. Bearing in mind Carroll’s principle of bringing together fragments, to see what common meaning, which story they imply, it is notable that this initial debate brings together all chief characters: the narrator, Muriel, Muriel’s aged father the Earl, and the physician Arthur. The arising debate displays different moral approaches to vivisection. Muriel assumes Carroll’s own position, advocating compassion towards animals as weaker beings, to make the case against both vivisection and hunting for sport. Echoing Carroll’s own sentiments, she also raises the question as to whether her professedly Christian reasoning was undermined by ‘orthodox writers’ who condemned ‘putting Man on the levels of animals’, by granting

them, in this case, a comparable capacity to experience pain (*SBC*, 295). The Earl, in turn, acknowledges that the notion that 'Man is the only reasoning animal' was 'at an end now', but partly refutes that recognition stating also that 'Man can still claim certain monopolies'. Thus, the suffering of animals was, he claimed, 'part of the Great' *unsolvable* 'riddle why innocent beings ever suffer' (*SBC*, 296).[57] Appealing to mystery to make his position unchallengeable, he in fact makes it incompatible with his daughter's altruism.

Deflecting any responsibility for any part in such suffering by failing to consider the position of weaker beings, especially with a view to the outbreak of disease in the quarters of workers for whom the Earl shows equally little consideration, is significant. The Earl avoids this matter by insisting on the difference between human and animal: as reason was absent in animals, as apparently proven in any manifestations of 'intellect', they could not suffer. He asserts that 'the wonderful perfection in a hive of bees' was not Free Will, but 'Reason of the *highest* order' – 'None of it was done by the Bee', 'God', an overarching force, a collective 'mind', had 'reasoned it all out' (*SBC*, 298). The Earl thus co-opts *suitable* elements of deterministic scientific theories, such as Spencer's, claiming that 'Organisms', such as insects, 'in which reflex action only is seen' are 'totally unconscious', and could therefore not suffer. His theory stands challenged. Although Spencer had indeed claimed that with their actions being 'purely automatic as are those of a steam-engine piston; such animals are doubtless co-ordinated after a generally analogous manner', the lack of pity towards a group or species sits not only uncomfortably alongside the environmental influence and moral atmosphere, when not countered, but was, as the narrator highlights, un-Christian.[58] He interjects that even '[M]ost religious believers *now*

[57] The Earl thus contentiously classifies man-made suffering as part of the question of theodicy, which MacDonald also addresses, as will be discussed in the subsequent section. Carroll, Kingsley and MacDonald, as will become clear, all strongly disagreed with this view.
[58] Spencer, *Principles*, p.536.

agree with Bishop Butler', that 'animals have some kind of soul, which survives their bodily death' – implying they possessed consciousness, and thus felt suffering, which, through vivisection, hunting and sports was 'chiefly caused by Man's cruelty' (*SBC*, 296-7).

While the Earl had as a young man been a science enthusiast, his apparently scientifically-based remarks are outdated and hypocritical as he readily rejects modern scientific conclusions to assert instead the superiority of mankind. The wider social implications of such stances on vivisection are outlined by Carroll in his article 'Some Popular Fallacies about Vivisection' (1875). In its opening he sharply condemned the 'strange' anthropocentric assertions that 'human and animal suffering differ in kind' 'from the lips of people who tell us that man is twin-brother to the monkey', who trace so 'proud an ancestry through the anthropomorphoid ape up to the primeval zoöphyte', but draw some inherent but 'inscrutable boundary line' to mankind. All who 'recognize the difference of right and wrong must admit, if the question be closely pressed, that the infliction of pain' was 'wrong' and must be avoided, and anyone who evoked 'the grim spectre' of the 'inalienable rights of man', avowed the most 'hideous' type of 'selfishness' in 'an age where selfishness has almost become religion'.[59]

Selfishness had, by MacDonald, been readily linked to the devil and is by Carroll likewise clearly identified as against God's moral, and Spencer's natural law, and such stances on vivisection translated into other social contexts. Followers of this 'religion', he wrote, behaved 'like beasts', and did not improve society but encouraged its downfall, and will be haunted by their own philosophy 'when anatomy shall claim as legitimate subjects for experiment […] "him that hath no helper"':

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[59] Carroll, 'Popular Fallacies', p.848.

> What potent charm have you in store to win exemption from the common doom? Will you represent […] the inalienable rights of man? He will tell you that this is merely a question of relative expediency, —that with a physique as feeble as yours, you have only to be thankful natural selection spared you so long.[60]

The Earl's position is revealed a fallacy, which Carroll, as his *Game of Logic* makes clear, considered to be 'any argument which deceives us'. In an example of *reductio ad absurdum*, Carroll shows that such views as the Earl's can no longer stand among modern scientific discoveries: they are, in Carroll's and Spencer's books, nonsense.[61]

To Carroll, the search for truth transcended the boundaries of any one epistemological system. His concern about harmful and immoral hierarchies which he had addressed in *Alice* demonstrates clear continuity between his professional and scientific concerns and those addressed in his fiction, showing how they illuminate one another. What is, in fact, recaptured in the Earl's example of bees operating as one collective mind, is what Carroll had already parodied in *Wonderland*'s 'Little Crocodile', in which children were equated to a uniform swarm, a class of inferior *human* beings, to which thought like the Earl's was a predator. This parallelism of the Earl and the predator, portrayed as a danger towards the classes they fallaciously depreciate, and thus threaten through the harmful influence their immoral thought exerts, illuminates the novels' seemingly unanticipated climax. After seemingly erratically meandering alternations between conversations, and fairy-segments, the plot gathers momentum when a highly infectious 'Fever' breaks out in the working-class district of the fishing village, and Arthur decides to join the efforts to combat it. He falls out of touch, and is shortly reported dead at the Earl's mansion; the narrative is interrupted, a newspaper clipping inserted, recording '*the honoured name of Dr. Arthur Forester*' among the dead.

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[60] Carroll, 'Popular Fallacies', p.854.
[61] Carroll, *Game of Logic*, p.81.

Fig.22:Sylvie and the dead hare **Fig.23: Muriel on Arthur's grave**

As the disparate fragments of *Sylvie and Bruno* connect across volumes like call and antiphon, the moral atmosphere translates cause into effect with uncanny, and indeed seemingly prophetic, fateful precision that relentlessly manifests in the novels, and indeed foreshadows Arthur's death. When, after the fact, the narrator accompanies Muriel to Arthur's grave, and in the 'most terrible […] outburst of grief I had ever witnessed', she flings 'herself on the turf' exclaiming 'Oh, my darling, my darling! […] And God meant your life to be so beautiful', he is 'startled' (*SBC*, 291; Fig.23). He had in the first volume, heard Sylvie exclaim the same words, flinging 'herself down at its side in such agony of grief as I could hardly have believed possible in so young a child' when she finds a dead hare in the fairy-forest (Fig.22). The hare was shot by those who 'hunt', and 'kill', 'sweet, gentle and timid' animals for sport, out of a supposition of their inferiority to mankind which Carroll had illuminated in his vivisection essay (*SB*, 319; *SBC*, 291; *SB*, 320). The 'plague' which annihilates a large part of the workers of Elveston, arises from their poor and unsanitary living conditions which Arthur had criticised earlier in the novel – a thought dismissed by the Earl, when Arthur notes that they depended on the charity of wealthier citizens.

A critique of the effects of the immorality of the powerful, not only upon the mind of the weaker, but upon society, shows another way in which *Sylvie and Bruno* is a development

from *Alice*; however, the vision's view is more firmly rooted in, and directed at, society, via its effect on the mind and body. As the epidemic is a long-term consequence through a chain of causations traceable to the neglect of the higher classes – and Arthur's death thus a consequence of the Earl's failure to cultivate his mind into morality – the novel reflects directly on the Victorian historical environment. Britain suffered a series of cholera outbreaks throughout the period, which social and sanitary campaigners, such as Charles Kingsley, openly linked to the neglect of the poor by higher classes in the biblical language of pestilence and plague.[62] It is unlikely this resemblance is coincidental, as Carroll was so concerned about this scene's accurate portrayal that he had consulted the eminent surgeon James Paget, evidencing that he wanted this incident to be as relatable as possible.[63]

After the novel has thus considered the inner, in-between and outer dimensions, another mysterious double-event, finally, theorises the in-between dimension of the moral atmosphere that translated the Earl's immoral thought into the courses of events that killed his son-in-law, to respond to the final remaining question.[64] If immoral thought in the long term effected death, would moral thought in the long term, translate into life? The in-between dimension is explained to Muriel, by a mysterious professor from a 'foreign land', addressed as 'Mein Herr', who resembles in all features, the Fairy-Professor from Sylvie and Bruno's 'Outland'. Like MacDonald's fairy-boy in *Phantastes*, he conveys this lesson metaphorically through a playful scientific object. He presents Muriel with the fairy-tale-

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[62] Carroll admired Kingsley's *Alton Locke*, which focuses on the underlying causes of the cholera outbreaks; this will be treated in detail in chapters 3.1. and 3.2.

[63] Carroll, *Letters II*, p.677.

[64] The resemblance of the scenes is not coincidental, and implied also in the resemblance by the illustrations that foreshadow one another (Figs.22;23), as they already do in the presentation of the portable plunge-bath and Muriel's lecture on the Purse of Fortunatus (Figs.17;24). Carroll had instructed his illustrator Harry Furniss accordingly: 'The scene […] contains two figures only, Lady Muriel and "Mein Herr". They, as you know, have a mysterious resemblance to Sylvie and the Professor. The picture will need very little invention, as I want it to be a repetition, with only such changes as are necessary, of the figures of Sylvie and the Professor, in the picture at p.24 of the first Vol.' (Carroll, *Letters II*, p.969).

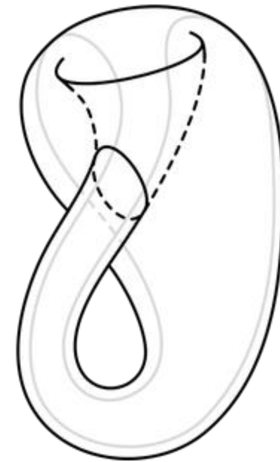

Fig.24: Muriel, Mein Herr, and the Purse of Fortunatus **Fig.25: Klein Bottle**

inspired mathematical paradox of the 'purse of Fortunatus': a bag of inexhaustible riches, which contains, like a Klein bottle, on its inside all the outside world (Figs. 23;24).[65] 'Mein Herr' poses a riddle: it will give 'wealth beyond your wildest dreams–it will give you Time', thus associating Space with Time, predating H.G. Wells's equation of the two concepts in the *Time Machine* (1895), to whom its first connection is most frequently credited (*SBC*, 96).

Mein Herr thus *asserts* that the principles of action, at a spatial and temporal distance, exist, leaving Muriel, however, struggling to grasp the concept. The question of their certainty is revealed, in a similarly pre-Wellsian manner, to the narrator through Mein Herr's second object. His 'outlandish watch' that facilitates time-travel is lent the narrator, who, hoping to use it to annihilate 'much of human suffering', instead only proves that he, alone, could not change the future at all, so bringing Carroll's established theory of the interaction of moral forces and their fatefulness into alignment with Huxley's near-unfathomable complexity of the interacting forces pointing towards determinism (*SB*, 348).

[65] The tale of Fortunatus and his purse originates in German Folkore, its first version was printed in 1509.

Carroll's choice of the purse of Fortunatus and the watch of the German professor are notable. The watch most readily evokes an association with Natural Theology's idea of a pre-determined future epitomised in Paley's watchmaker analogy – that God had predetermined the workings of the world, and thus their outcome – the purse, made from napkins, resembles a much more modern concept. Such non-orientable, non-Euclidean figures as the Klein bottle (Fig.25) or the Möbius band, conceived by the German mathematicians Felix Klein and August Ferdinand Möbius, appeared to challenge the truth of all Euclidean geometry which Carroll taught and regarded 'as his work for God', and thus stand symbolically for the modern epistemologies that had fractured any certainty in the *fin de siècle*. The professor, however, is also the clue to the resolution of these concepts' upheavals. Reworking an earlier Carroll fragment, the equally-daring German Professor Niemand ('nobody') from his *Euclid and His Modern Rivals* (1879), who is himself a pastiche of the by-then established figure of the German professor with seemingly mad, but potentially merely difficult-to-embrace philosophical theories, such as Carlyle's Professor Teufelsdröckh or later H.G. Wells's Professor Holzkopf.[66] As Mein Herr further mirrors the Fairy-Professor's pose and theme at the presentation of the mad, but potentially curative Plunge-Bath, the fragmentation proved a chance to synthesise, as by algebraic cognizance, the good and the new: the cure for the *fin-de-siècle* malaise, of mind and social body.

But whether this bold and seemingly mad conclusion could really be the case, is through these items postulated by Carroll at this stage of the novel as a riddle: an element of text,

[66] Fairyland is also called 'Outland', which a literal translation of the German term 'Ausland', meaning 'foreign land'. Carroll was literate in German, as he records in his 'Russian Diary'; he also owned German dictionaries. Assigning new, and seemingly paradox ideas, such as non-Euclidean mathematics, to a German professor, is plausible: plays with the meanings of words, appear in Carlyle's Teufelsdröckh, meaning 'devil's dung' or 'devil's frock' implying the character's malevolence, or in Wells's Holzkopf (Professor 'Woodenhead', in German a derogatory term), whose credibility is undermined by his affiliation of the Universität Weissnichtwo ('Don't-Know-Where').

inviting the readers to participate in the psychological process of solving this question – a technique also hearkening back to earlier Carroll texts such as *A Tangled Tale* (1880-5), a serialised collection of mathematical problems in prose form to be solved by readers.[67] Both paradoxes are essential in resolving and showing the plausibility, inevitability and underlying meaning of the otherwise estranged-seeming climax of the novel – which eventually resolves the still-suspended initial question of fate.

After witnessing Muriel's outburst, the narrator hopes for the miracle, that, due to his virtuous actions, Arthur may not be dead. By unconscious cerebration, a quotation rises to his consciousness: 'are there not "*more things in heaven and earth than are dreamt of in our philosophy*"?' – the same Shakespeare line often used by spiritualists, such as in Catherine Crowe's *Night-Side of Nature* to justify supernatural phenomena.[68] Subsequently, Muriel revisits the question initially posed in Arthur's letter, then negated, and now rephrased into the novel's *Gretchenfrage*: 'Do you *believe* in *Fairies*?' (*SBC,* 300). The question puts the narrator in a dilemma. Having, unlike Muriel, *seen* the fairies, that is, the moral consequences of thoughts translated into action, he is in a position to believe. Yet he remains wary that his beliefs, and the results of his thought-experiments, alone, are, like the reports of the spiritualists Carroll had perused, insufficient. On that basis, he had shortly before hesitated to reveal his fairy-experiences to Arthur, since he 'valued [his] own reputation for sanity too highly to venture to explain to *him* what had happened'.

Reading this through the fairies' meaning as moral psychological forces acting via the unconscious, it is significant the narrator, having reconsidered, responds: 'If you mean, by

[67] Solutions were submitted to Carroll and each new episode responded to them. Carroll notes in the first preface that the text contains riddles, to whose solutions he responds in the second preface.
[68] Catherine Crowe, *The Night Side of Nature, Or: Ghosts and Ghost Seers* (London: Newby, 1848), p.34.

"believe", "believe in their *possible* existence", I say "Yes"'; but, for the 'actual existence' of fairies one would 'of course' – as with the laws of science that are 'not yet tabulated' – need evidence' (*SBC,* 300). He adds, what reads like Carroll's own *credo*:

> I believe that there is life everywhere – not material only, not merely what is palpable to our senses – but immaterial and invisible as well. We believe in our own immaterial essence, call it "soul", or "spirit", or what you will. Why should not other similar essences exist around us, not linked on to a visible and material body? (*SBC,* 301-2)

This reply also points beyond the scientific discourse of the psyche, to the theological discourse of the soul, as indicated also in structural reference to the *Gretchenfrage* which itself asks for the belief in God, gaining greater urgency in this scene as Muriel asks with Arthur's death in mind.[69] The narrator's apparent confirmation of a belief in fairies, by analogy, suggests the possible truth of 'fate' in the absence of 'evidence' as the moral presence in nature, guiding its course – which is affirmed in the appearance of fairy siblings passing through the forest, seen, but unknowing of the human presence, which is followed by the revelation that Arthur is still alive – with which the novel concludes.

Thus, while suspending a final answer, all fragments *point to* benevolent directedness in the complex unseen procedures in nature, implicitly manifest around them in the fairy-forest, as suggested through the Professor's purse, but in fact throughout the novels in their entirety. From the very beginning, the two worlds are firmly entwined as one: *Fay*field Junction and *Elves*ton resembling in their names the fairy-domains, and the 'eerie' influence, similarly, reverberates in the names of its protagonists – all of which refer to trees.[70] Arthur Forester, Muriel Orme, French for 'elm tree', and even the name of Muriel's cousin, Eric Lindon, alludes to the lime tree; the same connotations reverberate in

[69] Bown, *Fairies*, p.3.
[70] Carroll took walks in a woodland called 'Fairyland' in Surrey with his friend Arthur Hughes who illustrated *Phantastes* (1858); in 'Bruno's Revenge' the fairy-vision arises from the influence of the real-world environment of the forest (cf. *Diaries VI*, p.225; *Diaries VII*, p.117).

the fairy names Bruno, the colour 'brown', and Sylvie, from Latin *sylva*, 'forest'. All embody and point towards the connection of events through time and space via a moral, natural law regulating that 'infinite sequence of all that is ever will be', which, Carroll, as opposed to Huxley, believes to be benevolent.

This, in the end, finds Carroll and Huxley on different sides of the same, temporary conclusion to which they are bound by their faith and agnosticism respectively. In the absence of 'evidence', both suspend the *final* conclusion – a proof would assert nothing more or less than the existence of God or a greater will, or the non-existence of such a concept. And as Charles Kingsley's narrator had, in his scientific fairy-tale *The Water-Babies* commented, 'wise men' as 'Professor Huxley', would not say anything is 'contrary to nature' just because it cannot be seen; and by the same logic they also cannot assert its existence from the same lack of evidence.[71] While, to Kingsley, there *was* a region of firmly *unknowable* truth which neither requires evidence, nor allows final proof; to Carroll, this was a *temporary* condition. As that 'nerve-force in the brain' that interested him, brought up again in the novel, 'would probably be traceable, *if Science were complete*', the same is the case with everything, even divine truth (*SB*, 390 [my emphasis]). But, while for want of that 'complete science', the novel cannot have a finite ending, but closes, with the hopeful 'aye, look Eastward' – hopeful in anticipation of the day science is complete and the miraculous to which Carroll dedicated his life can no longer be doubted, or obscured – it models, and encourages with the optimistic boldness of faith, a novel approach to this aim (*SB*, 395).

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[71] Charles Kingsley, *The Water-Babies: A Fairy Tale for a Land-Baby,* ed. by Brian Alderson (Oxford: Oxford University Press, 2013), pp.38-9; Huxley, 'Automata', pp.577;578.

'I thought I saw an elephant' and found 'the bitterness of life'

As Carroll's contemporary critics and modern scholars, such as Deleuze, Gubar and Cohen, have continued to refer to *Sylvie and Bruno*'s morbid visions as 'dreams', or 'Freudian dreams', and thus continued to compare it to *Alice*, finding little but their difference, a re-assertion of the author's point, that they are *not* is, crucial.[72] They do not anticipate to share the conclusive nature of his earlier literary dreams, as Carroll's final work underlines. A thought-experiment, the in-progress, fluid nature of its character, must be fluid to find consensus in the confusions of the *fin de siècle*, providing flexibility for stringing up ever more fragmental incomplete theories, and constant reflection upon them. For Morton Cohen, *Sylvie and Bruno* 'illustrates the state of Charles Dodgson's mind, with its logical conviction that life is purposeful, that God and eternity are real', raising the question whether containing this notion in one text might have been too great a task.[73] It certainly created a point at which reader expectation and author intentions have continued to clash.

While, in its never-unfinished aim, the novel, however, cannot be contained, Cohen concludes from this provisional nature, and by the confusion it caused readers, that Carroll had *lost* the ability to 'involve a reader in a problem', to 'walk a young mind slowly and carefully through the puzzle' -anticipating he would do so to its conclusion – which is ultimately suspended.[74] The clarity of the novels' self-reflexivity undoubtedly groans under the weight of unexplained scientific and theological references, which, especially to modern readers, are entirely obscure. An additional challenge is posed by the hybridity of the work: not strictly literary, the work constantly escapes the reader's grasp, appearing in

[72] Gubar, 'Wonderland', p.379.
[73] Cohen, *Lewis Carroll*, p.455.
[74] Cohen, *Lewis Carroll*, p.449.

the shape of a novel, but considering it as such, it turns into a nonsense fairy-tale, then into a scientific treatise enhanced by philosophical discourses seeming like religious tracts or sanitary reform lectures.

It resembles, in these points, its central poem, the 'Mad Gardener's Song', which inconclusively reiterates variations of its first stanza throughout the novels:

> "He thought he saw an Elephant
> That practised on a fife:
> He looked again, and found it was
> A letter from his wife.
> 'At length I realise,' he said,
> 'The bitterness of Life!'" (*SB*, 65)

Gilles Deleuze highlights how the song in fact encapsulates the liminal, self-referential nature of the tale itself, asking: 'Is it the song that determines the events, or events that determine the song?'[75] The meaning of *Sylvie and Bruno* is encapsulated in its constituent fragments, as the work shares with the poem its shapeshifting nature and also its syllogistic structure producing insight, which is, however, always immediately suspended through nonsensical ridicule transforming them into a riddle, spiralling the *Sylvie and Bruno* into a maelstrom of self-reflexivity. Through the narrator's own seemingly endless revisiting, of seemingly endlessly fragments of thought, readers are encouraged to likewise gain insight through repeated and ongoing meditation upon such fragments in new contexts. In the novels, however, the important contributions made upon psychological questions, as well as the act of engaging its readers in rethinking, to overhaul what we consider psychological data, however, thus run the risk of being swallowed up in this maelstrom of fragments of that encrusted mirror of Victorian thought.

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[75] Gilles Deleuze, 'Lewis Carroll', *Essays Critical and Clinical,* transl. by Daniel W. Smith and Michael A. Greco (London: Verso, 1998), p.22.

2.3. A reflection in a mind-mirror: *Lilith* and the 'experimental physics of the mind'

The Kingdom of Self is the Fall of Man, or the great Apostasy from the Life of God in the Soul; and everyone wherever he be, that liveth unto Self, is still under the Fall and great Apostasy from God. The Kingdom of Christ is the Spirit and Power of God dwelling and manifesting itself in the Birth of a new inward Man; and no one is a Member of this Kingdom, but so far as a true Birth of the Spirit is brought forth in him. These two Kingdoms take in all Mankind, he that is not of one, is certainly in the other; Dying to one is Living to the other.
William Law, *The Spirit of Prayer*[1]

Satan: Farewel happy Fields | Where Joy for ever dwells: Hail horrours, hail | Infernal world, and thou profoundest Hell | Receive thy new Possessor: One who brings | A mind not to be chang'd by Place or Time. The mind is its own place, and in it self | Can make a Heav'n of Hell, a Hell of Heav'n. [...] Which way I flie is Hell; my self am Hell.
John Milton, *Paradise Lost*[2]

Like *Sylvie and Bruno,* George MacDonald's final novel, *Lilith* (1895), was a work of epic magnitude which confused and polarised its readers. The novel's admirers, such C.S. Lewis, called it the hallmark of 'mythopoeisis', and Greville MacDonald, perhaps the novel's greatest advocate, believed *Lilith* to be the manifestation of the psychological 'palimpsest of the brain' of his father.[3] This is echoed in the words of those critics who understood this magnitude in less universal and more biographical terms as the 'rare undertaking' of a 'final and composite and definite expression', a 'kind of "final testament"' of MacDonald's 'Christian view of Higher Reality', and, in this sense, a 'masterpiece'.[4] Others, however, have pointed out the perhaps inevitable difficulty of such an endeavour. John Docherty finds the resulting richness of the work's theological content prevented readers from finding 'truth' through 'impenetrable barriers', ironically posed 'mostly in the form of biblical text', which meant that the 'thread of a didactic and spiritual path' was 'floundering in a morass'.[5] Not even numerous guides to the innumerable

[1] William Law, *The Spirit of Prayer; or: The Soul Rising out of the Vanity of Time, into the Riches of Eternity* (Providence: J. Miller, 1823), p.71.
[2] John Milton, *Paradise Lost* (London: Penguin, 2000), I.249-55; IV.75.
[3] Lewis, *Anthology*, p.1; Greville MacDonald, *Reminiscences*, p.322.
[4] Greville MacDonald, *MacDonald and his Wife*, p.56; Lewis, *Anthology*, p.3; Docherty, *Friendship*, p.365; Hein, 'Dimensions', p.71; Raeper, *MacDonald*, p.364.
[5] Docherty, *Friendship*, p.366.

biblical and apocryphal references in *Lilith* have brought significant clarity as to *Lilith*'s ultimate meaning and purpose: it has, overall, become understood as a 'challenging, even an irritating work'. It was, as Tom Shippey notes, further complicated by its 'unheroic' hero and 'endless ending', which Shippey pitches against MacDonald's earlier works' ultimately virtuous protagonists whose teleological plots follow an accordingly linear developmental trajectory.[6]

As with MacDonald's first novel, biblical approaches have dominated twentieth-century scholarship of *Lilith*, but remained similarly frustrated. However, unlike in the contemporary reception of *Phantastes*, prominent contemporary responses to *Lilith* pointed towards a fertile, but unpursued, approach for understanding this *magnum opus* in its science. In a never-discussed letter of the young H.G. Wells, for instance, the author enthusiastically wrote of his 'exceptional interest' in *Lilith*, and how he considered its scientific framework 'neat in the extreme'.[7] His later review of the novel reveals that he regretted that science had not played an *even* greater role and that 'Dr MacDonald wastes to a large extent his' – until then – 'unique opportunity of a realistic' – meaning scientifically-founded – 'wonderland'.[8] Writing in 1932, Greville himself attributes to *Lilith*'s scientific content that it 'should find renewed interest to-day when the most advanced scientific minds give heart to idealists', as a compass for progress.[9]

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[6] Shippey, 'Liminality', p.19; These include Greville MacDonald's own preface in the 1924 centenary edition of *Lilith* and John Docherty's annotated versions of it (*George MacDonald Society*, 1997; 2003), Dale Nelson's 'Notes and Questions' (*George MacDonald Society*, 1997) and Tim Martin's 'Checklist of Biblical Allusions in *Lilith*' (*North-Wind*, 1995).
[7] H.G. Wells in Greville MacDonald, *Reminiscences*, p.323; The whereabouts of this letter (cf. Appendix II) are unknown, and its reproduction in Greville's book is the only known version. When Greville asked Wells for permission to reproduce it, Wells indicated 'how very pleased he was to be associated with my father's memory' (*Reminiscences*, p.323). Despite one reference to it in Raeper's biography, it has, like most of MacDonald's scientific preoccupations, not received much attention.
[8] H.G. Wells, 'George MacDonald', in *H.G. Wells's Literary Criticism*, ed. by Robert Philmus and Patrick Parrinder (Harvester: Wheatsheaf, 1980), p.233.
[9] Greville MacDonald, *Reminiscences*, p.323.

Science emerges as the backbone of *Lilith* in the wealth of scientific material found in the eight manuscript drafts but omitted from the final version, which indicate that some of *Lilith*'s incompletenesses may not in fact be as *intentionally* 'incommensurable', as Docherty suggests.[10] The manuscripts instead give insight to the developing thought of the writer – a process similar to Carroll's 'making sense' of accumulated memory fragments in *Sylvie and Bruno*. While the documentation is, in Carroll's case, lost, in MacDonald's case it has not yet been the subject of critical study. Yet it evidences further his life-long study of, and contribution to, the sciences that provide the key to reconstructing *Lilith*'s aims and meaning. This context, that becomes particularly evident in the manuscripts, also clarifies not only hitherto obscure imagery, but also reveals how contemporary science was the foundation for the creation of a previously unacknowledged complex mythology of an imaginary world underlying and connecting MacDonald's works. Foregrounding the novel's significance in the light of C.S. Lewis's claim of its 'mythopoeia' – its making of a modern myth – this material opens up a new perspective upon the magnitude and complexity of MacDonald's impact on modern Fantasy. It, further, substantiates MacDonald's role in scientific innovation, which had been only gestured at, at times hagiographically. Greville, for instance, had called *Lilith*'s physics-based psychology 'prophetic' of 'x-ray'; his brother Ronald named it a 'psychological approach' with 'authority': a precursor to Jung's mythology-based psychoanalysis, and Freud's model of the id, superego and ego.[11] Although a causal link between MacDonald and Freud is questionable, *Lilith*'s psychology was evidently perceived as acutely contemporary. *Lilith* is a novel about fundamentally scientific questions, and the vision experienced in it is a

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[10] John Docherty, 'A paraphrase of the first draft by MacDonald's son Greville', *The George MacDonald Society* <http://www.george-macdonald.com/articles/lilith_docherty.html> [Last Accessed 01 Nov 2018]; Although comparative studies of the MSS exist, such as Rolland Hein's transcribed editions and an accompanying article (*North-Wind*, 1997), upon which other comparative studies are based, these, crucially, omit many of the substantial deletions, and thus a large amount of contextual references.
[11] Greville MacDonald, *Reminiscences*, p.324; Ronald MacDonald, *Northern Window*, pp.62;92.

metaphysical argument about modes of scientific enquiry in an age in which the unrest arising from 'incomplete science', in which MacDonald asserts, like James, 'man must keep asking', posed a global threat.[12] While *Lilith* has so far not been examined as a model for Wells's, and other Science Fiction, considering it as such, *and* as scientifically innovative, challenges existing definitions of Fantasy as skirting the 'scientifically possible', ultimately posing the question as to *Lilith*'s role as a milestone in the bifurcation of the two, soon-to-be-considered as distinct genres in literary history of the fantastic.[13]

'The palimpsest of the brain': Relocating a lost protagonist and his lost plot[14]

Lilith seems at once akin to and yet unique among MacDonald's novels. On the one hand, it revisits the same type of protagonist with whom he started his oeuvre, who is exposed to a psychological intervention – in Anodos's case the White Lady, a spectre for *Lilith*'*s* Mr Vane. Like *Phantastes*, the majority of the novel narrates the vision of a science graduate, who has returned home from his studies: a vision in which Vane journeys through a psychological landscape negotiating whether to follow the guidance of a Raven or the temptation of the demonic Lilith and the principles they embody. Unlike Anodos's dream, but similar to the visions of *Sylvie and Bruno,* Vane's vision is fractured by MacDonald negotiating through it forty years of scientific progress, science teaching, and science's application to society which he had witnessed since writing his first novel. In particular the way in which MacDonald's portrayal of the application of science to society and its link to science teaching had evolved since *Phantastes*, puts *Lilith* and its more socio-psychological focus into a different light in which it has not yet been extensively considered – as had been the case with *Sylvie and Bruno*.

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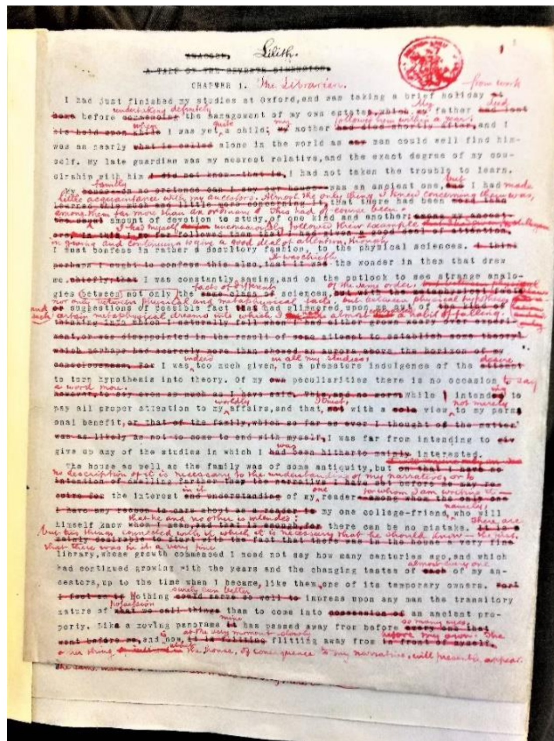
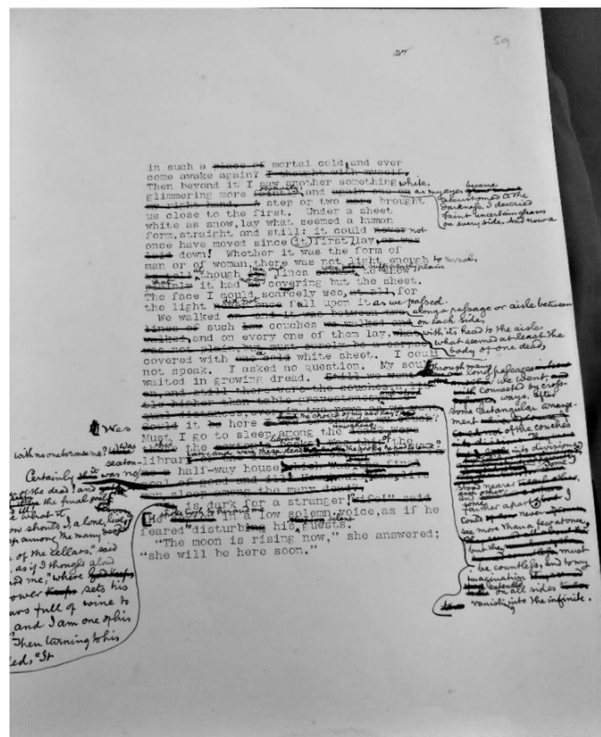
[12] James, *Principles*, p.vii.
[13] James and Mendlesohn, 'Introduction', p.1.
[14] George MacDonald, *Lilith B*, The British Library, London, MSS 46187 B, p.2; The *Lilith* manuscripts run in consecutive order from Add MS 46187 A-H and will be referred to by their conventional titles as *Lilith A-H,* in contrast to *Lilith* denoting the published work.

This shifted focus was not the result of a simple rewriting, but rather one repeated act of writing *over*, like a palimpsest, an existing narrative into 'a strange new figurative entity, invested with the stature of the substantive'.[15] This is evident in *Lilith*'s many, palimpsestic manuscripts, whose analysis thus becomes a similar process of psychological archaeology, of negotiating memories, tracing the development of thoughts and actions from them, in turn transformed into memories, as that Anodos had engaged in. The manuscripts reveal MacDonald's struggle to reshape a narrative he had once devised to solve the problems arising from a mind confronted with the epistemological and practical challenges arising from modernity. And thus, *Lilith* and its manuscripts crucially map the developments in science and society that had shaped, in Vane, a protagonist who re-emerges from this revised narrative not, like Anodos, a hero, but an antihero.





Figs.26,27: MSS *Lilith B* and *Lilith D*

Lilith's already challenging complexity seems, at first, enhanced by the manuscripts, which differ significantly from the published novel. From *Lilith A*, a straightforward quest

[15] Sarah Dillon, *The Palimpsest: Literature, Criticism, Theory* (London and New York: Continuum, 2007), p.1.

narrative comparable to *Phantastes*, to *Lilith H*, the cryptic masterpiece of which critics have struggled to make sense, some in-between manuscripts are nearly double the length of the final product, differing, in parts, substantially even from one another. The opening chapter, for instance, varies between sixteen and one pages in length between the first and the final incarnation of the text. Each of the heavily annotated drafts (Figs.26;27) contains significant amounts of respectively unique deleted material, especially of scientific, biographical and intertextual nature. As the significantly reduced narrative frame poses the greatest difference between *Lilith* and its manuscripts, and simultaneously the greatest obstacle to understanding its fantastic visions, considering the numerous originally-mentioned details of the protagonist's life, mind and scientific education, and scientific theories such as MacDonald had in other writings only hesitantly indicated, facilitates a much clearer picture of what is at stake in the visions that spring from Vane's mind. In considering them as palimpsests, they further illuminate *Lilith*'s place in MacDonald's works, and through it, that which it occupied in *fin de siècle* and fantastic literature.

The intertextuality of the drafts first of all integrates *Lilith* and its protagonist, in perhaps unexpected ways, into MacDonald's oeuvre. The opening is thus uncannily like, and unlike, that of *Phantastes*. Like Anodos, Mr Vane is an adolescent protagonist who has returned to the family home to 'assum[e] definitely the management of the estate'.[16] Like Anodos, he too is orphaned: his 'father had died long ago'; he also lacks a sense of belonging as he 'had made little acquaintance with the history of [his] ancestors'. Vane also shares Anodos's scientific mindset, but MacDonald is more specific. Vane had 'just finished [his] studies at Oxford' where he had 'devoted a good deal of [his] time' to 'the physical sciences' – making him unique among the author's otherwise consistently Scottish graduates. Anodos's initial desire for the purely material gains of scientific

[16] George MacDonald, *Lilith: A Romance* (New York: Dodd, 1895), p.1.

learning is echoed in Vane's self-confessed 'premature indulgence of the impulse to turn hypothesis into theory', indicating that MacDonald will revisit the questions of how to study science and to what ends in the journey upon which Vane too embarks when he encounters a supernatural appearance (1).

But it is equally evident that the direction of the plot shifts with its intellectual basis, so that Anodos's and Vane's paths diverge with the appearance of the spectre. When Vane sits reading on 'the evening of a gloomy day of August' on the ground-floor library of the family estate, the spectre appears, not in the dark, but when bright, red sunlight shines into the room to illuminate a portrait 'wonderfully', in an in-between state, symbolically between day and night. Next, with his 'eyes full of the light reflected from it', he 'saw, or *seemed to see*, a tall figure reaching up a hand to a bookshelf' (1;3; my emphasis). The vision externalises the thought processes of Vane's reaction. Rationalising the spectre, he analyses the optical factors of the physical layout of the scene, as if an experiment:

> I was sitting in my usual place, my back to one of the windows, reading. It had rained the greater part of the morning and afternoon, but just as the sun was setting […], and shone into the room. I […] looked out of the window. In the centre of the great lawn the feathering top of the fountain column was filled with his red glory. I turned to resume my seat, when my eye was caught by the same glory […]. (3)

Thus, the vision, notably, not rooted in the fantastic imagination, but in the scientific, rational waking mind, and the set-up of the scene is the same as that of the room in which MacDonald had written *Lilith*, with its library, and the turmoil knowledge gained from it may have caused him (Fig.28). This, the vision will later show, is crucial, as Vane remains eventually unable to leave this library, symbolic for him of being unable to make any progress in solving the problems that arise from its contents.[17]

[17] Details of MacDonald's writing rooms had appeared in his novels previously. When William Morris bought his Hammersmith house from MacDonald, he notes, the ceiling of its study was painted azure with gilded stars, like the nursery of Princess Irene in *The Princess and The Goblin*. Optical 'philosophical toys', such as a glass orb as in *Phantastes*, can be seen on MacDonald's Bordighera desk.

Fig.28: George MacDonald in his study in Bordighera

Through the spectre *Lilith* visualises, as Carroll's fairies had done, a dimension of environmental psychological influence, in this case that of Vane's science learning, upon his mind, unlike the revelation solely projected from the internal world in *Phantastes*, thus reflecting the same shift towards a framework based on evolutionary psychology. But the interaction with the spectre also shows a different scientific mindset, reflective of *fin-de-siècle* developments. Unlike Anodos, Vane does not interact with the apparition. As opposed to Revelation-like wonder depicted in *Phantastes*, Vane takes reassurance from the scientific character of the phenomenon, which seems to him confirmed when, due to its dependence upon light and refraction, the situation is 'rectified' in 'the next instant' by the sudden 'comparative dusk'. The illusion of the animated portrait and the spectre disappear; and any 'ocular spectra', illusions caused by an 'after-image', which Smajic points out were popular with Victorians as a scientific pastime, seem to be ruled out.[18] Anodos's curiosity and awe are replaced entirely with Vane's rational conclusion that his 'optic nerves had been momentarily affected from within', and that he thus 'saw no one' (3). Vane, consequently, remains unmoved also when the phenomenon recurs, its repetition only proved its scientific character; it indeed recurs in identical circumstances when Vane is, again, absorbed in reading a 'book on optics' at dawn. It is only another recurrence in which the spectre acquired greater detail that unsettles Vane and reveals how his scientific mind is neither sound nor as certain as it initially seems. It was 'not without uneasiness', that 'I had a recurrence of my former illusion'; and 'naturally' he now '*could not help feeling* a little nervous' (5; my emphasis). The loss of Vane's scientific certainty is reflected in a drastic and sudden shift of narrative mode. The narrator's focus first breaks away from the material and is directed towards the immaterial:

> Coming to a point which demanded *reflection*, I lowered the book and *let my eyes go wandering*. The same moment I *saw* the back of a slender old man, in a long,

[18] Smajic, *Ghost-Seers*, p.26.

> dark coat, shiny as from much wear, in the act of disappearing through the masked door into the closet beyond. (5; my emphasis)

What had at first appeared as a scientifically justifiable peculiarity of multiple optical refraction rapidly unravels into a supernatural threat. Vane's certainty is fractured, and with it the realist frame. Actions now occur in the passive voice, rather than being directed by the protagonist's will. He is no longer sure whether he 'saw' or 'seemed to see'; whether he turned himself or whether 'something, I cannot tell what, *made me turn* and cast a glance', an inanimate painting begins to 'respond to my look' (3; my emphasis).

'Bewildered', Vane jettisons the scientific method, and resorts to a method for which MacDonald had reserved extraordinary disdain: the 'platitudes and weary vulgarities of what they call SPIRITUALISM' the 'most killing poison to the imagination'.[19] In the fashion of Gothic supernaturalism he seeks anecdotal, rather than empirical, evidence from his servants. These are certain the apparition was, in fact, a former master's librarian, Mr. Raven, haunting the house. That master had maintained an interest in 'strange, forbidden, and evil books,' and his librarian 'Mr. Raven, who was probably the devil himself, encouraged him' (8). MacDonald once more evokes the image of Faust's contract with the devil in his study: the 'black stockings' and 'slipper-like shoes' of the phantom were traditionally the stage-dress of Mephistopheles (6;8).[20] With Vane's agency and Free Will undermined, supernatural possibility floods into the void of scientific unaccountability, MacDonald thus judging the *fin-de-siècle* resurgence of spiritualism far more harshly than Carroll, not as potentially interesting, but as dangerous offspring of misguided scientific study. As the imagination was *the* agent for scientific problem-solving to MacDonald,

[19] MacDonald, *Castle Warlock*, p.94.
[20] Black stockings and slipper-like shoes are often used for stage-portrayals of Mephistopheles, or the devil, as for instance by Henry Irving in Fig.16. Carroll mentions the MacDonald family saw *Faust* starring Irving and Ellen Terry on stage; the MacDonald daughters were lifelong friends of the Terry family; Lilia MacDonald was an amateur actress (cf. Kate Terry to Lilia MacDonald, 24 May 1880, Gen. MSS.103 Box 2f. 097, Beinecke Library, Yale University).

Vane's accepting an *untrue* explanation over actual knowledge ('scientia') so as to not risk *his own* agency and control, without hesitation, posed a danger equivalent to Faust's pact with the devil.

A comparison to Anodos, and the references to Vane's *fin-de-siècle* environment highlight that Vane is a modernised MacDonald protagonist. However, the shaping of Vane's flawed character, evident only from the manuscript deletions, further reveals an intellectual pedigree that specifies the character of Vane's 'mental peculiarity', shedding light also on his relation to Anodos and speculations whether *Lilith* was meant as a sequel to *Phantastes*. While Vane's family history is almost entirely absent from the final novel, which only identifies the 'gentleman' in the portrait as 'old Sir Up'ard', 'an' ancestor of Vane's grandfather, the manuscripts also list the vanished father 'Mr Vane', a 'Sir Cosmo', an ancestor of 'hundreds of years' ago, and more recently 'Sir Upward' and 'Sir Ralph': 'my grand-father' (57).[21] *All* these names belong to protagonists of earlier MacDonald works. Extensive cross-novel family relations are, in fact, not uncommon in them: references to, or re-appearances of protagonists are common across MacDonald's realist novels, but in his fantastic novels an equivalent phenomenon has only been established through his 'great-grandmother' figures, whose 'consistent occurrence' is among their most-discussed features.[22] In *Phantastes*, for instance, the white-clad beautiful phantom lady identifies herself as Anodos's 'two hundred and thirty-seven years old' great-grandmother'; in the *Princess and the Goblin*, Princess Irene encounters a nearly identical 'great-great-grandmother' also called Irene, who is her 'father's mother's father's

[21] *Lilith D*, pp.6-7.
[22] Cf. Katherine Bubel, 'Knowing God "Other-wise": The Wise Old Woman Archetype in George MacDonald's *The Princess and the Goblin, The Princess and Curdie* and "The Golden Key"', *North Wind: A Journal of George MacDonald Studies*, 25 (2006); Maria Gonzalez Davies, 'A Spiritual Presence in Fairyland: The Great-Great-Grandmother in the *Princess* Books', *North Wind: A Journal of George MacDonald Studies*, 12 (1993); Deirdre Hayward, 'The Mystical Sophia: More on the Great Grandmother in the *Princess* Books', *North Wind: A Journal of George MacDonald Studies*, 13 (1994).

mother'.[23] Equivalent figures appear in *At the Back of the North-Wind* and 'The Golden Key'. The great-grandmothers establish a familial link, but belonging to the paternal line, they also connect the protagonist to a spiritual dimension and their place within creation by leading eventually to God-the-Father.

MacDonald's fictional great-grandfathers however thus *only* appear through *Lilith*'s manuscripts as the first indicator of the mythopoetic nature of all of MacDonald's novels as fragments of one, interlinked fictional realm through which he refracts his experiences with science and society throughout his life. They fulfil a consistent parallel function to the grand-mothers, situating the protagonist in an intellectual, rather than a spiritual, lineage: two poles which, as *Phantastes* had shown, must be synthesised. Vane's grandfather Ralph also appears as Anodos's 'Uncle Ralph' in *Phantastes* and as Ralph Rinckelman in MacDonald's fairy-tale 'The Shadows' and is consistently portrayed as unimaginative. Rinckelman experiences the metaphysical dimension merely as the side-effect of a passing illness, not as a reality, and in *Lilith* 'Old Sir Ralph believed in nothing he could not see or lay hold of' (6). Vane's father, as the spectre later informs him, likewise, 'did not care about my acquaintance' (49). By contrast, 'Sir Cosmo', the character Anodos *becomes* when reading in the library of his mind, appears in *Castle Warlock* as intuitively in touch with the spiritual dimension, which 'grinding men' were never to find, as they did not read 'poetry'.[24] Vane is a hero of his time: a restless mind, unfulfilled by science, but unable to pursue alternative avenues, which, as his lineage reveals, has been offered to his ancestors, who have witnessed, and not learned – a tradition he continues.

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[23] MacDonald, *Phantastes,* p.45; MacDonald, *The Princess and the Goblin* (London: Blackie and Son, 1911), p.25.
[24] MacDonald, *Castle Warlock*, p.318.

This initial routing of Vane in a tradition of unwillingness and indifference to learn is crucial for the developmental trajectory of the novel, or rather the reason for its frustrating lack thereof. While sharing the ancestry of Sir Cosmo and Sir Upward – a direct translation of the name Anodos, who takes the title 'Sir Anodos' in his dream-within-a-dream – Vane descends from the lineage of Ralph and is a cousin of Anodos. Their different philosophical family lines represent a bifurcation in attitudes to science. As a *fin-de-siècle* hero, Vane is not merely 'un-heroic', but situated in the lineage of MacDonald's villains, like *David Elginbrod*'s Count von Funkelstein, a 'false' scientist and carefully devised as an anti-hero: a fact never explicit in the final novel, but crucial to its ending. This thought was so central in the devising of the novel that it is reflected in *Lilith*'s rarely-noted original title: 'Anacosm' (Fig.26).[25] Mirroring the name Anodos, but replacing the word-stem with the name of Cosmo, deriving from cosmos ('κόσμος'), 'order' – the whole that all was once part of, it is the tradition of the other family to which Vane must aspire: an aim from which, as the reconstructed frame reveals, he is further removed than any of his ancestors.[26]

Collating prior iterations of Vane's character projects a distinctly more sinister narrative than the final novel's frame would indicate. The diachronic framework of evolutionary psychology also gives the implications of *Lilith* more global significance, as Vane's character arises substantially from inherited factors and the long-term effects of misguided scientific education. This is embodied symbolically in the library. As opposed to other MacDonald protagonists such as Cosmo, Vane did not have to *acquire* access to a library by striving for it, but lives in one he inherited. In the drafts, Vane's family 'was of some antiquity', and possessed 'more than an ordinary amount of devotion to study': their

[25] MacDonald, *Phantastes*, p.130.
[26] *Lilith B*, p.1.

library was a 'moving panorama' of the history of science and the 'transitory nature' of knowledge.[27] Vane is however not even like *Castle Warlock*'s 'grinding men', but only studied after a 'desultory fashion', and only because, he suspects, he was 'unconsciously' following his family's example'.[28] Vane had inherited access to scientific knowledge and an attitude of never going beyond it: in the entire novel Vane never physically leaves his house, which, as in previous MacDonald novels, symbolises the body. He thus stands utterly in contrast to MacDonald's scientific ideals of an inward and outward looking science communing with the imagination, altruistically applied to the improvement of society.

The way in which Vane embodies the *fin-de-siècle* mind in comparison to the scientific ideals expressed in MacDonald's fiction, makes him the antithesis of progress. He himself, in this mindset, cannot comprehend scientific progress: although he had 'learned a good deal of what people at the time called science', his library containing the works of 'old science and new' – 'the two Roger Bacons [sic.]', 'Huxley and Maxwell', and as MacDonald later adds, 'Darwin' – Vane is exasperated that 'they were always changing the thing they gave the name to, but never changing the name'.[29] He cannot comprehend the process of scientific discovery: he grows 'weary over experiment', 'disappointed in the result of *some* attempt to establish *some* theory, which perhaps had scarcely shown more than an aurora on the horizon of my consciousness'.[30] His desire for knowledge is not rooted in nature. Knowledge is a commodity as Vane confuses the ends of science with its

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[27] *Lilith B*, p.1.
[28] *Lilith B*, p.1; Such as *Castle Warlock*'s Cosmo, *The Portent*'s Duncan, or the eponymous protagonists of *Thomas Wingfold: Curate* (1876), *Robert Falconer*, *David Elginbrod,* and, eventually, *Phantastes*'s Anodos.
[29] *Lilith B*, p.2; MacDonals, presumably in error, changes 'Roger Bacon and he of Verulem' to 'the Two Roger Bacons', which eventually became 'the two Bacons', referring to Francis and Roger; *Lilith A*, p.4; MacDonald leaves gaps for additions to a list he alters throughout the drafts; MacDonald had certainly read Darwin – the earliest note to that effect appears in a letter from 1845 in which he mentions to his father he was reading Darwin's *Journal of Researches* [*Voyage of the Beagle*] which had been republished in 1845 in its second edition; he references Darwin in *Thomas Wingfold* and his Natural Selection in *Malcolm* (1873).
[30] *Lilith B*, pp.1-2 [my emphasis].

means. For this reason, he, finally, cannot see science in relation to society. Vane assumes the management of an estate 'not with a *sole* view to my personal benefit', but, 'far from intending to give up any of the studies which interested *me* at the time'. [31] His neglect of those for whom he is responsible translates to his human interactions. The only reason that he had no knowledge of 'the exact degree of cousinship' between him and his only, and recently deceased, relative is that he 'had not taken the *trouble* to *learn*'. Rather than a land-owning graduate with a gentlemanly curiosity in science as which Vane manifests in the published incarnation novel, Vane was conceived as a practicing, but selfish and reckless scientist – the like of Mary Shelley's Victor Frankenstein or H.G. Wells's Griffin.[32] Thus, although Vane's reactions to the spectre, the erratic trajectory and ending of his ensuing journey appear misplaced in relation to the protagonist in its final incarnation, they are, in fact, connected to the character MacDonald originally conceived. Shippey notes that 'most hero(in)es of fantasy are not given the choice' whether they become the hero of their tales, like in Anodos's case; whereas Vane is not given a choice in whether or not to be exposed to the vision, the decision to pursue it is actively taken, and its motivation is the gaining of an 'advantage' symptomatic of an already morbid intellectual greed – that determines his becoming an antihero, rather than a hero, which is thus, a choice – a detail crucial in understanding the ensuing journey – and its ultimate failure (55).[33]

'Thoughtland': Four-dimensional optics and psychological metaphor

The ensuing visions of *Lilith* are a journey through the environmental influences of George MacDonald's take on evolutionary psychology, which is embodied through optical metaphor. To facilitate a vision, which, as Jeffrey Bilbro puts it, 'miraculously forces' the

[31] *Lilith B*, pp.1-2.
[32] *Lilith B*, p.1 [my emphasis].
[33] Shippey, 'Liminality', p.16.

protagonist to more 'accurately perceive himself', the journey begins in an allegorical house to examine the protagonist's physio-psychological constitution.[34] Having now followed the spectre *up* the stairs, Vane traces the path of the environmental influence exerted by scientific learning from his bookcases to his mind, his vision revealing what mental culture his type of study fostered. In the attic which had already in other MacDonald novels symbolised the imagination, Vane marvels at its 'wide expanse', its unfamiliarity – as it is his 'own and yet unexplored' – and its unsophisticated appearance. 'Long neglected', it resembles an 'unpainted enclosure of rough planks', has a 'dull and desolate' look, and only a 'few, rather dim sunrays' illuminate the room, shining through a 'cloud of motes' (9). Vane struggles to *see* – that is, to understand – in the dimly lit room. Lacking foresight in his scientific study, which is facilitated by the imagination, he is, like Shelley's 'modern Prometheus', much like his approach to scientific study, 'short-sighted' (10).[35] The room contains an 'awful mirror' – 'dark', 'dull', 'dusty', and 'old-fashioned' and 'rather narrow', like Vane's frame of mind (9-10). Like the 'magic mirror' that revealed Anodos's achievement of 'the mind's greatest potential' to become Cosmo in the fairy-castle, this mirror foreshadows its limitations and frustrations revealing a landscape 'desolate' and 'melancholy' that results from his narrow philosophy.[36] Thus, when the only 'beam' of light that falls through the attic window is absorbed by the mirror, the astonished Vane stumbles through it, following the knowledge-bearing light *into* the workings of his mind, to find himself on a barren heath (10).

On that side of the mirror, Vane is welcomed in the 'realm of the seven dimensions': as Greville notes, this is his father's take on the, by then, 'much-debated fourth dimension',

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[34] Jeffrey Bilbro, '"Yet more spacious Space": Higher-Dimensional Imagination from *Flatland* to *Lilith*', *North-Wind*, 28 (2009), p.2.
[35] The name Prometheus translates as 'foresight', his brother Epimetheus's name means 'hindsight'.
[36] Alison Winter, *Mesmerized: Powers of Mind in Victorian Britain* (Chicago: Chicago University Press, 1998), p.2.

which further evidences MacDonald's ongoing preoccupation with the sciences in later life (25).[37] The fourth dimension had become popularised as a future space through H.G. Wells's *Time Machine* (1895) subsequent to the publication of *Lilith*, but that 'fairyland of geometry' found wider applications in Victorian thought.[38] It had prior to Wells gained currency as 'Thoughtland', as Bilbro and Jann note, through Edwin Abbott's *Flatland* (1884): a space, opposed to the Kantian 'understanding proper and reason proper', of 'passive reception of thought' and the cognitive products of 'Intuition'.[39] In *Flatland*, this dimension facilitates 'houses, churches, your very chests and drawers, yes even your insides and stomachs' to 'lie open' to the 'view' of the lower-dimensional protagonist.[40] In the same fashion, MacDonald's fourth dimension is as introspective as his earlier dreams, making visible thought. It further, and this is where *Lilith* moves on from *Phantastes*, transcends the synchronic individual perspective, spatially and temporally, to measure individual thought and thought development against that of other – better – minds, and against natural law.

This dimension, therefore, externalises not only the faults, but the development of problems that arise from that 'mental peculiarity': Vane's flawed scientific engagement with his environment. In the overarching fourth dimension Vane can *see* the feelings and 'big thoughts' of others 'hatch', and turn 'prayer-flowers' or 'snow-white pigeon[s]' that 'float out' of the 'hearts of *those who think them*', while the heath of his own imagination remains bleak and unpopulated, as it cannot think productively (30; my emphasis). Vane is virtually unable to progress at all towards the knowledge embodied in the light towards

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[37] Greville MacDonald, *MacDonald and Wife*, p.549; *Lilith A* consistently uses the term 'fourth dimension'.
[38] Mark Blacklock, *The Emergence of the Fourth Dimension: Higher Spatial Thinking in the Fin de Siècle* (Oxford: Oxford University Press, 2018), p.13.
[39] Blacklock, *Fourth Dimension*, p.15.
[40] Bilbro, 'Space', p.1; Rosemary Jann, 'Introduction', in Edwin A. Abbott, *Flatland: A Romance of Many Dimensions* (Oxford: Oxford University Press, 2008), p.xxix; Abbott, *Flatland*, pp.86;112.

which the 'live thoughts' rise in his Thoughtland, making visible how his mind is unfit to produce the scientific progress towards the knowledge ('scientia') which he desires (62). From his individual perspective, he is alarmed that the 'material and psychical relations of *our world*', as Vane considered them to be, 'had ceased to hold', since Vane's *willing* himself to proceed does not result in progress, and he feel the 'sport of the law*less'* (11; my emphasis). As the imagination, not 'thought proper' was to MacDonald 'the product of live law' of Nature and driver of progress, this dimension is not law*less*, but shows, instead, that Vane's thinking, driven only by rationality, is at odds with this law.[41]

Vane does, however, soon realise that what he has entered was a dimension in which, whenever he was 'looking at something [he] was perusing a metaphysical argument': it is the dimension William James had asserted was necessary to overhaul scientific data, to progress science (11). The vision stages the crisis unfolding due to a lack of metaphysical imagination that inhibits Vane's mind, and that of the age and philosophy he represents, to function as naturally intended: to his own, and others', future detriment. It also enacts the metaphysical argument of the solution, which is conveyed through but *Lilith*'s Optics-based framework: a diachronic system aligning biological, psychological and physical analogies, more complex than, but building on the light-and-dark and associated imagery MacDonald had used in *Phantastes*.

That this system, which is obscured in the final novel, was originally conceived as comprehensive underlying system is illuminated by deletions from the manuscripts, as, for instance, the subsequent scene shows. When, unable to progress, Vane observes a Raven: the same Mr Raven who had initially appeared as the spectral librarian, but in this dimension shapeshifts between his human form and that of an actual Raven to reveal how

[41] George MacDonald, 'Fantastic Imagination', p.276.

the different layers of meaning are linked. In his bird-shape he pecks worms out of the heathland, tossing them 'in the air' where they also undergo a change and 'spread *great wings*' and 'soared aloft' (23). Rather than Vane leaving the scene in confusion, as in the final novel, the manuscripts expand. In his characteristically aloof manner, Vane disregards the vision's manifestation of 'live law', to instead offer a *hypocritical* correction of this, to his mind, false display of biological law. 'Tut, tut […] you mistake, Mr. Raven, worms are not the larvae of butterflies' and Vane *condescends*:

> 'You should mind what it is, if you are going to *make* fly! It seems to me far from *proper* to *make any creature forget its origin and natural history*. The result must be confusion, and the mingling of classes the most plainly distinguished! No one should be allowed to forget where he came from […] *lest he grow so proud to recognize his superiors*. Or am I wrong in presuming as I have been taught that *a man* is *superior to a bird*?'[42]

He boasts that this was 'a recognized fact in sociology – or was it zoology, or physiology, or entomology?', yet the narrator's voice fractures his own confidence, disclosing how, '*my* notions of *things* had become dreadfully mixed'.[43] The scene reveals how not only 'rationality proper' and 'live law' are at odds, but also how, representatively, *fin de siècle* epistemological systems provide conflicting interpretations. And, as Vane adds with hindsight, 'I spoke this *nonsense* without the slightest perception I was making an *idiot* of myself', the terms 'idiot' and 'nonsense' diagnose, in a Spencerian psychological system, the same unhealthy state of his psyche that had produced the fallacious conclusions Carroll had portrayed in *Sylvie and Bruno*.

The layers of meanings are implicit in the organisation of the scene's imagery and topography along a vertical axis. Prayer flowers and birds *ascend* towards the light – the metaphor of 'light-as-knowledge', through which Francis Bacon's *Novum Organum* (1620) had exerted great influence on the Enlightenment – which had already signified

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[42] *Lilith B*, p.11; *Lilith C*, p.23 [my emphasis].
[43] *Lilith C*, p.24.

knowledge in *Phantastes*.[44] The symbolic embodiments of moral and epistemological ideals located high, are thus, in *Lilith*'s semantic framework, desirable; Vane's position is unideal. Static on the ground and unable to ascend, all his descriptors of his behaviour, in fact, point downward: he condescends – coming from *above* – to reveal his hypocrisy – his 'pretence' and being '*below* distinction'.[45] The transformation of the worms is likewise organised along the same vertical axis. The Raven leads Vane on to *reflect* on the state of his mind, by enquiring about the worms' origin – to which Vane replies 'the earth' – the lower end of the vertical scale. This exchange occurs in a chapter entitled 'earth-worms' – a powerful symbol in theology, but one that had in the Victorian imagination become linked to Darwin: layers of meaning which in *Lilith* work in conjunction.

The worm that has *not yet* risen is the embodiment of the unilluminated soul Vane represents. The psychological transformation Vane must undergo, with regard to scientific study, is analogous to that of the 'live thoughts' that turn into birds, of the worms that ascend in their pursuit. The Raven explains that the books which are the source of all of Vane's learning 'are but dead bodies', his 'library nothing but a catacomb':

> I went through your books – all in *your* library anyhow – and I came out *the other side* of them. I have given up reading […] I am now a sexton […] there is not much difference. […] I *was* a librarian, and I *am* a librarian all the same now I am sexton. I *was a bookworm*, and now I do what I can *to turn such worms into psyches*.[46]

It is Vane who has abandoned *his* natural history by reducing his cognitive potential to half its naturally-intended capacity, engaging only with one part of what is intended to reach knowledge, placing him below both bird and man on this symbolic evolutionary scale. In the 'psyches', MacDonald uses the metaphor already utilised by Carroll and Gatty to

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[44] Anton M. Matysin and Dan Edelstein, 'Introduction', in *Let there be Enlightenment: The Religious and Mystical Sources of Rationality*, ed. by Anton M. Matysin and Dan Edelstein (Baltimore, MD: Johns Hopkins University Press, 2018), p.8.
[45] Cf. OED 'to condescend' and 'hypocrisy'.
[46] *Lilith C*, pp.27-8.

signify psychological, cognitive, spiritual development – an image he had himself used to signify the resurrection of the soul to God. In a letter to Ruskin after the death of Rose LaTouche, he wrote that, now, 'the Psyche is *aloft*, and her *wings broad and white* […] and the empty chrysalis, what of that?'[47] While in this letter, the metamorphosis is apparently spiritual, it corresponds with the 'great wings' of *Lilith*'s 'flying creatures' and also to the 'twain wings' which in MacDonald's essay on 'The Imagination' had lifted the mind to higher intellectual spheres, and, through it society to progress.[48]

The danger of Vane's state is thus implicit, firstly, in the theological meaning of this image: as Vane is embodied not merely, as larvae and thus not mature, but as the 'worm', the biblical devil; his way of pursuing knowledge can bring but death. This is, secondly, not only a risk to himself but the outside world, which is equally implicit through the earth-worm's significance in a Darwinian context and its popular reception. In his *Formation of Vegetable Mould Through the Action of Worms* (1881) Darwin had foregrounded the worm's capacities in shaping the earth:

> When we behold a wide, turf-covered expanse, we should remember that its smoothness […] is mainly due to all the inequalities having been slowly levelled by worms. It is a marvellous reflection that the whole of the superficial mould over any such expanse has passed, and will again pass, every few years through the bodies of worms.[49]

Darwin's 'anthropomorphic portrayal of the worm', as Blacklock highlights, lent itself to metaphoric treatment, as in in *Lilith* in which it however encapsulates the dangers of Vane's position of power in shaping society.[50] This comparison is, however, founded in psychology. With the 'vast expanse' of his mind, MacDonald makes Vane use the exact same phrasing as Darwin's when he for the first time beholds the 'wide expanse' of the

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[47] George MacDonald to John Ruskin, 30 May 1875, King's College Archive, MS MacDonald 1/1/48, p.1.
[48] MacDonald, 'The Imagination', p.26.
[49] Charles Darwin, *The Formation of Vegetable Mould, Through the Action of Worms with Observation of their Habits* (London: John Murray, 1881), p.313.
[50] Blacklock, *Fourth Dimension*, p.39.

desolated landscape of his unconscious mind. Worms plough away in it unseen, as do Carroll's fairies who embody the processes of unconscious cerebration. These were by Cobbe also compared to a librarian: the profession of the Raven, who once, had himself been a worm.

As Cobbe had compared unconscious cerebration to being 'possessed' by 'an obedient *secretary* or *librarian* whom we could order to hunt up a missing document […] while we amused ourselves with something else', which Cobbe had used to describe its problem-solving potential – whose linguistic ambiguity in the word 'secretary' explains the likeness of the raven and the writing-desk, which indeed had served as metaphor for the unconscious mind and what it can unleash in *Phantastes*.[51] Fernando Soto suggests that therein may also lie the answer to Carroll's famous riddle – 'Why is a Raven like a writing desk?' – as Mr Raven was also the 'secretary' of Vane's father.[52] Such metaphors as the hall with many doors of *Alice*, and the secretary of *Phantastes*, with their doors and drawers correspond to mid-Victorian conceptions of the static unconscious mind. The worm, however, as it digests the world external to it, and, through this process, in turn, contributes to shaping it, thus like Carroll's 'Purse of Fortunatus', embodies the continuity between inside and outside, psyche and environment, across which the Raven is an agent. MacDonald updates the introspective imagery of *Phantastes*, to incorporate modern psychological ideas and their concerns, through the fourth dimension and its associated imagery, creating in *Lilith* a both inward and outward-facing fantasy.

Apparently purely theological imagery, such as the prayer flowers and pigeons, thus gains psychological meaning and social significance; theological imagery, however, like in *Phantastes*, evaluates Vane's progress and failures, morally and in terms of natural law,

[51] Cobbe, 'Unconscious Cerebration', p.25.
[52] Fernando Soto, 'Why is a Raven like a Writing-Desk?', 5 September 2018, The Lewis Carroll Society.

which were equivalent to MacDonald. The hypocrisy inhibiting Vane's scientific progress is an example. As the fourth dimension is located beyond the mirror, the looking-glass, a symbol for the eye – the optical border between world and imagination – it references the same epistle that was crucial to *Phantastes*, as well as, more pertinently, Christ's parable of hypocrisy from the Sermon on the Mount:

> Wilt thou say to thy brother, let me pull out the mote out of thine eye; and behold, a beam is in thine own eye? Thou hypocrite, first cast out the beam out of thine own eye; and *then shalt thou see clearly* to cast out the mote out of thy brother's eye.[53]

The parallel to Corinthians' 'seeing dimly now' and 'seeing clearly then' establishes both a diachronic, as well as dynamic psychological trajectory, which lifts the lesson from a purely psychological, to a practical dimension, in which perception of the environment and cultivating the mind determine the future shape of society. As the hypocrite in Christ's parable focuses on a 'mote' in another's eye, offering to remove it, not noticing the 'beam' in his own eye, he, focusing on others' faults, overbearingly offers advice as a sign of virtue, failing to notice his own rather greater faults – like Vane towards the Raven, after Vane has followed the *beam of light* through the mirror, beyond his eye, into the mind, forced to finally 'more accurately perceive' his own flaw in a process, virtually, and psychologically, of reflection. Vane remains 'but a worm', and his mental landscape appears uncultivated. MacDonald gestures at a common theme of caricature, such Linley Sambourne's 1882 'Man is but a worm'

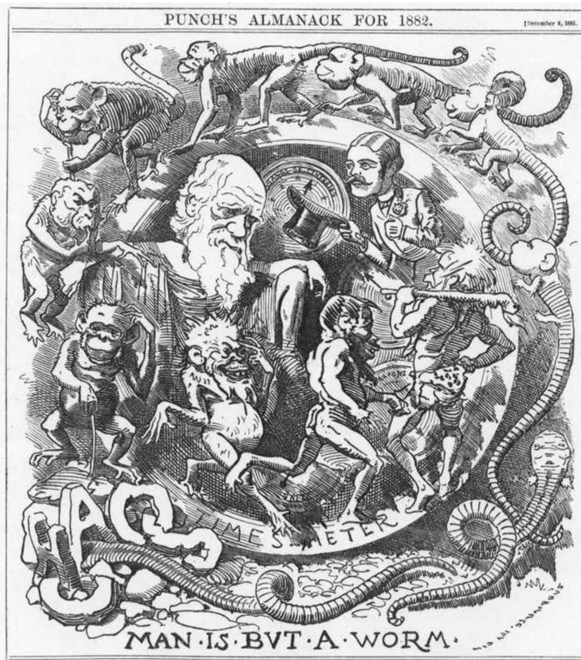

Fig.29: Linley Sambourne 'Man is but a worm'

[53] Matthew 7:4-5.

(Fig.29), in which the lowly state of the worm is located, as the caption of the caricature reads, the state of 'Chaos' – Vane, as the original title of the novel – *Anacosm* – indicated needs to strive for its opposite.

This framework illuminates the reasons for the first collapse of the vision which follows this encounter. The psyche metaphor, the Raven's language of libraries and books as catacombs and dead bodies, and indeed his own inherent symbolism of death, indicate that Vane's situation begs transformation. The sexton-librarian Raven, the mythological harbinger of death, but also purveyor of rebirth, offers Vane to 'sleep the sleep' of transformation at his 'house of sleepers'. Yet, as Vane discovers, the house is apparently a morgue. In the metaphysical dimension death signifies the annihilation of the mindset of his present self that is causing his apparent *stasis* in scientific discovery. Vane, lacking metaphysical understanding cannot grasp it as such, and refuses, exclaiming the credo of his philosophy: 'let *me* first go home […] and come again after *I* have *found* or *made*, *invented*, or at least *discovered* something' (30). While Anodos's productive dream-thought was mirrored in physical, this-worldly progress, Vane's un-productive mind is the cause of literal stasis: as he 'escapes into *known* regions' in 'terror', he returns to settle down, in his chair but also in his old ways, to read, reverting to precisely the position in which he started.[54]

In seeking escape, Vane refuses to comply with the 'life law of Nature'; this, he declares, is his right, as he is a 'free agent' whom the Raven could not *make* sleep 'against [his] will', and thus could not, as the worms, '*make* to rise'. With Vane's continuous failure to produce any type of progress by sheer will, MacDonald touches on the same question of the nature of Free Will, and the role of the unconscious in guiding actions as in *Sylvie and*

[54] *Lilith B*, p.14.

Bruno – finding, however, different answers than Carroll. The Raven explains, it is only 'when you have a will' that it is possible to act differently to the way things were predetermined – an idea, which MacDonald had expressed elsewhere: it was a false notion that 'the free will of man was only exercised in rejecting—never in accepting the truth'; truth would eventually be *given* to those searching for it, no matter 'their notion of love or justice' (24).[55] The choice Vane faces is complying with the law of nature, and progressing, or insisting on his illusion of freewill and perishing. Divine Will takes a more prominent and less negotiable place in MacDonald's philosophy.

In the treatment of Free Will in the context of societal decision-making lies the major difference between *Lilith* and *Phantastes* that determines the difficulty of *Lilith*'s plot structure. While Free Will remains an abstract concept to the protagonists of *Sylvie and Bruno* that is illustrated in a fantastic vision only to the narrator, to Vane the truth of its nature, and that he is mistaken in his beliefs, is made manifest – not only in his first sojourn into the fourth dimension but even before. Already at the start of the novel Vane has an inkling of the intellectual significance of this dimension. He saw 'suggestions' of 'strange analogies, not only between the facts of different sciences of the same order, but also between physical and metaphysical facts' and 'physical hypotheses' – which he desires – 'glimmering', from 'metaphysical dreams into which [he] was in the habit of falling' (1). Greville MacDonald had compared *Lilith* to the process of 'unconscious cerebration', a process that allowed, as he writes in *Reminiscences,* insights into 'the deeps of mind and soul', which explains why the spectre continues to haunt Vane, and haunted

[55] George MacDonald, *Robert Falconer. With Side-by-Side English-Scots*, ed. by Michael Phillips and David Jack (Azure: North Charleston, 2016), p.329; *Robert Falconer* is written in the Doric dialect ('Lowlands Scots'), spoken in MacDonald's hometown Huntly; the quoted text is David Jack's translation.

him in the first place.[56]

Vane *knows* he is acting against natural law: he knew before the first apparition the reader witnesses, and it is the protagonist himself who makes the admission. Whereas Anodos is overwhelmed by the revelation of his apparition, and the first experience of the imagination in a state of passivity, and is eventually converted by his dream-vision, Vane is unmoved by the spectre. He *has* experienced a vision revealing to him the effects of his own fallacies, yet *still* cannot accept his passive role in their discovery while continuing to desire its results. Even when he experiences fully the agency of the unconscious, and that the fourth dimension was 'the brain of the place' from which he was '*safe* nowhere', driving home to him that *he* 'knew nothing about anything in the universe' as knowledge was latent, this increased awareness only instils horror. Now noting every instance in which he acts '*without the least consciousness of volition*', in painful retrospective awareness of the fact, produces 'an *involuntary* cry'.[57] The synchronic view of Vane's Thoughtland, which constitutes the entire narrative of *Phantastes*, reflects a *fin de siècle* man putting science and self over society, one who has reached the limit of his capacities, but remains unwilling to overhaul his thinking. The more outward-facing vision of *Lilith* makes a broader point than its predecessor. *Lilith*'s vision is not the narrative of a successful conversion, it, instead, intervenes at various stages of the thought-action process to mitigate its failures.

'Polarization and mirror business': MacDonald's experimental physics of the mind

Vane's virtual stasis thus corresponds with the lack of learning, which continues, even after he discovers upon return his 'father's manuscript' which contains a report of his journey to the seven dimensions, and its discoveries. As Vane realises that he had missed

[56] Greville MacDonald, *Reminiscences*, p.320.
[57] *Lilith B*, pp.14;19;24 [my emphasis].

revelations concerning ‘the relations of mind to matter, and of senses to qualities’, he returns in haste to the fourth dimension, demanding to sleep – but is refused, as his intentions are still motivated only by gaining the ‘advantage’ of knowing another world (48). As MacDonald had asserted in *Robert Falconer* it ‘would not do’ to ‘*make* folk be good’, it ‘would not be goodness’, as it must come by self-recognition – or, as in the case of *Lilith*, self-recognition*s*.[58] The vision moves on from a synchronic revelation of his protagonist’s mind to a diachronic angle to illuminate how internal flaws inevitably develop into actions, that have a directly corresponding effect in external reality: the premise through which *Lilith* ultimately approaches the cure of the malaise of the *fin de siècle* in body, mind and society.

After his renewed failure, and having ‘lost his spiritual compass’ by rejecting the Raven as a guide, Vane wanders through the ‘projections of his own consciousness’, the state of his psyche now having taken a downturn. The previously blank slate of the heathland has turned into the nightmarish ‘Bad Burrow’: the same ‘heather’ and ‘bare spongy soil’ but plunged into the ‘dark of ignorance’, the ‘self-shadowed atmosphere of his microcosm’ (64). This depicts the same state of mind as Anodos in the ‘Church of Darkness’, and of Faust, whom Anodos emulates, after having called upon the Macrocosm who reveals him, like Vane, as a ‘worm’ who resembles ‘the spirit you comprehend, but not me’ – the spirit to which he believes himself akin.[59] Faust is disqualified as ‘mirror image of the divine’ in the same way in which Vane feels wronged by the Raven in ‘very essence of [his] individuality’, when declared to have no free will – the God-given distinguisher between beast and man – thus rendered beast-like (24).

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[58] MacDonald, *Robert Falconer*, p.329.
[59] Goethe, *Faust,* I.512-13.

As Anodos acquires his shadow, and Faust strikes a deal with Mephistopheles, Vane sinks ever deeper into his self-shadowed microcosm. It is in this state that he sees, for the first time, Lilith – from a distance. 'A woman' with 'pride at once and misery on her countenance', she is the cause and effect of Vane's temptation by the 'cold, clear and beautiful face' of 'Madam Science', and continues the line, as Björn Sundmark notes, of such 'Scientists/Witches' of MacDonald's fairy-tales, as Watho in 'The Day Boy and the Night Girl' who, as the counter-principle to the great-grandmothers, poses a risk to 'childlikeness' and imagination (66).[60]

Lilith is the opposite gravitational pull to what the Raven embodies, and signifies also and an explicitly insane, unhealthy and unnatural state: an influence of which Vane is perceptive. Wandering the Bad Burrow he repeatedly refers to himself as an 'idiot', but failing to see his own part in his condition, claims that the 'moon is affecting my brain' – still inadvertently calling himself a 'lunatic' (64).[61] Vane presents a condition commonly noted in scientific literature to express itself in nightmares. The 'melancholy reflection' in which 'intellectual' and 'deep thinkers' 'indulge', Macnish had noted, was believed to disturb the 'cerebral system', causing 'incubus' and its 'frightful accompaniments', which are the effect of Vane's worsening philosophy, but also his, as a result, deteriorating *physical*, condition.[62] Vane's agonised exclamation 'my heart was sore and in my brain was neither quest nor purpose' epitomises this interdependence of psychological and physiological, internal and external dimensions in which the false pursuit of knowledge is

[60] MacDonald, 'Sketch', p.51; Björn Sundmark, '"Travelling Beastwards": An Ecocritical Reading of George MacDonald's Fairy Tales', *North-Wind: A Journal of George MacDonald Studies*, 27 (2008), p.13.
[61] *Lilith C*, p.23; MacDonald changes the word 'fool' to 'idiot', and back into 'fool'. As evident from *At the Back of The North-Wind*, whose protagonist is called an 'idiot' in a derogatory fashion for its psychiatric connotations. As scholar of ancient Greek MacDonald was also aware of 'ἰδιώτης' as the term for 'uneducated', a person excluded from political participation in ancient Athens; 'fool' is consistent with the later softened tone.
[62] Macnish, *Philosophy of Sleep*, p.87.

the cause for a more than symbolic malaise of the heart, as they had been in *Sylvie and Bruno* – Vane has, figuratively, arrived at the heart of his problem (60).

Having identified the fault, his vision thus next shifts from the introspective experience so far corresponded with Anodos's, to projecting through this fault a diachronic, societal perspective, a narrative feature unique to *Lilith*. Vane's restrictive thinking is now externalised, when he is captured, put in shackles, and enslaved by the Giants inhabiting the Bad Burrow; called the 'Serfs' in *Lilith*, they are, more tellingly, named the 'Selfs' in the manuscripts. The destructive effects of Vane's 'mental peculiarity' are put on halt with his mind now forced into passivity. His now-passive 'hoping heart, and mind haunted by doubt', 'at length', 'longed' and grew 'athirst' for the 'inhabitants' of a higher, purer dimension – a desire entirely opposite to his selfishness – the antidote to which is presented to him in the shape of his rescuers: the 'Little Ones' (73). The Lilliputian 'Lovers' are the polar opposite of the Serfs, the Bad Giants. Born from the woods adjacent to the Eden-like orchards they inhabit – akin to the woods that embodied natural thought in *Phantastes* – they are descendants of Nature; they evoke fertility, as opposed to the darkness of the Bad Burrow and its Evil Woods. Unsurpassed in 'goodness', 'loveliness and truth and purity', they nurture Vane 'with delicious little fruits'; with his arms and legs bound by ropes, he now becomes child-like himself, 'smothered' by Nature and her offspring (91).

The Little Ones, most readily, embody the 'Childlikeness' that was the reformed mental state MacDonald's fairy-tales aimed for. Before *Lilith*, MacDonald had used the phrase 'little ones' in his sermon 'The child in the midst' with reference to the gospel of Matthew, which establishes a similar binary of ideal and unideal. Christ's assertion that, '[E]xcept ye be converted, and become as little children, ye shall not enter into the kingdom of heaven'

is juxtaposed to those who act against the childlike: ‘But whoso shall offend one of these little ones’, ‘it were better for him that a millstone were hanged about his neck, and that he were drowned in the depth of the sea’.[63] This scene, MacDonald preached, was a ‘*lesson* […] against emulation’ of a false ideal: the situation in which Vane finds himself.[64] As Sundmark notes, the fairy tale was, for MacDonald, a ‘pastoral,’ and therefore ‘natural genre’, in which this childlikeness was the natural state, which must at no point in human lifetime be superseded, but aspired to.[65]

The ‘Little Ones’, accordingly, provide the *lesson* on which ways of learning will lead to the acquisition of the ‘divine’, ‘childlike soul’ which *alone* could ‘understand truth’. This is a necessary transformation for one chasing a false idea which had been engrained into Vane’s mind by false educational hierarchies, now countered with an education conveyed by his unconscious mind.[66] As MacDonald had drawn on contemporary scientific metaphors in *Phantastes*, the scientific imagery used for his agents of the unconscious, as his use of the librarian Cobbe also indicates, is likewise updated. He thus draws on the ‘Little People’ which had been used also by fellow Scotsman Robert Louis Stevenson. Stevenson explained these little people ‘manage man’s internal theatre’, ‘do one-half of my work for me *when I am fast asleep*, and in all human likelihood do the rest for me as well *when I’m wide awake*’. They are ‘unseen *collaborators*’ kept ‘*locked away* in a back *garret*’ like Vane’s, where they ‘played upon their stage like children’ once their parents, this being reason and the waking mind, were not at home.[67] For his ‘Little People’, Stevenson drew on the ‘Brownies’ of Scottish folklore, which MacDonald had himself

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[63] Matthew 18:3;6.
[64] George MacDonald, ‘The Child in the Midst’, in *Unspoken Sermons: First Series* (London: Longman, 1887), p.2.
[65] Sundmark, ‘Beastward’, p.9.
[66] MacDonald, ‘Child in the Midst’, p.2.
[67] Robert Louis Stevenson, ‘A Chapter on Dreams’, *Scribner's Magazine* (3 January 1888), p.124 [my emphasis].

already used as device to 'open the imagination' in *Sir Gibbie* (1879). They are, external natural forces, but are also at times mischievous – a distinct difference to 'MacDonald's psychological 'fairy orders'.[68] Despite also being hidden forces, and in Vane's case suppressed, they are, for MacDonald, the essence of an inherent, original, moral goodness, which is, however, equally present externally – as the Little Ones' origin in Nature indicates.[69]

The way in which the recurrent polar opposites function on individual psychological, and projected societal narrative levels illustrates how the optical metaphor of polarisation facilitates a far more complex structural analysis of the impact of *fin de siècle* epistemological crises. As this is an element which, despite its central importance to the narrative structure, and the fascination it exerted on writers like Wells – so much so that it becomes the subject of two novels written in the same year he read *Lilith* – has never been addressed in *Lilith* scholarship, it is crucial to state its mechanics and how these are imitated in narrative structure.[70] Polarisation, firstly, was a widely popular subject, which featured frequently in demonstrations of popular science lectures, such as those by John Tyndall, William Spottiswoode or Arabella Buckley. Two crystal plates – or 'Nicol prisms' – were 'placed together in the path of a beam of light', and 'one plate turned round, the other remaining fixed, the light will gradually fade' until 'all light will have been extinguished': a process echoed in the two absolutes of light and dark in MacDonald's narrative.[71]

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[68] George MacDonald, *Sir Gibbie* (Philadelphia: MacKay, 1911), pp.102-3.
[69] Stevenson, 'Dreams', p.124; Cobbe, 'Unconscious Cerebration', p.25.
[70] Both Wells's *Time Machine* and *Invisible Man* refer to polarisation as a means for time travel and invisibility respectively; Griffin's laboratory monologues resemble strikingly those of Vane in the library.
[71] William Spottiswoode, 'The Polarisation of Light: A Lecture Delivered in the City Hall, Glasgow' (Glasgow and London: William Collins, 1878), p.5.

Vane is evidently well-read, and indeed particularly interested this subject. In *Lilith A,* Fane[72] alludes to the popular appeal of the subject, stating that ‘everybody knows something of the marvellous effects [of] such [polarized] light in revealing the structure of crystals’, adding, in *Lilith C*, ‘as well as that of organic substances’.[73] He notices the spectre of the librarian while ‘reading’ what the manuscripts specify as ‘a book upon light and its properties’, a ‘certain department of Optics’, being ‘polarized light’, Vane further discovers a ‘laboratory’, containing a small enclosure, a contraption of multiple chain-linked mirrors that reflect light into the main mirror, ‘*in appearance* an ordinary glass’, and, in the manuscripts also a wooden ‘funnel’-like contraption: a set-up which he recognises from his books as an experiment in ‘polarization’.[74]

Vane’s preoccupation with polarisation translating into it being the subject of his dream is both plausible and something upon which Vane reflects during his visions, so that the practical application of polarisation to the mind is intended and foregrounded. Besides creating two extremes, polarisation refracted light into its constituent colours by gradually filtering them. This was applied in spectral analysis to show ‘written out, [the] invisible facts of the substance of matter’ of gases and crystals as Buckley notes, and, as Spottiswoode stressed, of ‘internal structure’ and structural ‘weaknesses’ of materials.[75] When Vane identifies that polarisation is at work in the attic mirror in which he should see himself reflected, he clearly displays his own as well as a wider awareness of this function of polarisation. In *Lilith C* Vane comments ‘I knew well what a power there is in polarized light to reveal the construction of crystals *as well as that of certain organic substances*’, and in *Lilith D* the line reads: ‘*everyone now knows* something of the marvellous effects of

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[72] Only in *Lilith A* is the protagonist called Fane, not Vane.
[73] *Lilith A*, p.12; *Lilith C*, p.18.
[74] In the MSS the set-up of this laboratory, which *Lilith* only mentions in passing, spans five or more pages.
[75] Buckley, *Fairy-Land of Science*, p.29; Spottiswoode, ‘Lecture’, pp.15-6.

the powers of such [polarized] light in revealing the structure of crystals.'[76] Vane at this point highlights that this function is, by metaphorical extension, what the pursuit of the beam of the light-as-knowledge, and the visions projected through the polarised prism of the mirror do in relation to 'certain organic substances' – such as himself and his mind: they reveal his weaknesses, and project their stories like a magic lantern show.

Vane's identification of the mirror as a simultaneously narrative, scientific, and – metaphorically – psychological device, casts the entire set-up of the narrative frame into a different light. The frame acts in synchrony with this polarisation as a narrative principle, imitating from the very beginning common examples of polarisation. The 'scattering of light' due 'to the presence of small particles in the air', when a beam of light is 'allowed to pass through a room, its track becom[ing] visible by its reflexion from the motes of floating bodies […] by the dust in the air', was an effect 'established by Professor Tyndall' and occurs in the attic.[77] This effect extended to fine particles of 'water floating in the atmosphere' in 'invisible minuteness' after a rainy day, amplified by 'the sun setting' when these 'finer particles scatter […] rays from the red', such as on the day of Vane's first vision.[78] Polarisation is in *Lilith* performing what Greville MacDonald had called psychological 'x-ray', the 'light more penetrating' Bacon had sought, which he believed could make visible the workings of the intellect.[79]

As the diorama-like narrative of *Phantastes* provides a cross-section of individual thought, *Lilith*'s polarisation embraces the dynamic, externalised focus of late-Victorian psychology, to allow a future, diachronic perspective of the developments that inevitably

[76] *Lilith C*, p.18 [my emphasis]; *Lilith D*, p.12 [my emphasis].
[77] William Spottiswoode, *Polarisation of Light* (London: Macmillan, 1883), p.94; This is now called the 'Tyndall effect'.
[78] Spottiswoode, *Polarisation*, pp.94-5.
[79] Matysin and Edelstein, *Englightenment*, p.8.

spring from certain synchronic 'weaknesses'. As soon as the flawed prism of Vane's mind is thus put in the way of the light exuded from the Little Ones, its weaknesses next become apparent: their darkness that had become linked to the effect of Vane's selfish pursuit of science on his mind, contrasted against the light, of the symbolic innocence and purity, of the Little Ones' child-like imagination.

At first, and 'very soon', Vane 'loved' the childlike people 'more than [he] can tell', and has 'no desire save to spend [his] life with the Little Ones,' especially their mother-figure, Lona (81). But once freed from the Giants' shackles, returned to his agency and given the opportunity to reconcile a mind of his education with their value system, a sharp contrast becomes apparent through Vane's focus, his obsession with it. His gradgrindian questioning begs 'nothing but Facts': 'Are there more boys or girls of you now?', 'You can count them, surely!', 'How old are you?'; he also notes that 'Of time they had scarcely the idea', and that they do not physically grow beyond their childlike stature (84;91).[80] His questions mean nothing to the Little Ones, and Vane concludes they may be 'full of wisdom', but are 'empty of knowledge', and 'soon other thoughts and feelings began to influence' him (92;91). The Romantic 'inversion of the adult-child relation', reminiscent of Wordsworth's 'We are Seven' (1810), is not reconciled.[81]

MacDonald's ideal of childlikeness and the childlike mind, as well as Vane's approach to the Little Ones' education echoes elements of the *fin-de-siècle* discourse of educational psychology. The mathematical obsession he displays was a manifestation of, as Alice Jenkins notes, a widely-observed side-effect of scientific education based solely on the repetitive, rigid and mathematical processes of Victorian university education, which was believed to foster 'overactive habits of analysis', a sense of mathematics as 'the only

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[80] Charles Dickens, *Hard Times* (Oxford: Oxford University Press, 2006), p.7.
[81] Sundmark, 'Beastward', p.9.

logic', and cause of 'mental breakdowns', which could lead to permanent mental damage.[82] Sally Shuttleworth highlights that 'insanity in adulthood' was commonly 'traced to errors in upbringing', particularly to 'ill-judged schooling', which was believed to 'engender a range of mental disorders in the young'.[83] MacDonald had previously linked poor educational practices to psychological damage in *Phantastes* or *David Elginbrod*, but while public discussions debated especially the 'cultivation' of 'children's minds', MacDonald located the real danger at the start of 'college-life'.[84] An awakening into 'self-consciousness', it forced a focus on 'facts' through which the 'intellect is seized and *possessed* by a new *spirit*', 'knowledge is *pride*' and 'the *mere* consciousness of knowing is the reward of its labour'; it is clear Vane's mind has been affected in this way.[85] Jenkins elaborates that even famous naturalists felt that their university education had left them with 'a habit, a permanent feeling of dissatisfaction, or doubt, respecting all truths which are not capable of strict demonstration', leading to anxiety and depression: the same symptoms Vane displays when this method continuously fails him in explaining the world, as the Bad Burrow, a reflection of this state, showed.[86]

The greatest issue of this education is its self-absorbedness. As the light-as-knowledge is absorbed by the mirror, Vane's mind absorbs and consumes it. With him seeking to own it, and not to apply it to the benefit society or environment, Vane voids knowledge of the world of its value, making it dangerous, which is reflected in his actions after encountering the society of the Little Ones. Vane remains '[C]onvinced' that 'knowledge', as he understands it, would make these '*good* people *better*', and that, for *their own* advantage,

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[82] Alice Jenkins, 'Mathematics and mental health in early nineteenth-century England', *Journal BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 25 (2010), pp.92;94.
[83] Shuttleworth, *Mind of the Child*, p.107.
[84] MacDonald, 'Sketch', p.50.
[85] MacDonald, 'Sketch', p.45.
[86] Jenkins, 'Mathematics', pp.95-6.

'they would learn mathematics' (92). Obsessed with increasing the Little Ones' physical, rather than any other type of, growth, Vane is trapped in the mindset which MacDonald wrote was 'falsely called maturity', dominated by what Spencer called 'ornamental knowledge' – a useless type of knowledge that will not advance the human race, but rather, cause the opposite.[87] Craving but 'applause', it fostered a 'type of scholar' who 'strives to make conquests' with a 'restless craving to impress [their own] individuality on others, and in some way subordinate them'. As Vane obsessively asserts his individuality and Free Will with the Raven, he seeks to conquer and instrumentalise the Little Ones for applause, led by his desire to find, or invent something for his own benefit, as he states at the outset of his journey. But this type of knowledge was of 'little use' in utilising 'all our faculties to the greatest advantages of ourselves and others', as was, Spencer stated in his theory of evolutionary psychology, the ends of the role of science in society.[88]

Having been nourished by the thinking of the Little Ones, Vane shortly hesitates, and reconsiders: 'what seemed to me [their] *ignorance* might in truth be my own lack of insight'; were they not also 'full of wisdom'? (92). The juxtaposition of ignorance – literally not knowing – and lack of insight – not seeing – is noteworthy, as they embody MacDonald's concepts of wisdom and false science ('knowledge') making visible, challenging, and clarifying, the true meanings of common terminology. Vane ponders further: 'In seeking to improve their conditions, might I not do them harm, and only harm? To enlarge their minds after the notions of my world—might it not be to *distort* and *weaken* them?' He even considers that the Little Ones' 'fear of growth […] might be *instinctive*!', linking the childlike people to the metaphysical imagination that the Raven had made visible to him, and opposed to 'rationality proper', thus establishing the causality

[87] MacDonald, 'Sketch', p.43; Spencer, *Education*, p.62.
[88] Spencer, *Education*, p.62.

of their destruction (96; my emphasis). Spencer had warned that a young mind 'unnaturally dulled by early […] coerced attention to books', 'a passive recipient of *others'* ideas' before they 'can be *understood*' (or 'seen'), would be prevented from becoming an 'active enquirer' or 'self-instructor'.[89] Vane cannot teach knowledge, as he has not understood its meaning.

Vane's train of thought mirrors contemporary concerns, shared by MacDonald, about education 'spoil[ing] countless precious things' such as childlikeness of mind, a natural state necessary to morally guide modern science. MacDonald was not opposed to institutional education, but, as had emerged in *Phantastes* already, was committed to its reform, warning that whenever confronted with something pure, 'we must not bring the forces of our intellect *to bear on it*', but '*let it work on* that part of *us* that for its sake exists' – the imagination – as 'he who will be a man, and will not be a child […] *cannot help himself*'.[90] Despite having written numerous 'campus novels' in his earlier life, and tantalisingly choosing in Oxford a radically different institution for the protagonist of his final novel, he draws no direct connection between Vane's mental condition and his *alma mater* which, however, put Vane in a unique position among MacDonald protagonists.

Vane's degree in 'the physical sciences' had in fact been the result of an overhaul of the formerly entirely mathematics-based degrees into '*Scientiis Mathematicis et Physicis*' – as Keith Hannabus, however, notes, a largely formal, rather than a practical change (1).[91] That Vane adheres, however, to the ideals of the unreformed degree corresponds all the more strongly to his mental rejection of progress and reform. Robert Trexler further notes, that at Oxford a graduate like Vane would have more immediate proximity to the Victorian

[89] Spencer, *Education*, p.62.
[90] MacDonald, 'Fantastic Imagination', p.281.
[91] Hannabus, 'Mathematics in Victorian Oxford', p.38.

governing classes – he even speculates whether Vane may have been a deliberate hint to the Vane/de Vere dynasty at Oxford, which produced a number of Members of Parliament.[92] Trexler's is a striking argument, as the criticism of the powerful who, having studied science, applied their knowledge led by their own desire, rather than Christian ideals, resonates with a sentiment MacDonald had consistently expressed, but also a detail from the story. By pursuing his own 'advantage', rather than Christian ideals, and to alleviate social crises, Vane evidently did not follow either the ideal of his educational institution expressed in its motto – 'Dominus illuminatio mea', the Lord is my Light – as MacDonald's Vane repeatedly himself turns away from this light.[93]

Using insights gained only to *help himself*, Vane abuses his 'dangerous' position of power, under the guise of being a self-declared 'philanthropist', who is, however, not a 'lover of humans', but driver of narcissistic self-reproduction (96). The inevitably dire consequences of Vane's psychological condition for the Little Ones are foreshadowed in the first appearance of Lilith which coincides with the appearance of Lona. This setting mirrors Faust's encounter with Lilith in the nightmarish Walpurgisnacht, which the Bad Burrow resembles. Mephistopheles points Faust to her:

> This is Lilith […] Adam's first betrothed […] | Beware her gorgeous hair | the jewels only she displays | As once she's lured with them young males | not without struggle let will she let them fare'.[94]

She is the omen for the destruction of Faust's innocent lover, to whom Lona is alike. This vision is followed by another of a 'pale and beauteous child', 'the good Gretchen', with

[92] Robert Trexler, 'Mr Vane's Pilgrimage into the Land of Promise: MacDonald's "Historical Imagination" in *Lilith*', in *George MacDonald: Literary Heritage and Heirs*, ed. by Roderick McGillis (Wayne, PA: Zossima, 2008), p.53.
[93] As Georgina Edwards, archivist of Brasenose College, Oxford, which was attended by all matriculated members of the Vane family points out to me in personal correspondence, they were Eton-educated 'gentleman commoners', members of the boat club and dining societies, graduating with third- and fourth-class degrees, to subsequently becomes lawyers and members of parliament, their type certainly corresponds with Vane's 'desultory' approach to study and position of power (cf. Appendix VI).
[94] Goethe, *Faust,* I.4117-23.

‘eyes as that of the dead’, her neck adorned by a ‘red line | not wider than a knife’s edge’ foreshadowing Gretchen’s execution, echoed in Lona’s death that Vane causes.[95]

As a corrupted mind creates unnatural environments, which, in turn, exercise their further corrupting influence of the mind, compounding its corruption, Lilith emerges as the psychodynamic metaphor tracing this process. MacDonald portrays the effect of this corruption – intellectual, psycho-physiological, and reciprocally, social – according to the novel’s framework in all its dimensions, embodied in Lilith, who like the Raven, shapeshifts. When Vane comes to the ‘conclusion […]that I *must rise*, and continue my travels, in the hope of coming upon some elucidation of the fortunes and destiny of the bewitching little creatures’, he encounters Lilith again, this time more intimately (92; my emphasis). In the shape of a ‘white leech’ Lilith penetrates and preys on Vane, who notices the ‘bite’, and identifies ‘blood’ as the ‘object’ of the ‘creature’s desire’ (143). In his essay on education and psychological development, MacDonald had warned that those who projected the ‘perfection of his own being’ as ‘the summit of things’ could only perpetuate ‘life that is *no life*’, and turn men into an ‘unideal of man’, who ‘*as of a lower race*’, which ‘*will not rise*’ – forecasting once again that Vane wants, but will not ‘rise’.[96]

Biblical condemnation again reverberates in this scene. God curses Satan that ‘above all cattle, and above every beast of the field upon thy belly shalt thou go, and dust shalt thou eat all the days of thy life’.[97] Like the worm which the Raven cannot make *rise*, Vane, condemned to life that is ‘no life’ but death, remains earth-bound, as is made manifest in his tied-up body; in evolutionary terms, Vane continues to degrade himself biologically with a philosophy subtractive to human nature as he becomes thus as ‘of a lower race’. It is

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[95] Goethe, *Faust,* I.4203-5.
[96] MacDonald, ‘Sketch’, p.58 [my emphasis].
[97] Gen 3:14.

this state from which the vision now transcends the in-between dimension of environmental influences, to project their inevitable effect: a new Fall of mankind and society through the environment a mind like Vane's would inevitably create.

'The Kingdom of Self is the Fall of Man': Visions of Evolutionary Socio-Psychology[98]

Vane now enters, in Carroll's and Spencer's language, 'the story' indicated by the fragment, the flaw in the 'social atom', which MacDonald's final novel develops into Lilith's city Bulika: a dystopia, to which, despite *seeing* her real nature, Vane follows her. From ancient Greek 'boulê' ('βουλή'), 'to will, wish' or 'will, determination', Bulika, as Colin Manlove notes, 'describes the essence of Lilith, who has insisted on her absolute freedom of will since her creation'.[99] As the vision reveals in his first encounter on the journey there, Vane instinctively already *knows* the meaning of the place he is about to enter, multiplied, raised to the power of three. The mysterious woman, Mara, unambiguously warns Vane three times. She asserts Lilith's 'wicked' and 'evil' character; that she had come from Vane's world, and that her 'terrible history' is not over yet. She is a principle having penetrated the world of the imagination, an influence unnatural to it, having taken hold of it. Bulika is not only a monument to Lilith's principles, but also a forecast of what is created by the imagination under siege.

Bulika is populated by 'proud', 'self-satisfied people', 'never doubting themselves'. A single, solitary footnote on this passage reads, 'William Law'. Law was a seventeenth-century cleric and mystic, best known for his *The Spirit of Prayer*, in which he wrote 'he be, that liveth unto Self, is still under the Fall and great Apostasy from God': Bulika is this kingdom of selfishness.[100] They were, Mara adds, formerly 'simple folk', cultivating the

[98] Law, *Spirit of Prayer*, p.71.
[99] Colin Manlove, *Scotland's Forgotten Treasure: The Visionary Romances of George MacDonald* (Aberdeen: Aberdeen University Press, 2017), p.167.
[100] Law, *Spirit of Prayer*, p.71.

land, corrupted into caring only about selling 'diamonds and opals', who now 'think themselves rich, but they are, in fact, slaves' like Vane in the Bad Burrow (101). As Goethe's Lilith had lured men with her jewels, Bulika illustrates the potential fate of the Little Ones, the ones who cultivated Vane's mental landscape into a fertile one, under Vane's educational (mis)guidance.[101] Bulika's architecture is dark, featuring pillars with 'hideous bat-like creatures' which evoke the monsters of the Bad Burrow and the darkness that clung 'batlike' to the symbolic study representing the state of mind in which Anodos begins his journey. The 'young men' of the place 'reminded me not a little of the bad giants': the city populated by Vane's 'selfs' (161). An utter antithesis to the orchards of the Little Ones, all trees and vegetation having been cut down, and there being no flowing water. Bulika is a human and ecological Armageddon, immoral, unnatural, inhuman and unable to bring forth life, reproduce, and thus survive.

Critics such as Raeper have compared Bulika to such mythical places of evil as 'Babylon' stating this made it 'the opposite of everyday reality'; it, in fact, closely mirrors MacDonald's everyday reality, which is via the reconstructed frame and mental economy of Vane, the direct consequence of the philosophies he embodies, at whose receiving end he is now placed.[102] Vane, crucially, experiences the city from a poor man's perspective:

> I looked poor, and that was enough: to the citizens of Bulika […] poverty was an offence! Deformity and sickness were taxed; and no legislation of their princess was more heartily approved of than what tended to make poverty subserve wealth. (162)

Echoing in its future dimensions the predictions of Carroll's essay on vivisection, the exclusion of the poor from the city was already a reality MacDonald knew through his support of 'social reform amongst London's working-class poor' through aiding Octavia Hill's social housing efforts in poverty-stricken districts of Hammersmith in which he then

[101] Raeper, *MacDonald*, p.375.
[102] Raeper, *MacDonald*, pp.370;375.

resided.[103] The latent eugenic thinking of Bulika's citizens corresponds with the magnified 'profound socioeconomic fears of the paupers and lower classes' harboured by the 'average middle-class Victorian', which exploited evolutionary theory to construe an 'invalid and insidious distinction' to justify the 'culling of the weak' – a philosophy to which MacDonald held 'a strong personal objection' grated against his portrayal of the poor and suffering, especially with regard to children, such as Diamond in *At the Back of the North-Wind*.[104]

Although appalled by Princess Lilith's legislation, he follows her to her castle, just as Anodos had retraced real-world creation to its source at the Fairy-Castle. But as the antithesis of the Castle in *Phantastes*, at the source of his imagination Vane finds 'the brain of the princess', in which *Lilith* declares 'you have found me at last'. As the Raven had predicted he was not an individual and had no will of one's own, the sick heart of his mind *is* Lilith (191;176). When she, mirroring the Raven's suggestion, offers to restore him through a miraculous sleep, which he accepts without hesitation, the act resembles rather a 'last rite of passage'.[105] As Lilith offers no life, he is smothered by feelings of evil, a 'strange odour', the opposite of the sweet sensations evoked by the Little Ones, 'fills [his] mind'. As Smajic had characterised visions inherently as *re*visions, Vane now '*saw*

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[103] Jeffrey W. Smith, 'George MacDonald's Approach to Victorian Social Reform in *The Vicar's Daughter*', in *Rethinking George MacDonald: Contexts and contemporaries,* ed. by Christopher MacLachlan, John Patrick Pazdziora and Ginger Stelle (Glasgow: Association for Scottish Literary Studies, 2013), p.69.
[104] Geoffrey Reiter, 'Travelling Beastward: George MacDonald's *Princess* Books and Late Victorian Supernatural Degeneration Fiction', in *George MacDonald: Literary Heritage and Heirs*, ed. by Roderick McGillis (Wayne: Zossima, 2008), p.217; Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton, 1981), p.14; Ginger Stelle, '*Thomas Wingfold* and the Mid-Nineteenth Century Debate of Eugenics', in *Rethinking George MacDonald*, p.52; George MacDonald, *At the Back of The North-Wind* (London: Broadview, 2011), pp.159;172; Octavia Hill, the founder of the National Trust saw her work for the poor as her and MacDonald's joint venture, and MacDonald saw it as his 'mission', his 'responsibility' for the country. MacDonald's Hammersmith house, the centre of his efforts, was later purchased by William Morris, who was moved in his work and writing by the same environment as MacDonald, cf. Franziska E. Kohlt, 'From Scotland to Utopia (via Hammersmith): William Morris, George MacDonald and the Utopian Ecological Aesthetic', *Journal of Irish and Scottish Studies*, 8 (2019).
[105] Marilyn Pemberton, 'The Ultimate Rite of Passage: Death and Beyond in "The Golden Key" and *At the Back of the North Wind*', *North Wind: A Journal of George MacDonald Studies*, 27 (2008), p.1.

again' all the terrible memories of his vision – illustrating how what springs from Vane's mind is utterly opposed to the principle embodied by Anodos's White Lady. Vane accordingly 'sprang from the bath' recognising that Lilith was 'working on [him] *unlawfully*', and that she, as the embodiment of his desires, is contrary to the 'live law' (178; my emphasis). Smajic elaborates that 'ghostly revenants' as '*re*visions' were also 'every vision a revision' of 'history', and thus a vision of its future.[106] This *re*vision now provides him with real *in*sight, that is connects past, present and future: his 'mind's eye' now *sees through* Lilith's deception, the 'large clumsy glove' on her 'left hand' reveals 'hair and claws' – a diagnosis of his own mind, and the danger it poses (182). Rather than the right hand of God, being Christ, the left hand (Latin 'sinistra') is symbolically linked with darkness, evil and death. A hand 'shut hard', not feeding, but demanding that he follow her for 'nothing […] in return', and to force '*progress'* upon the 'dwarf-people', her hand holds, in *Lilith A* the key to the subdued waters of Bulika, which signify the free flow of the unconscious in *Phantastes* (182;181). Lilith is death in all its forms and dimensions. Vane realises, too late, that 'the danger of the Little Ones' was 'imminent', that he 'had saved the life of their fearful enemy' and embarked on the path to mental corruption, social and global destruction (183).

MacDonald's scientifically-based analogy shows the progression of events as the result of Vane's choices and natural law. Vane's intellectual and mental deterioration and their physiological consequences, as manifest in Lilith's deformed hand, the danger of Vane's intellectual and moral decline is expressed in the pathological language of degeneration: the 'enormous' *fin-de-siècle* discourse around the belief in an atavistic reversal of progressive evolutionary processes.[107] *Lilith* emerged into an economy of degenerative

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[106] Smajic, *Ghost-Seers*, p.200.
[107] Ledger and Luckhurst, *Fin de Siècle*, p.1.

fantasies, such as *The Strange Case of Dr Jekyll and Mr Hyde* (1886), *She* (1886), *The Picture of Dorian Gray* (1890), or *The Island of Doctor Moreau* (1896). These works were fuelled by a fear of degeneration, Greenslade notes, originating in the perceived 'lack of synchrony between the rhetoric of progress and the facts on the ground' which, to MacDonald, was the poverty and social disintegration that surrounded him at the time he was writing *Lilith*. Consequently, his novel comments on these discourses of class and education.[108]

This fear Greenslade alludes to fuelled an anxious discussion concerned with the 'future of civilisation and human race itself' which 'fostered a sense that what might really be happening to civilisation lay somewhere hidden buried from sight' – a dimension which fantasists 'could dramatize […] more profoundly than their realist counterparts, because they could accelerate the process of regression, and show more far-reaching consequences'.[109] They fathomed the 'fear of the uncontrollable', including the uncontrolled mental forces shaping society which evolutionary psychology sought to theorise – theories which writers like Carroll and MacDonald sought to reconcile with those fears to productively counteract them. This socio-psychological and biological angle is crucial in re-examining *Lilith*, because although her degeneration, in dominating theological framings of past criticism, has appeared as a primarily moral one, its scientific foundation also suggests a scientific solution.

Lilith draws on, but also reinterprets common literary imagery of degeneration, and, interrogating fragile Victorian social hierarchies through biological, social and moral parameters, reconsiders their origins and implications. MacDonald had first used reverse evolution in *The Princess and the Goblin* (1871), where the process of degeneration

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[108] Greenslade, *Degeneration*, pp.15;2; Ledger and Luckhurst, *Fin de Siècle*, p.1.
[109] Greenslade, *Degeneration*, p.15; Reiter, 'Travelling Beastward', p.219.

gradually delineates the goblins living below Princess Irene's castle, as 'regressed humans', who were once 'were very like other people' but 'did not like' the 'observances [required] of them' by the King, and consequently 'disappeared', 'grew in cunning' and 'mischief', and *inflicted suffering on others*.[110] They undergo the same cycle of moral corruption, exerting the same immoral, destructive influence, as Vane. While these are the degenerated subjects of the King, in *Lilith* these structures are inverted: the degenerated one is a Princess, the mind she inhabits is an educated man's, in charge of the lives of others in contemporary Victorian society. MacDonald inverts the popular discourse of degeneration that located it more frequently in the lower classes, as the writings of John Conolly and Hugh Diamond had shown.

This puts into perspective the choice of the religious-mythological figure of Lilith as embodiment of the principle driving degeneration. While Wingrove notes that '*Lilith* has been persistently ignored by the "gatekeepers" of the canon of Gothic fiction', MacDonald utilises an image of Lilith as 'rebel, seductress, as vampire' that was 'well established'.[111] Parasitic seductresses had appeared widely in *fin-de-siècle* literature, for example in Arthur Conan Doyle's *The Parasite* (1894).[112] Lilith also shares the popular atavistic features of vampires, such as Stoker's Dracula, who was portrayed with 'long and sharp' nails and thick 'hair' on his hands, like Lilith.[113] Lilith is not only bestial and subhuman, but parasitic and predatorial: she embodies the threat of extinction, a 'malevolent power' which Diane Purkiss notes she draws from her presence in Middle Eastern mythology in which she appears as a threat to mothers and children and 'drinks their blood'.[114]

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[110] MacDonald, *Princess*, p.1.
[111] David Melville Wingrove, '"La Belle Dame" – *Lilith* and the Romantic Vampire Tradition', in *Rethinking George MacDonald: Contexts and Contemporaries*, in Rethinking George MacDonald: Contexts and Contemporaries, ed. by Christopher MacLachlan, John Patrick Pazdziora and Ginger Stelle (Glasgow: Association for Scottish Literary Studies, 2013), p.178.
[112] Wingrove, 'Vampire Tradition', p.178.
[113] Bram Stoker, *Dracula* (Oxford: Oxford University Press, 2011), p.20.
[114] Diane Purkiss, *Troublesome Things: A History of Fairies and Fairy Stories* (London: Lane, 2000), p.33.

Accordingly, Vane's 'lover', Lona – as it transpires, Lilith's daughter – is in a symbolic act slain along her siblings by Lilith – an infanticide with symbolic importance.

MacDonald's Lilith is not only a reiteration of a Biblical archetype, but encompasses features of other sources that increase her representative power in a *fin-de-siècle* context, as her vampiric, and infanticidal features highlight. Well established in Victorian social criticism, the destructive potential of the capitalist applications of scientific progress, which is implicit in the Bulikans' and goblins' obsession with jewels as capital, had been embodied by such writers as Karl Marx's in similar shapes. He compared 'British industry' to the 'rite of the religion of Moloch', 'sucking', 'vampirelike', 'children's blood'.[115] MacDonald harnessed loaded contemporary metaphors for his purpose, subsequently readily taken up by socialist writers, such as Wells for his Morlocks – degenerated, underground-dwelling, cannibals – and Eloi – their orchard-inhabiting childlike prey. While Vane's 'mental peculiarity' has been consistently framed as an individual, moral problem, mostly afflicting suffering on himself, this imagery illuminates an additional dimension to Vane's character that had been indicated in the manuscripts. The *fin-de-siècle* everyman Vane, a modern entrepreneurial middle-class science Oxford graduate is framed by MacDonald as the greatest risk to the species; Lilith is mainly the persuasive shape in which he disguised this truth. *Lilith* is MacDonald's take on this 'post-Darwinian myth' as 'speculative instrument for the penetration of late-Victorian complacencies' of the upper classes: a far more worldly-based myth for MacDonald's modernity than has so far been acknowledged.[116]

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[115] Karl Marx, 'Inaugural Address of the International Working Men's Association' [n.p.]. <http://www.marxists.org/archive/marx/works/1864/10/27.htm> [Last Accessed 23 Sep 2016].
[116] Greenslade, *Degeneration*, pp.1;7;16.

Accordingly, it is this worldly ideal, and all worldly, and idealistic philosophical notions tied to it, that are collapsed in the novel's climax. The analogical framework that is opened up layer by layer, is closed in the same manner. Completing the 'proof' of the diagnosis MacDonald returns to his optical analogy, to show a mental function, in the 'pitch-dark' hall of 'infinite blackness' of Lilith's 'brain', where light and knowledge is absorbed by the self, and, through theological imagery, evaluates its nature (185). It is here the 'single spot' of light from Vane's garret reappears through an 'oval aperture' in the roof and summons Vane's memories, which he experiences as a 'humming of voices', a 'confused murmur', in addition to seeing a 'confused commotion of colours and shapes' (191). The cinematic reflection reveals his unconscious in action, teaching him: 'actions […] not unknown to me; I had been in them, looked at them, and so had the princess': he was present in the Princess (190). Instead of the angular architecture of the garret, this place is organic, liquid, irregular and curved shapes and pulsating 'reddish lines' indicate he is inside something living: inside himself (175). Yet he seeks to affirm the indication of his vision through his sense of touch, in an inversion of Anodos reaching out for the White Lady, the embodiment of his ideal, Vane reaches out for his unideal: and, with a 'shriek' Lilith 'fell heavily, and lay still' until 'her body vanished' (190). In Vane's penultimate self-recognition, Lilith is exposed, not as a revelation of higher knowledge, but an 'eidolon', a spectral illusion; she is, as in Goethe's *Faust* an 'Idol', a homophone of 'eitel' – meaning 'vain'. Vane, who *is* Lilith, *sees*, having followed the light-as-knowledge to the core of his weakness, that he was led by 'my vanity' inhabiting his own allegorical name.

MacDonald, even at the end of his life, does not reject science, but advocates an overhauling of science, sensitive to its environments, human, societal and natural, which must be shaped according to natural law, which can only be done once the mind was in unison with it: the future of the species, society, and the environment depended on this

rethinking, and without it all science would stall. As the unending processes of evolutionary psychologies interplays between mind and environment, this 'overhauling' cannot be final; it would be an unending process, requiring continuous and careful navigation which could only occur through a balanced mind. This is evident as even after Lilith's disappearance, she continues to haunt Vane, as his vision has not cured his mind.

Her disembodied voice tempts Vane into climbing a tree – the Tree of Knowledge – to retrieve its fruit to restore her to reanimate the illusion he had just identified as the source of mankind's renewed Fall. He cannot resist, and in the tree Lilith appears again, as a 'snake' – 'that old serpent, called the Devil, and Satan, which deceiveth the whole world', as it has always done, and always would be – Vane slips, and falls (191).[117] Vane's Fall echoes post-Darwinian anxieties of extinction and destruction of creation originating in the *fin de siècle*'s 'extreme disappointment with the state of things' that had, as Greenslade notes, conjured up degeneration – moral, biological and social – as a 'fully-fledged explanatory myth', a secularised "fall" from grace'.[118] Science for its own benefit is as morally reprehensible as in previous MacDonald novels, but, as the chapter title, 'A silent fountain', indicates, it is only in MacDonald's final fantasy it is thought through, via every necessary step in the thought-action chain, to its inevitable consequence of diminishing life out of existence into extinction (182).[119] As Vane is from the beginning shown to be unwilling to learn, *Lilith* does not trace the success of the dream-narrative, but exploits the potential of the imagination to also illuminate, at every turn of thought, the possibility of

[117] Revelation 12:9.
[118] Greenslade, *Degeneration*, p.16.
[119] Strikingly, the chapter title, 'The Silent Fountain', and MacDonald's use of springs as an image for the natural psychological and intellectual development shaping society to mirror nature corresponds with Rachel Carson's seminal work of environmentalism, *Silent Spring* (1962), which also plays with the double meaning of the season and source of preservational thought.

an ideal. As sin had come into the world through mankind, salvation, as the epistle to the Corinthians MacDonald frequently cited, must also come through mankind.[120]

‘Coloured shadows’, ‘yet higher dimensions’, and the ‘Revelation of St George the Divine’[121]

Through the reconstruction and reconsideration of the psychological, scientific and theological layers of *Lilith*’s framework, it is possible to assert that, rather than remaining inconclusive, the novel does, in fact, come full circle conceptually. As the vision of Bulika provides a dystopian future vision, *Lilith*, unlike the *Time Machine* or other works inspired by it, also provides a model utopia through its ‘seven dimensions’. These have been one of the great bewilderments to critics. Beyond the link to the fourth dimension, that has been widely agreed on, critics have proposed numerous explanations, however, without consensus. Bilbro suggests Jacob Böhme’s mysticism and its seven-fold ‘eternally-generating qualities’ as a model, and Deirdre Hayward, believed ‘Dante’s four “dimensions”’ – the literal, allegorical, mystical and anagogical – to have been ‘added to the familiar three’.[122] While acknowledging the diverse sources of MacDonald’s philosophy and imagery, none of these theories has direct correspondence with the layered, and analogous metaphors that abound in his works: a framework, which Optics, as an extension of his theory of the fourth dimension, indeed offers.

The aspect of a direct correspondence of *layers of truth* in creation was, first of all, crucial to MacDonald: he consistently expressed a belief in a subtractive, structured model, in which every one of these layers of meanings gradually approached divine truth. In the ‘Fantastic Imagination’ MacDonald writes ‘in everything God has made, there is layer

[120] 1 Corinthians 15:22.
[121] Greville MacDonald, *Reminiscences*, p.321.
[122] Bilbro, ‘Space’, p.2; Deirdre Hayward, ‘George MacDonald and Jacob Boehme: *Lilith* and the Seven-fold Pattern of Existence’, *VII: An Anglo-American Literary Review*, 16 (1999), p.59; Hein, ‘Dimensions’, p.74.

upon layer of *ascending* significance; also he expresses the same thought in higher and higher *kinds of thought*'.[123] These layers are bookended by the lowest and highest types of thought, which, at this stage in *Lilith* have already been integrated into an optical analogy of the psyche. MacDonald had already used optical imagery for expressing knowledge, and corresponding states of the soul in the 'Sketch'. At the extremes of this layered scale of 'awareness' lay the dark and light of the polarised mind: 'wrapt in the mist that deepens on the one side into the deepest night' – the dark of ignorance' – 'and on the other brightens into the full assurance of existence'.[124]

The higher states of knowing were reached through a purification of the psyche, indicating mobility between these two poles, via a greater number of layers of meaning and understanding, through psychological development. In *Sir Gibbie* Donal experiences this through an optical metaphor foreshadowing MacDonald's use of polarisation, as an opening of 'his imagination, vista by vista, into realms of might-be possibility'. This process was, as MacDonald had written in the 'Sketch', an undoing of the state 'we foolishly call maturity' that lies between 'the *dawn* of consciousness' and 'each succeeding consciousness', that leads to Vane's 'self-consciousness', that '*dims*, often *obliterates* that which went before' – in the same way in which polarisation in its in-between phases reveals weaknesses in substance in the form of shadowed areas blocking out the light.[125] These faulty 'layers', or 'realms', or 'vistas' are equivalent to *Lilith*'s dimensions.

MacDonald layers into this dimensional system developmental and hierarchical trajectories from other epistemologies that shaped *Lilith*. Blacklock notes that therein lay the

[123] MacDonald, 'Fantastic Imagination', p.280.
[124] MacDonald, 'Sketch', p.43.
[125] MacDonald, *Sir Gibbie*, p.102; MacDonald, 'Sketch', p.43.

attractiveness of the fourth dimension. '[S]pecific life forms' described in Darwinian theory 'were also used in versions of dimensional analogy', so that 'evolutionary narratives were fused in the cultural imagination with dimensional expansion', as the 'narrative of evolutionary theory [that] was culturally dominant' had 'gradual progression at its core'.[126] *Sir Gibbie*'s Donal accordingly elaborates that in these 'realms' to which his mind is opened 'dwelt whole clans and kins of creatures, differing from us and our kin, yet, occasionally, at the cross-roads of creation, coming into contact with us, and influencing us, not greatly, perhaps, yet strangely and notably' – like the in-between creatures between humans and Goblins in the *Princess* novels.[127] Thus *Lilith*'s dimensions also correspond to degeneration in the seven dimensions, in a manner that is in fact explained by the Raven in his explanation of the dimensional shapeshifting:

> Every one, *as you ought to know*, has a beast-self—and a bird-self, and a stupid fish-self, ay, and a creeping serpent-self too—which it takes a good deal of crushing to kill! In truth he has also a tree-self and a crystal-self […]. You can tell what sort a man is by his creature that comes oftenest to the front. (37; my emphasis)

MacDonald maps onto these dimensions the hierarchies of divine creation and Darwinian evolution, layers between which Christian morality and evolution facilitate mobility that is generated within the psyche. This construction of evolutionary psychology responds to the question whether or not MacDonald believed in Darwin's evolution. *Lilith* thus integrates the much-discussed 'impossibility of erecting any cerebral barrier between man and the apes' into a theological framework that, for him, constituted truth, a belief MacDonald had attributed to the schoolmaster Mr Graham in *Malcolm* (1874), who even 'long before the younger Darwin arose, had suspected a close relationship—remote identity, indeed, in nature and history, between the animal and human worlds'.[128]

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[126] Blacklock, *Fourth Dimension*, p.39.
[127] MacDonald, *Sir Gibbie*, pp.102-3.
[128] George MacDonald, *Malcolm* (Philadelphia: Lippincott, 1875), p.29.

In this theological aspect also lay the final clue to MacDonald's dimensional system of meanings, as he integrates into his *seven* dimensions the *seven* days of creation, which correspond to seven consecutive, distinguishable but fluid evolutionary phases of human development.[129] While the light and dark states of polarisation mark the extreme ends of this spectrum, they are separated by the *seven* coloured strands of the refracted beam of light, with Optics thus, finally, clarifying the relation and psychological and cognitive method of transition between these dimensions. In this the rainbow, firstly, is itself of significance. An equally recurring, guiding image in MacDonald: the 'rainbow of Fairyland', which 'is not dependent upon the sun, as ours is', is the 'glimmering' stairway that leads the dream-travellers to the 'country whence the shadows fall', the kingdom of God and truth in 'The Golden Key'.[130] 'The 'rainbow glimmer' also indicates the direction towards which the youth of the 'Sketch' must strive, and indeed 'longs' for in his 'dreams'; it is the colour of a butterfly-like 'creature' which 'flashed in all colours of the rainbow', which Vane chases and desires in the Bad Burrow, which goes 'where [the light] has come from', to which Mr Raven tells Fane his journey must also lead in *Lilith A* (62-3).[131] The rainbow was the symbol of God's promise of forgiveness and hope for salvation, which gives meaning to the continuous necessity of reflection, and repentance. The rainbow had also featured in optical approaches to the fourth dimension, where it had been noted, as by Spottiswoode, for its potency as a device for epistemological experimentation. He saw embodied in it 'the whole story and mystery of manifold space'.

> It is not seriously regarded as a reality in the same sense as ordinary space; it is a mode of representation, or a method which, having served its purpose, vanishes from the scene. Like a rainbow if we try to grasp it, it eludes our very touch, but like a rainbow, it arises out of real conditions of known and tangible quantities, and

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[129] Huxley, *Man's Place in Nature*, p.98; In the book of Genesis, God creates light and dark, earth, vegetation, fish and fowl, creeping creatures and beasts, before he creates rest, and takes the divine rest.
[130] MacDonald, 'The Golden Key', in *The Golden Key and Other Stories* (New York: Crowell, 1901), pp.5;8;65;66.
[131] MacDonald, 'Sketch', pp.51-2; *Lilith A*, p.9.

> if rightly apprehended it is a true and valuable expression of natural laws, and serves the definite purpose in the science of which it forms its part.[132]

Dealing with such real tangible quantities as evolution and psychological development, the rainbow thus served as a perfect vehicle to produce, in Tyndall's sense, real scientific knowledge by analogy.

Secondly, the lowest and highest ends of the scale thus function consistently as the lowest moral and evolutionary stages across all of MacDonald's works. The rainbow, however, gains a more complex function in the analogical framework of Lilith, where it was only partially consistent with the Newtonian model of the phenomenon in which all colours were of equal, neutral value. As in *Lilith*'s dimensional framework, the stages represent a conditional, evolutionary system, a violation whose law caused reversion to earlier, lower stages, destruction, extinction, a new Fall. Temptation and 'repentance' function as gravitational pulls to either end of this spectrum, needing to be balanced for the progress that meant survival. In MacDonald's short story 'The Shadows', the highest dimension is revealed to Ralph Rinckelmann: in it were only 'white shadows' – an unusual, but crucial phrasing. MacDonald draws on a subtractive system of optics, such as Goethe had established in his *Theory of Colours*, in which he had claimed, unlike Newton, that the seven colours resulting from breaking up light were not in fact, coloured strands of light, but 'coloured shadows'.[133] 'For every light which has *taken* a colour is *darker* than colourless light', Goethe explained; 'the different confines of shadows variously modify light.' By that logic, G.H. Lewes interpreted, white light was a 'white shadow'.[134] By

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[132] William Spottiswoode, 'Presidential Address', *Report of the Forty-Eighth Meeting of the BAAS Held at Dublin in August 1878* (London: John Murray, 1979), pp.22-3.
[133] Johann Wolfgang von Goethe, *Die Tafeln zur Farbenlehre und deren Erklärungen* (Leipzig: Insel Verlag, 1994), pp.24-27.
[134] George Henry Lewes, *The Life and Works of Goethe* (London: Dent, 1908), pp.344;347.

contrast, when Lilith falls, a 'flat superficial shadow of two dimensions' is exposed as the contaminating influence of selfishness that 'wanted to *be*' Vane (163).

While 'repentance', an act of moral purification, was the means by which the soul progressed through the dimensions, 'repentance' was also the name given by the Little Ones to the hatching of the butterfly from its chrysalis, a 'sacred' purification from lower states, striving from the *darkness* of ignorance towards the *light* of existence (232). This symbolic, and yet biological image, explained the relation between the different 'selves' and their highest form: the crystal-self. The purified psyche, it had appeared in MacDonald's earlier works, associated with child*likeness*, in its most perfect state embodied in the boy Diamond in *At the Back of the North-Wind*; its most villainous, its emulation by deception, in *David Elginbrod*'s 'Herr von Funkelstein', meaning 'fake diamond'.[135] That child*likeness* was however not child*hood*, but the end of an age-long purification process, is revealed to Vane when his journey through the seven dimensions comes full circle, and Mr Raven unveils himself as Adam, the first of man, the name of whose 'crystal-self', resembles the Greek 'adamas' meaning 'diamond'. It is through this crystal-self – a prism with no weaknesses – in the final vision of *Lilith*, the possibility of Utopia, is refracted, after Vane finally agrees to sleep at the House of Sleepers: a vision of a purified Bulika, a projection of the purified soul that would inevitably build it. A landscape that offers no obstructions to the light of truth which permeates it, it evokes the New Jerusalem of the Revelation, 'the city had no need of the sun […] for the glory of God did lighten it' (345).[136] Vane has finally reached the state in which he is ready to receive his revelation which Anodos achieves in the first chapter of his journey.

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[135] George MacDonald, 'David Elginbrod', MS ABHER: 2010.012.4, Aberdeen Museums Archives, Mintlaw, p.267; MacDonald changes his villain's name from 'Count Halkan' to 'Herr von Funkelstein' in the MSS, the naming is clearly conscious (cf. Appendix IV).
[136] Revelation 21:23.

The language of the vision mirrors its fluid liveliness. An alliteration conveys the 'roaring, radiant river' that swells through the mountain slopes and embodies the true mind that can think live thoughts (347). A 'land of bloom', 'nothing in this kingdom was dead'; instead, it is filled with 'opal pigeons' 'whose wings gleamed in every single colour' and 'jewelly hummingbirds' 'whose feathers sparkled as with all the precious stones' (345). The prayer-birds of the first vision gain a different quality in their crystalline purity: as Vane notices, even the paving of the city was made from 'prototypes of all the gems that [he] had loved on earth', but unlike the currency of bribery in Bulika, 'they are living stones' (347). The vision is the utter opposite of ecocide and infanticide: what the Bulikans had seen as mere dead currency, are here the metaphoric souls of the childlike that *make up* the city, and are, in Bulika's real-life equivalent, London, the subject of oppression and eugenic thought.

Greville highlighted the definitive significance, both spiritual and as inspiration to scientists, of this vision in his father's epistemological hierarchy, by calling it 'The Revelation of St George the Divine'.[137] Symbolism and literalness are equally pertinent. The crystal birds are animate, purified souls refracting the light and truth of God that permeated that city. *Lilith* shares with the Revelation a this-worldly relevance of a symbolic vision, which as in *Phantastes* serves as a warning to change the ways of life in the present. While critics have compared it to Eden, it is firmly a vision of New Jerusalem: a city built on Earth *after* the Fall of Man, the destruction of the world, and its purification from sin. This world's relationship to Bulika is like that of William Blake's Jerusalem to his London; in which the first narrator's voice pledges to not 'cease from mental fight' until England is freed of its 'satanic mills', faces bearing '[M]arks of weakness, marks of woe', and streets reverberating with the 'Infants cry of fear'.[138] The vision's flowing

[137] Greville MacDonald, *Reminiscences*, p.321.
[138] William Blake, 'Preface', *Milton*, in *William Blake: Selected Poems* (London: Penguin, 2005), p.240; Blake, 'London', *Blake: Selected Poems*, p.123-4.

waters, diverse animal life and the liberated, rather than enslaved, children, are an antithesis to the London MacDonald inhabited, a vision of a land having preserved its nature and offspring and averted extinction. It was a place, as Lona reveals, where 'serpents grow birds […], as caterpillars used to grow butterflies', where an impossible-seeming rehabilitation of souls like Vane's and societies like MacDonald's was possible (345).[139] Bulika and the city of this vision are thus not merely imaginary, but binaries separated by layers of moral choices and decisions: a hope upon which the inheritors of MacDonald's scientifically informed fantasy would draw, and a vision that transfers an urgent duty to act upon the reader.

This conditionality is the chief difference from the conclusive narrative arch of *Phantastes*, which cannot exist in *Lilith*, as its now plausible 'endless ending' shows. Vane's ascent does not show a moral purification, as its mirroring of the final chapter of the *Pilgrim's Progress* illuminates, in which Christian and Hopeful are also led 'by their arms' up the mountainous road, through the clouds, to the Celestial City.[140] Vane, however, does not take the position of either. Ecstatic in anticipation, Vane too, on his 'toilsome ascent' up the 'rocks', grasps a helping arm, and a 'hand, *warm* and *strong*' which draws him 'to a little door with a *golden* lock' (348). However, instead of the glorious reception to the Celestial City, MacDonald presents a scene in which

> the door opened; the hand let mine go, and pushed me *gently* through. I turned quickly, and saw the board of a large book in the act of closing behind me. I stood *alone* in my library. (348)

The ending of Vane's dream mirrors not Christian's ascent, which ends with his overcoming of his spiritual doubts and entering the heavenly city, but that of Ignorance, who crosses the river-border of the Celestial City not by death in faith, but ferry, and thus

[139] Revelation 22:1.
[140] Bunyan, *Pilgrim's Progress*, p.176.

deception. As punishment, Ignorance is put through a 'door […] in the side of the hill'; the dreamer comments that 'there was a way to hell even from the gates of heaven' – and awakes.[141]

An 'Endless Ending'

Vane is expelled from the vision of New Jerusalem, and his life on Earth is rendered a purgatory. But as Adam and Eve, both of whom Vane has now encountered, were cast out of paradise, this marks an ending, and a beginning as well – indeed an 'endless ending', as the final chapter is entitled. How this new beginning, that is impressed also onto the reader, ought to look is now implicit in the biblical language, and the psychological system embedded in it through the referential frame of polarisation and evolutionary psychology. The anticipation derives from the parallel structure of the penultimate chapter with Christian's ascent, and the shift from 'warm', 'strong' and 'gentle', to the dry repetition of the word 'alone' as the only descriptor of his state upon his sudden return. Vane has not reached a catharsis, but remains in stasis, still. Vane's rambling thoughts return to one word: 'wait': 'All the days of my appointed time will I *wait* till my change come', 'I *wait*, asleep or awake, I *wait*' (351).

Taken from the book of Job, the 'archetypal sufferer', Vane's words anticipate Job's fear, whether 'If a man die, shall he live again?'[142] MacDonald was a universalist: refusing the doctrine of eternal damnation, he believed that all will be given the opportunity to redeem themselves, and the first epistle to the Corinthians, which resolved the ending of *Phantastes*, also provides the answer to Job's prayer. *Lilith*'s late-Victorian recapitulative

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[141] Bunyan, *Pilgrim's Progress*, pp.181-2.
[142] Job 14:14.

fantasy, which promises the possibility to reverse the effects of socio-psychological degeneration, appears as a credo of a real-world scientific universalism. While

> not all flesh is the same: *People* have one kind of flesh, *animals* have another, *birds* another and *fish* another. […] So will it be with the resurrection of the dead. The body that is sown is perishable, it is raised imperishable; […] it is sown a natural body, it is raised a spiritual body. […] Listen, I tell you a mystery: *We will not all sleep, but we will all be changed.*[143]

In the figure of the archetypal sufferer Job MacDonald responds to the ailments and sufferings of his contemporary environment, and thus, by proxy the question of theodicy, why God, able to grant salvation, permits suffering. The salvation to Vane's representative suffering cannot be immediate, it must be reached through struggle, through 'mental fight'. Similar scenarios in earlier novels confirm this: Robert Falconer wondered 'Does [God] *force* those who accept salvation?', to which his grandmother replies that instead he 'shows them the truth in such a way that they just can't stand themselves, but *must turn to him for very peace and rest*' – the rest granted on the final day of creation – the seventh dimension, the crystal self, which can only be saved through struggle, indeed the time period specified in Job's lament as all the days of 'the appointed time of my *struggle*' – 'tsaba' ('צָבָא') – a term with distinctly Darwinian reverberations.[144] The 'tsaba' was fought out in parallel, and in response to everyday anxieties, once again in the imagination, which was *made literature* in the 'subcreation' that the Inklings believed the essence of 'mythopoeia'. It is that which MacDonald offers as solution in the novel's final sentence: 'Novalis says, "Our life is no dream, but it should and will perhaps become one"' – the sentence that had prefaced *Phantastes*, thus bookending his oeuvre (351). Establishing Fantasy as a shadow to scientific progress in society, MacDonald reinforces mankind must

[143] I Corinthians 15:40;42-3 [my emphasis].
[144] MacDonald, *Robert Falconer*, p.329.

struggle to integrate the imagination in its quest for knowledge, progress and societal advancement, otherwise it will not be advanced, and will not advance.[145]

Greville's first reaction to his father's final testament, crystallises its purpose:

> A text-book on light-waves can't make us understand *much* at all! And *Lilith* was written, I take it, only to help people think it out for themselves and to find it all *within*.[146]

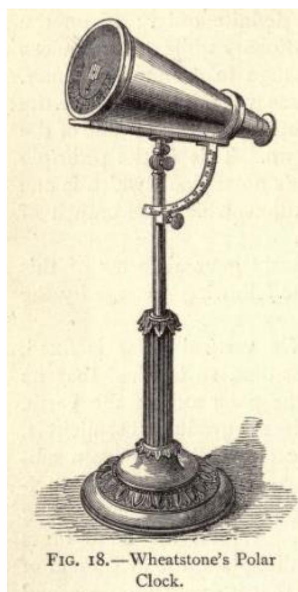

Fig.30: Polar Clock, from Spottiswoode's *Polarisation of Light*

Vane, as fallen *fin-de-siècle* everyman, must now embark on a journey to mental purification, now that he knows its mechanisms – which is evident in his ability to operate the instruments in his attic, and his repentant insight 'truly, I was much to blame: I had fled from my dream' (327). The instrument he operates in the attic room, which the manuscripts in fact describe in painstaking detail of which none survives into the final novel sums this up. A 'conical chimney' which went 'through the roof', the attic window, its inside 'entirely dark', but at 'noon' capturing the light when the sun was 'so many degrees above the horizon' through mirrors that polarised its light. These details correspond with Polar Clocks – sundials that determined the time of day by locating light even when it was not visible through polarisation, revealing the time of day in the polarised colours, which had been described, for instance, by Spottiswoode in his polarisation lectures (Fig.30).[147] It was the proof that, right from the start, Vane's moral compass, that would guide him even in the dark of ignorance toward the light-as-knowledge, was already to be found within.

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[145] Lewis refers to the Inklings' definitions of the term as 'subcreation' in literature, as subset of God's creation must be true to its laws (cf. J.R.R. Tolkien, 'Mythopoeia', in *Tree and Leaf* (London: HarperCollins, 2001).
[146] Greville MacDonald, *Reminiscences*, p.324.
[147] Spottiswoode, *Polarization*, pp.97-103.

3. Beyond Worlds: Death-Visions and the Politics of Nature

Sleep after toyle, port after stormie seas, Ease after warre, death after life does greatly please.
Edmund Spenser, *Faerie Queene*[1]

In 1897 H.G. Wells's Gottfried Plattner returns from a journey which, as the tale's narrator reflects, can only have occurred by him having been 'taken out of *ordinary existence*'.[2] Thus, Plattner precedes the protagonist of 'Under the Knife' who relates a vision he experienced 'within an ace of death', Lionel Wallace, who disappears through the green 'Door in the Wall', beyond which he had sensed prescient visions as a child, and the visions of 'The Crystal Egg', 'The Country of the Blind' and *The Time Machine* whose protagonists never return from their journeys into strange visions prescient of aspects of daily life invisible to others, future projections.[3] The visionary journeys of Wells's protagonists decisively shaped the early Science Fiction genre; his works were praised as 'prophetic', 'utopian or dystopian future visions', based on a 'profound understanding of scientific matters'.[4] The type of journey upon which Wells drew – visions experienced in, near or after death – beyond 'ordinary existence' – is, however, less frequently linked to the previous time they prominently resurfaced in the mid-nineteenth century, in Charles Kingsley's *The Water-Babies*, whose fantastic vision, while influenced by forms of dream-visions, and their subtexts, was distinct in form, themes and outlook. As it peaks in the middle, and rises again to prominence at the end of the nineteenth century, it was, notably, to exert its influence also especially on a different strand of fantastic fiction.

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[1] Spenser, *Faerie Queene*, I.9.40.
[2] H.G. Wells, 'The Plattner Story', in *H.G. Wells: Complete Short Story Omnibus* (London: Gollancz, 2011), p.109 [my emphasis].
[3] H.G. Wells, 'Under the Knife', in *H.G. Wells: Complete Short Story Omnibus* (London: Gollancz, 2011), p.171.
[4] Brian Aldiss, 'Science Fiction', in J.A. Cuddon, ed., *Dictionary of Literary Terms and Literary Theory*, 3rd edn (London: Penguin, 1999), p.843.

Because of the significant impact of this distinct, yet related type of vision, whose roots are to be found at the same time in the same circles and literary endeavours as that of MacDonald and Carroll, this section will cast a glance back to examine the death-visions of Charles Kingsley before evaluating the legacy of the dreams and visions of Victorian fantasy in the conclusion. This third type of vision, as this section will show, facilitated an external focus. As opposed to the internal and phenomenological focus of dreams and morbid visions, their concern was with society and its systems, producing a vison more political in content. Separated from society by death, their protagonists are mediators of these visions, who are relieved from the pressure to enact the lessons taught in the revelations about contemporary realities. As they are juxtaposed with ideas of origins, and, based on them, ideals of future governance, this pressure is, through the death of the dreamer transferred to the reader, rallying them into action.

Although separated by a generation and by some fundamental ideological differences, there were crucial commonalities between Kingsley and Wells representative of the 1860s and 1890s, in which narratives as theirs, fathoming boundaries posed by human life and society, surfaced, and resurfaced. Kingsley and Wells discussed questions of ideal individual-society relationships responding to the tremors of the same epistemological earthquake caused by Darwin's *Origin of Species* (1859), and their works cluster around crucial milestones of the Darwinism debate. They were respectively an ally and a student of T.H. Huxley, 'Darwin's bulldog' – Kingsley called him a friend, and Wells 'the greatest man I was ever likely to meet'.[5] Kingsley was a theist, Wells an atheist; both were socialists – Kingsley a Christian Socialist, Wells, initially, a Fabian. Neither of them shied away from public debate – and controversy – in which their views on evolution came to bear. And while the ideological importance of evolution to both men's works has been

[5] H.G. Wells, 'Huxley', *Royal College of Science Magazine* (13 April 1901), p.209.

explored in considerable depth, the role of psychology has not received equivalent scholarly attention. Yet through psychology's paramount role in the emerging science of sociology, which principally shaped both authors' works, the futuristic sociological narratives with which Science Fiction became synonymous were conceived through an explicitly psychological framework. Thus, the narrative form they chose, which was more readily linked to the utopian narrative tradition than the dream, was accordingly influenced by the same psychological theories that structured role the dream narratives treated in the earlier chapters.

Besides the widely-discussed destabilising impact of Darwin's evolution, its more differentiated conception of "Nature" as shaper of its life forms provided the basis also for theories on how both natural *and* built environments also shaped inner worlds of the psyche, how it, in turn, shaped its environments, and how these, finally, affected the individual. Nature, and the 'man-made', were unhinged from the binaries of good and evil, and now appeared on a gradient on which both could be either. This revived hopes in finding that universal natural law, the 'cipher', as Novalis had said, a 'book of nature', which would make it possible to engineer a perfect, science-based society: a *real* utopia. The psyche was key to all this. Theological understandings of the "psyche" as the indestructible essence, were updated with scientific theories from evolutionary psychology, thermodynamics, and organic memory that, sedimented in all living nature, were the "building plans" of life.

The psyche, in its ideal, 'natural' state, became a biological Rosetta stone revealing in the human origins it indicated the law for society and the key to human species' future survival, its progress to perfection, and thus, in an evolutionary context, its secular salvation. The narrative form of the death-vision facilitated a telling the tale of the soul, in which the death of the individual, and its causes, become representative of the extinction

of mankind, society, earth itself. In being located beyond death, these visions created an illusion of 'historical hindsight' which they juxtaposed to future reflections which, in Kingsley, held up a utopian ideal to be aspired to, or appeared as dystopian warnings in Wells.[6] Devising in a space entirely separated from human life *true* visions of how to practically construct a better world this particular narrative iteration of the dream narrative illuminates the 'other world' tradition with its time and space travel that became one of the most prominent features of twentieth-century fantasy and science fiction: a literary bifurcation from a path once shared with Carroll and MacDonald's psychological dream narratives.

[6] Helen Kingstone, 'Imaginary Hindsight: Contemporary History in William Morris and H.G. Wells', in *Utopias and Dystopias in the Fiction of H.G. Wells and William Morris: Landscape and Space*, ed. by Emelyne Godfrey (Basingstoke: Palgrave Macmillan, 2016), p.43.

3.1. Charles Kingsley, natural theology, socio-psychology, and the rhetoric of utopia

The ways of God go down into microscopic depths, as well as up into telescopic heights – and with more marvel, for there lie the beginnings of life: the immensities of stars and worlds all exist for the sake of less things than they. So with [the] mind.
George MacDonald, 'The Inheritance'[1]

For since the creation of the world God's invisible qualities – his eternal power and divine nature – have been clearly seen, being understood from what has been made, so that people are without excuse.
Romans 1:20

Charles Kingsley was at different but overlapping stages in his life Regius Professor of Modern History at Cambridge, science populariser and Canon of Westminster Abbey, defender of Christian Universalism and 'prophet' of the Chartist movement. Encompassing the sheer breadth of social purposes, professional fields, and the different epistemological systems in which Charles Kingsley was involved in his relatively short life has posed a challenge to critics. Brenda Colloms sees in this a 'restlessness', Manlove finds it 'contradictory', Douglas-Fairhurst 'hypocritical', all highlighting that the man's versatility was not always unproblematic.[2] To his contemporaries, however, one apparently overarching concern emerges not only as dominant, but as synthetic of such contradictions. As George Day concluded, Kingsley was all, 'a Christian Socialist, social reformer, brilliant novelist, [and] eloquent preacher' but he *must* be *primarily* 'ever rank among our *most perfect naturalists*'.[3]

[1] George MacDonald, 'The Inheritance', in *Unspoken Sermons*: *Third Series* (London: Longman, 1889), p.254.
[2] Colin Manlove, *Modern Fantasy: Five Studies* (Cambridge: Cambridge University Press, 1978), p.13; Brenda Colloms, *Charles Kingsley: The Lion of Eversley* (London: Constable, 1975), pp.13-4; Robert Douglas-Fairhurst, 'Introduction', in Charles Kingsley, *The Water-Babies*, ed. by Brian Alderson (Oxford: Oxford University Press, 2013), p.vii.
[3] George Day, *Naturalists and Their Investigations* (London: Partridge, 1895), pp.134;146-7 [my emphasis].

‘Happy, truly, is the naturalist. He has no time for melancholy dreams’: Mind, Macrocosm and Organic Memory[4]

Nature was the point at which his dispersed paths of interest converged, and by which they were guided. In seeing the natural world as ‘voluntatem Dei *in rebus revelatam*’, God’s creation as the manifestation of truth, Kingsley, ‘committed’, as Piers Hale notes, ‘to the methods of Baconian inductive science’, tracing natural ‘facts to principles’, always leading to the ultimate ‘principle’ which was God.[5] Will Abberley explains how the study of nature apparently transcended distinctions between scientific learning and veneration. Kingsley’s natural theology hinged upon his faith in nature’s “truthfulness” *in an empirical sense*, as it followed fixed, observable laws, and also *in a moral sense*, as it sincerely conveyed God’s values and taught humans to be equally sincere’.[6] Thus, as all of his occupations required truthfulness, his entire self had to be in a state of synchrony with the state of truthfulness expressed in nature.

This highlights the crucial role played by the study of nature on a psychological level. ‘Happy, truly’, Kingsley wrote in *Glaucus; Or: The Wonders of the Shore*, his first work of Natural History, ‘is the naturalist. He has no time for melancholy dreams’.[7] Melancholy was an indicator of a mind not in synchrony with the truth of nature, and was accordingly cured by the ‘inexhaustible treasury of wonder’ which, he concludes, could not fail to have ‘a weighty moral effect’ upon ‘hearts and spirits’.[8] Due to the ‘marvellous interdependence of all natural objects and forces’, the mind was only ‘happy’ when in tune with Nature, with truth.[9] Natural Science was an alpha and omega. Frances Kingsley and George Day

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[4] Charles Kingsley, *Glaucus, Or: The Wonders of the Shore* (London: Macmillan, 1890), p.14.
[5] Piers J. Hale, ‘Darwin’s Other Bulldog: Charles Kingsley and the Popularisation of Evolution in Victorian England’, *Science & Education*, 21 (2012), p.989; Frances Kingsley, *Charles Kingsley: His Letters and Memories of his Life. Edited by his Wife* (London: Kegan Paul, 1888), p.6.
[6] Will Abberley, ‘Animal Cunning: Deceptive Nature and Truthful Science in Charles Kingsley’s Natural Theology’, *Victorian Studies*, 58 (2015), pp.34-5 [my emphasis].
[7] Kingsley, *Glaucus*, p.14.
[8] Charles Kingsley, ‘Science’, in *Scientific Lectures and Essays* (London: Macmillan, 1890), p.249.
[9] Kingsley, *Glaucus*, pp.14-15;16;40.

highlight how Nature was an earthly 'Paradise', 'the vestibule of heaven': it was not only the source of facts, but also an indication of the ends to which they must be employed; it modelled the perfect state of mind and life, which must guide everything.[10] It was for this reason that writers like Day credit it to Kingsley's upbringing in and through Nature, where his father had taken him on natural 'expeditions' that had a lasting 'effect on the boy's mind, that his mind had been shaped to cast sound Christian moral and scientific judgment, guiding his actions in his multitudinous engagements.[11] The study of Nature thus appeared an antidote to Victorian anxieties, a guide to their solution of both scientific questions and social problems plaguing the age.

In accordance with this philosophy, to Kingsley, scientific discoveries, if obtained soundly, could only further unite all epistemologies, as they strove for the knowledge of truth. Accordingly, true science could only be further proof of God, rather than endangering him.[12] Science and religion, Kingsley's writings suggest, shared the common aim of the wellbeing and future of mankind, an assertion through which he defused the potential threat scientific rigour posed to Christianity. Natural science was to Kingsley, by extension, '*true* science', and led (if I may be allowed to transfer the Lord's great parable from moral to intellectual matters) to *Life*, and *could* not undermine *true* religion. From this foundation, Kingsley proceeded to the intuitively more challenging task of reconciling scientific discovery, in any shape it might take, and religious belief, a challenge which only arose, in Kingsley's eyes, when *un*true morals guided either. *True* scientists were 'brave men' and 'moral benefactors to their race', who could not discredit God's creation, but rather 'wielded in defence of Christianity the very science which was faithlessly and

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[10], Kingsley, *Letters*, p.6.
[11] Day, *Naturalists*, p.136 [my emphasis].
[12] Charles Kingsley, 'The Study of Natural History', in *Scientific Lectures and Essays* (London: Macmillan, 1890), p.183.

cowardly expected to subvert it'.[13] Only 'fanatic' religion, which made 'a hollow compromise between fact and the Bible, by twisting facts just to make them fit the fancied meaning of the Bible, and the Bible just enough to make it fit the fancied meaning of their facts' was a danger to Christianity, as well as to science.[14] Epitomising their common devotion to truth, to guidance and advancement of mankind, Kingsley proclaimed that God himself was 'the architect of modern science', and that it was foolish to believe that he would not be anything but 'pleased when humankind made discoveries which improved society'.[15]

When scientific discovery therefore challenged preconceived notions, a change in his personal convictions thus seemed imperative, and Kingsley's adherence to his convictions initially seems to be proven, for instance by his confrontation with Darwin's *Origin of Species.* He received the 'unexpected honour' of an advance copy of a book containing a theory which he was, at first, not inclined to believe; its 'facts' indeed converted him. He wrote in a letter to Darwin:

> All I have seen of [the *Origin*] awes me [and] with the *clear intuition*, that if you be *right,* I must give up much that *I have believed & written* […]. In that I care little. Let God be true, & every man a liar.

The confrontation with the natural facts that represented truth appears, similar to the way Carroll conceived it, as a matter of mental cure. The *Origin,* he wrote further, 'encourages me at least to observe *more carefully*, & think *more slowly*. I am so poorly (in brain) that I fear I cannot read your book just now as I ought'.[16] The facts revealed in scientific *pro*gress effected a psychological *re*gression: a return to an intended, original state of mind

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[13] Kingsley, *Glaucus*, p.14.
[14] Kingsley, *Glaucus,* p.13.
[15] Keith A. Francis, 'Paley to Darwin: Natural Theology versus Science in Victorian Sermons', in *The Oxford Handbook of the British Sermon 1689-1901*, ed. by Keith A. Francis, William Gibson, John Morgan-Guy et.al. (Oxford: Oxford University Press, 2012), p.455.
[16] Charles Kingsley to Charles Darwin (18 November 1859), *Darwin Correspondence Project* <http://www.darwinproject.ac.uk/DCP-LETT-2534> [my emphasis].

with an *inherent* understanding of nature, to which intuition – a learning from within, or immediate knowledge – pointed and from which Kingsley felt he had strayed.

Defining true scientific discovery as that which was 'natural' or 'improved society' was, however not unproblematic, as Kingsley's reflections elsewhere show. His beliefs were unsettled by such natural facts as the behaviour of parasites which, he states with concern, could 'teach no moral theology' despite being part God's nature, which he believed to be governed by moral laws.[17] Reading such a statement besides his confident assertions that science and theology were essentially equivalent, illuminates critics' assessments of Kingsley as 'contradictory' and 'hypocritical'; his almost compulsive need to write and lecture in laboured search for their resolution as 'restless'. Nature acted to Kingsley as an idealised, but not unconflicted, compass of truth also when he navigated, in search of the ideal relationship between mind, society and nature, the fast-paced discourse of psychology, in which 'facts' were yet scarce. And in this context Kingsley's use of narrative to extend science, and to overcome and balance out such unsettlements, makes particularly clear the uses and dangers of such a technique in his own work, which he meant to be real-life guidance for regulating society, thus also shedding light on such practices in the Victorian fields, scientific, sociological, theological or journalistic, in which Kingsley participated.

'The reconstruction of society upon a scientific basis': A socio-psychological natural theology[18]

Kingsley's ideal crystallised at a time when one of the key concerns of nineteenth-century psychology, was, Laura Otis notes, the 'establishment of a continuum' between the human

[17] Kingsley in Abberley, 'Animal Cunning', p.41; Victorian Natural History writers such as the Rev John Wood were puzzled about how to frame the 'usurping', 'devastating' and 'destructive' behaviour of parasites and their imperialist connotations in the narratives of Christian morality promoting, amongst other, altruism (cf. John Wood, *Social Habitations and Parasitic Nests* (London: Longman, 1888), pp.52;83;97).
[18] Walter E. Houghton, *The Victorian Frame of Mind, 1830-1870* (New Haven: Yale University Press, 1957), p.35.

mind and his environment, and therefore sat on the pulse of contemporary science. The purpose of such a theory was to 'link in a continuous chain from past to future' the path to greater cognitive abilities, and, equivalently, greater knowledge, and, most importantly, greater control of nature, mankind, and society, seemingly more externally-focused than Kingsley's concern.[19] In this context, it is crucial to note that it was not Darwin who exerted, according to his own admissions, the greatest influence, but Herbert Spencer: his 'favourite author'.[20]

Despite coining the phrase 'survival of the fittest', Spencer's understanding of evolution did have a more optimistic outlook than that of Darwin was often made out to be, and, as Rick Rylance points out, thus also a more conservative one. Further, while being 'probably the most far-reaching […] remodelling [of psychology] in the light of evolutionary theories', 'Spencer's conception of history in his *Psychology*', Rylance highlights, 'appears mainly in the form of determining structures imposed on the mind by its (Lamarckian) evolutionary inheritance'.[21] Even as late as 1892, Spencer still advocated an anthropocentric model of evolution, citing men as highest creatures. These retrospective elements are crucial to note before discussing Kingsley's attempts to reconcile Darwinian evolution with other philosophies, because although the Lamarckian inheritance of Spencer's *Psychology* was pre-Darwinian, it continued to exert a strong attraction in the post-Darwinian period through its focus on optimising the human species: a point in which Spencer's theories converge with Kingsley's.

Like Spencer, Kingsley believed the 'law underlying the whole of creation' was inherently moral. Spencer, moreover, asserted that there was an equally latent macrocosmic '*moral*

[19] Otis, *Organic Memory*, p.18.
[20] Hale, 'Other Bulldog', p.988.
[21] Rylance, *Victorian Psychology*, pp.255-6;203.

law of society' which 'like [society's] other laws, originates', not in Nature, but 'in some attribute of the human being' – unlike the 'law of commerce'.[22] Such a 'moral law' implied that 'civilisation' meant adherence to morality, which, in turn, was natural, and society – *naturally* – strove for progress which Spencer defined as the eradication of the 'things we call evil and immorality'. Accordingly, Spencer projects that, 'provided the human race continues', it 'must end in completeness', meaning 'that man must become perfect'.[23] Conceiving of the natural, social and individual worlds as analogous reproductions of one another, Spencer effectively predicted a natural, social and psychological utopia, once nature, mind, individual and society had been rebalanced into their naturally intended harmony.

Spencer's view seems an inverted version of Kingsley's, suggesting that the environment should be guided by what is within the individual, the mind. But combining their theories, this could only succeed once the mind was in harmony with Nature; the environment Spencer refers to is that shaped by the individual, and its mind. What emerges is a triangulation in which society must follow natural law, and the clue as to whether or not it was succeeding in doing so – and thus proceeding to perfection – was the psyche. And Spencer's conception of the psyche was in its fundamental points not unlike theological conceptions of it. He wrote, 'we commonly regard mental and bodily life as distinct' but 'it needs only to ascend somewhat above the ordinary point of view, to see that they are but sub-divisions of life in general; and that no line of demarcation can be drawn between them, otherwise than arbitrarily'.[24] To 'understand humanity in its combinations', however, 'it is necessary to analyse that humanity in its *elementary form*—for the

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[22] Herbert Spencer, *Social Statics: or, The Conditions Essential to Happiness Specified, and the First of them Developed* (London: Chapman, 1851), p.19.
[23] Spencer, *Social Statics*, p.65.
[24] Spencer, *Principles*, p.349.

explanation of the compound, to refer back to the simple'.[25] While 'infinitely complex organizations of commerce ha[d] grown up', they could have done so 'under certain desires *resisting* in each of us' a natural law: 'the affinity between atom and atom'. This, he judged, was wrong; instead, 'every social phenomenon *must* have its origin in some *property* of the individual' – 'the *social atom*'.[26] As the human individual magnified its properties into the macrocosm of society, society had to turn to this 'atom' – the "building plans" within the individual for guidance in solving the grievances of environments created from resisting these laws.

Whether Nature, the psyche, or 'atom' and society, "resonated" could thus be measured by the effect environments had on the individual. As Spencer's choice of the 'law of commerce' as counter example to the 'moral law of nature' indicated, he did not think mankind was currently succeeding at leading its species to perfection – and neither did Kingsley. But the theories that informed Kingsley's writing also informed the thought of those governing society, and those reflecting on its governance, some of whom interpreted Spencer's theories into a different direction. While Darwin had compared evolution to a 'Tree of Life', showing 'different organisms [developing] in different directions', Spencer, Lamarck or Haeckel compared the process to a 'straight line, proceeding from the simplest organism' by Lamarck's notion of the 'steady accumulation of characteristics', to the human being: a process in which such progress meant a step towards perfection and morality, as it must have weeded out 'malfunctions' to progress.[27]

As functioning was defined as survival of a species' constituent members, by inverse reasoning those who were ailing or dying were interpreted to be malfunctioning; and as

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[25] Spencer, *Social Statics*, p.16.
[26] Spencer, *Social Statics*, p.17 [my emphasis].
[27] Otis, *Organic Memory*, p.39.

their existence was not conducive to the species' progress to perfection, it must, therefore, be both immoral and unnatural. This interpretation became the core thought of the, as Otis points out, largely rhetorical 'organic memory' theory. Its advocates also 'located history in the individual' in the same way fossils stored in the earth 'made visible' historic truth, the body of an individual became a 'palimpsest' – a 'record of its interactions with its environment', 'like a landscape written over by the past.[28] But they also problematically aligned 'memory with heredity and individual development with racial development' in ways that sustained systematic exploitation and oppression of the British working classes and, applied to race, in the Empire, where it justified in the terminology of biological law exploitation as the survival and deserved superiority of the fittest.[29] As history '*was*, in fact, visible' in those denoted deviant individuals, organic memory theory 'encouraged the view that non-European cultures represented not alternatives to Western civilization, but stages Europeans had surpassed': a rhetorical pattern transferred to the British working classes.[30] As Darwinism, Alan Collins notes, 'implied that humans were a product of the same natural laws as all other creatures', and that, thus, 'some psychological functions were a product of those laws,' it was, in turn, concluded that the economic situation of the working classes must be due to an evolutionary and psychological disadvantage.[31] The crucial difference of this view to the theories of Spencer and Kingsley was that the health, or fitness of the mind and individual was not measured against the law of nature, and natural environment, but against the 'law of commerce', and man-made environment.

The role of narrative is notoriously crucial, as, although apparently a scientific theory, 'not all of those who wrote about organic memory had the principles of physics', or indeed

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[28] Otis, *Organic Memory*, p.4.
[29] Otis, *Organic Memory*, pp.5;4.
[30] Otis, *Organic Memory*, p.40.
[31] Collins, 'Psychology in England', p.183.

evolutionary biology, 'at their command', Otis notes. Although Organic Memory theory supplied apparently a sociological theory of population health, '[F]ew of its advocates performed their own experiments', 'although' they keenly 'reinterpreted the experiments of others'. All were 'resourceful in attempting to prove the theory, drawing upon philosophy, literature […] or whatever fields were available to them'.[32] Despite appearing in the guise of science, Otis clarifies, Organic Memory theory must be 'understood as a semantic, or perhaps literary achievement', a movement that 'sought power through language'.[33] Its success was, nonetheless, pervasive, as a contemporary article in the *Economist* showed. It stated 'suffering and evil were nature's admonitions, they cannot be got rid of, and the impatient attempts of benevolence to banish them from the world by legislation have always been more productive of evil than good': a 'survival of the fittest' measured in racial and economic terms that earned the name social Darwinism, which, at its most extreme became the basis for eugenics.[34]

Responding to the hugely influential claims of Organic Memory theorists, Kingsley thus himself harnessed rhetoric, but substantiated it with science, enhancing it, further, as a fervent preacher, with Biblical pathos to redefine and correct their claims. The need for any of such theories arose not only from a desire for the regulation of society to steer humanity to perfection, but from a 'state of anxiety', especially in London, where the atmosphere of destruction, catastrophe and dissolution was, as Hale notes, 'oppressive' at the time Kingsley wrote the most prolifically.[35] A far greater threat to social cohesion than Darwin's evolution, Francis believes, was the 'ever present terror' of a series of natural disasters – poor harvests and floods – in the 1850s and 60s.[36] Kingsley observed and

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[32] Otis, *Organic Memory*, p.18.
[33] Otis, *Organic Memory*, p.27.
[34] Rosalind P. Blakesley, *The Arts and Crafts Movement* (London: Phaidon, 2006), p.13.
[35] Hale, 'Other Bulldog', p.988.
[36] Francis, 'Paley to Darwin', p.453.

commented on all these, but it was especially the recurrent outbreaks of cholera which put his blood 'on the boil'.[37] Their worst manifestations centred around the workers' quarters of the London district of Bermondsey, as Dickens described in *Oliver Twist* (1838), and they confirmed to Kingsley that society was advancing towards precisely the opposite to perfection, but for the opposite of the reasons that Organic Memory theorists and popular scientific theory supporting governance suggested.

Kingsley embarked on a mission, in the religious sense of the word, to not only prove these interpretations fallacious, but declare them the reason for current crisis in every medium at his disposal. He reminded readers of the *Morning Chronicle*, that it was the 'laws of commerce' that were the opposite of all that was natural in Spencer's books. And when he describes in apocalyptic terminology the state of the workers and their unnatural environment it becomes clear in his use of that terminology, that *they* were not to blame, but their environment having been created as *un*nature. This article crystallises to what ends Kingsley employed rhetorical means: compared to his descriptions in *Glaucus*, the vocabulary of his article was un*natural* but un*holy*. The trees of Bermondsey's Jacob's Island were 'black with mud', and the 'running brook', where monks once sat to enjoy their 'sack and ale', was now a stagnant 'tidal sewer'. The vocabulary evokes the Egyptian plagues sent as a punishment for ignoring God's warnings: an image Kingsley had already summoned in his sermon 'Pharaoh's Heart' to compare those 'grinding their labourers' to the biblical villain.[38] The 'slimy' and 'muddy stream' was, as in Egypt, as 'red as blood' and undrinkable; in it floated the 'swollen carcasses' of dead animals; pests, like the frogs, locusts and flies of scripture, proliferate; the dwellings were plunged into darkness. In this 'nest of pestilence', typhoid fever, cholera and scarlatina 'bring death to almost every

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[37] Colloms, *Beast and Monk*, p.130; Francis, 'Paley to Darwin', p.453.
[38] Charles Kingsley, 'Pharaoh's Heart', in *Sermons on National Subjects* (London: Macmillan, 1890), p.325.

door' by causing infant death, just as the tenth plague is 'killing the firstborn of all Egyptians', as Kingsley preached, to remind those who 'obey the laws of trade, the usages of society, [and] the interests of one's class' rather than the laws of God.[39] Biblical language identifies immoral action, and within Kingsley's philosophy, it is clear that he considered immorality contrary to science.

He thus offers his own take on evolutionary theory. While Spencer and Lewes regarded processes of evolution and dissolution as naturally recurring, alternating cycles, Kingsley understood these tendencies as conditional upon mankind's adherence to God's, or in Spencer's case, the moral laws of nature. The Biblical-scale apocalypse London was facing was thus unambiguously the result of a series of Darwinian biological processes, stimulated not by natural, but built environments, which, shaped by human minds that had been spoiled by the opposite of natural law, therefore creating in turn unnatural environments, compounding their effect. But this effect could accordingly also be mitigated by altering these environments. Kingsley at this point adapts evolutionary theory for application beyond the natural sciences into a sociological context, pre-empting the now common distinction between natural and built environments, and their distinct but fluid effects on the human psyche.[40] Examining his cholera writings it becomes evident that he does not retreat to the Romantic dichotomy of evil man-made versus divine natural, but offers something more differentiated. The poor state of the workers initially seems the result of them being exposed to a man-made environment. The 'inhabitants' of the workers' lodgings 'showed in their faces the poisonous influence of the mephitic air' in their 'ill-ventilated' surroundings, their white skin tells of 'impaired digestion' and

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[39] Charles Kingsley, 'A Visit to the Cholera Districts of Bermondsey', *The Morning Chronicle*, 24 (September 1848), p.3; Exodus 11:4-6; Kingsley, 'Pharaoh's Heart', p.326.
[40] Johnson, D. L., 'Meanings of Environmental Terms', *Journal of Environmental Quality*, 26 (1997), 581–589 <https://dl.sciencesocieties.org/publications/jeq/abstracts/26/3/JEQ0260030581> [Last Accessed 28 March 2019].

'languid circulation', their 'glassy' eyes showed a 'secretion of tears peculiar to those who have been exposed to hydrosulphate'. But the causes of this process can be clearly linked to the 'great evil' of the 'capitalists'.[41] However, within this man-made space, the lower classes, elsewhere villainised as a hereditary curse to society, were gravitationally pulled towards a small garden set up in the midst of the 'dingy' surroundings of Jacob's Island, in which it seemed 'brighter and greener than an oasis in the desert', which made Kingsley wonder whether 'the poor souls [knew] by an instinct that plants were given to purify the atmosphere'.[42] The resonance between psyche and environment was activated within built environments, and this principle of resonance, that identified the situation in which mankind was striving towards a better future, is here named as *instinct*. Kingsley not only anticipates sociological differentiations between built and natural environments, but also distinguished himself from later socialist thinkers in urban reform, such as William Morris, who claimed man should, and has 'conquered nature', and only thus could establish an ideal, utopian society.[43] To Kingsley, Nature reigned superior, and all society built must be built subordinate to, but in harmony with Nature, God's creation, and its laws.

Keith Francis highlights that what Kingsley thus offered was 'something new' and nothing less than a new Natural Theology.[44] His redefinition of sin and punishment in which Darwinism, social science and theology are now aligned is exemplary of how he used this new theology to counter, and correct public theological paradigms, such as the 'widespread belief' among the public that the cholera outbreak was an arbitrary 'judgement of God'. As Kingsley made science theological, he here redefines scripture

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[41] Kingsley, 'Visit', p.3.
[42] Kingsley, 'Visit', p.3.
[43] William Morris, 'How We Live and How We Might Live', in *The Collected Works of William Morris: With Introductions by His Daughter May Morris, Volume 23: Signs of Changes; Lectures on Socialism* (Cambridge: Cambridge University Press, 2012), p.15.
[44] Francis, 'Paley to Darwin', p.454.

through science. In his sermon 'Who Causes Pestilence?', he declared cholera had been sent by God as punishment, but was brought on by people's 'Selfishness […], Laziness and Ignorance'.[45] So shifting agency, and re-establishing the deadly sins in a modern context, cholera was nothing less than a 'fresh scandal to Christianity', in which 'capitalism' was cast in the role of King Herod causing a nineteenth-century 'Massacre of the Innocents'.[46] Modern scientists and those applying science to the benefit of society, as the 'Sanitary Commissioners', were the missionaries who 'proved to all England fifteen years ago' that cholera 'always' clung to 'bad drainage and filth' – 'such were the laws of God and had always been'.[47] Cholera could not be 'God's *judgment*' when 'one can work out how to prevent it'.[48]

Cholera was the natural result of society not adhering to natural – and thus moral – law. Further evidence in nature was to be found in the torrential rains, which caused the London floods, and had made the cholera epidemic subside. Concluding from those who suffered without blame, and those who ignored what was exacerbating the situation – as, he stated, the clergy, and the 'capitalists' who 'took no notice […] because it was the poor rather than the rich who suffered', they were evidently the ones acting against nature, and thus objectively immorally.[49] In order to convey this, thus apparently objective, notion, he chose the word of God, to cast the working classes into the role of the Israelites, the chosen people enslaved under the Egyptians, the rich being guilty of 'that sin of Pharaoh's, of "*not letting the people go*"': in a modern context, not letting the people evolve in the direction

[45] Charles Kingsley, 'Who causes Pestilence?', in *Who Causes Pestilence: Four Sermons* (London: Richard Griffen and Company, 1854), p.4.
[46] Kingsley, 'Pestilence', p.4; Charles Kingsley, 'The Massacre of the Innocents', in *Sanitary and Social Lectures and Essays* (London: Macmillan, 1889), p.257.
[47] Charles Kingsley, 'Why should we pray for fair weather? A Sermon' (London: n.p., 1860), pp.4-5.
[48] Kingsley in Francis, 'Paley to Darwin', p.454.
[49] Kingsley, 'Visit', p.3.

nature had intended.[50] Biblical punishment was thus nothing more than disobedience to scientific fact, which was, in these terms, redefined as *sin*.

Kingsley's new Natural Theology uses biblical imagery, which the rhetorical toolkit of his occupation in the clergy would have put at his disposal, in a dramatic function, not only metaphorically as in MacDonald, to produce meaning, but to construct a truth claim. To narrativise this revelation, he frames it within the Natural Histories genre's scientifically and psychologically purifying journey of discovery of Nature and truth. Lightman highlights the exceptionality of Kingsley in the Natural History context. This was not because of these books' reconciliation of science and religion. Lightman stresses that while it may 'seem somewhat surprising that Church of England parsons were so well represented within the ranks of popularisers of science in the second half of the nineteenth century', an age readily associated with progressive secularisation, clergymen-naturalists, in fact, responded vigorously, seizing 'upon the traces of design in Darwin's theory' and were determined 'to provide a religious framework for science', using Natural History to 'renegotiate the role of the transcendental, and of God'.[51] They thus produced a 'significant number' of 'affordable science books' with which, as Melanie Keene highlights, a large number of 'readers were baptized into the scientific community in Victorian Britain'.[52] It was also not just because of his reconciling religion and evolution, which Robert Chambers's pro-evolutionary *Vestiges of the Natural History of Creation* had already done in 1844. But, unlike other cleric-naturalists, Kingsley, as one of the first, 'attempted to co-opt', rather than 'at least partially revoke', Darwin 'into a new vision of Natural Theology', and 'strode boldly' where others had 'feared to tread', reforming

[50] Kingsley, 'Pharaoh's Heart', p.327.
[51] Bernard V. Lightman, *Victorian Popularizers of Science: Designing Nature for New Audiences* (Chicago: University of Chicago Press, 2007), pp.40;42.
[52] Keene, *Science in Wonderland*, p.83.

theology through a scientifically revised sociology: an explosive balancing act, which he performed very differently from Carroll and MacDonald.[53]

While Carroll and MacDonald aligned different narrative forms into analogy, Kingsley specifically maintained them in their exclusive function. To reassure the reader whose 'side' he is on in his Natural History *Glaucus*, Kingsley, for instance, often interrupts his prose to isolate apparent markers of potentially threatening science, to assert that 'there are', in fact, 'no microscopes' and 'no big words' in his text. But he next extends an invitation to trust '*them*', the scientists, because 'all that *they* ask us to believe' was in fact not undermining God's creation, it merely suggested 'the whole of organic nature […] *may* still be going through, some such development from a lowest germ […] to man himself' – even softening the assertiveness of such theories.[54] *Glaucus* exemplifies the ways that Kingsley's narrative affiliations shapeshift in order to achieve their aim. That this technique was deliberate becomes clear in his letter to the controversial theologian F.D. Maurice, in which Kingsley wrote about the religious aims of his most famous fairy tale, *The Water-Babies* – despite it being published among scientific essays. In order to 'get the pill swallowed' and 'make children and grown folks understand that there is quite a miraculous and divine element underlying all physical nature' he had 'wrapped [it] in tomfooleries'.[55] Not only a pun on the name of his protagonist, Tom, he admits to fooling, luring his reader into truth in an act of narrative mimicry – one of the discoveries in nature, which he had thought could 'teach no moral theology', thus indicating that disguising his argument in the language of those he sought to disprove was not unproblematic.[56]

As this chapter will show, Kingsley self-consciously balances the precarious narrative line

[53] Lightman, *Popularizers*, p.43; Francis, 'Paley to Darwin', p.457.
[54] Kingsley, *Glaucus*, p.99 [my emphasis].
[55] Kingsley, *Letters*, p.245.
[56] Abberley, 'Animal Cunning', p.46.

with regards to revealing truth. Was his many-faced narrative style a deception to trick the reader? Or its shapeshifting merely the phenotypes of a necessary natural metamorphosis such as his protagonist undergoes, natural, despite being as made up as a fairy tale? Or is it, like the dream, a recreated illusion conveying a revelation of higher truth? Thus, seemingly in spite of his fulminant rhetoric he makes the ambiguous precariousness of his endeavour his own, by wrapping his ambitious aim in a self-consciously Janus-faced narrative form – the fairy tale: inherently fantastic, and yet existent to convey moral truth. Co-opting the 'naturalist's quest', which Laurence Talairach-Vielmas explains, already blurred the lines between the scientific and fantastic, he resembled the 'hero of the fairytale', 'the knight of romance' who seemed 'to *inhabit* a fantastic world', through which 'the earth becomes to him transparent'.[57] Creating an illusionary 'diagnosis' seeing through human nature and environment into the human atom, while simultaneously inhabiting the living world, it conjures up a vision simultaneously illusionary yet truer than reality, and a protagonist a prophet conveying a true fiction unsettling the reader into a moral, scientific, and divine duty to reform.

[57] Laurence Talairach-Vielmas, *Fairy Tales, Natural History and Victorian Culture* (Basingstoke: Palgrave Macmillan, 2014), p.15; Kingsley, *Glaucus*, p.13.

3.2. Visions of futures past: The *Water-Babies* and the utopian death-vision

For since by man came death, by man came also the resurrection of the dead.
1 Corinthians 15:22

Every discourse ought to be a living creature, having a body of its own and a head and feet; there should be a middle, beginning, and end, adapted to one another and to the whole.
Plato, *Phaedrus*[1]

'Selfhood outside the self': nature, childhood, death and instinct[2]

How did Kingsley write a fairy-tale to engage with specific social circumstances while locating his protagonist as far as possible away from them through their death? The premise seems contradictory, and the death vision of the *Water-Babies* has been called 'confusing' by such critics as Stephen Prickett, who believed that the lack between a '*clear one-for-one* correspondence' between the fantastic part of the narrative and 'the events in the surface narrative' further complicated the interpretation of the work.[3] Connecting, however, the 'surface narrative' to Kingsley's use of fairy-tale elements in his non-fiction writings, draws out unacknowledged narrative strands connecting the two parts. Rather than making it, as Prickett suggested, 'superfluous' and 'irrelevant', the fantastic elements of realist frame, and the scientific elements of the fantastic vision illuminates Kingsley's distinct and innovative contributions to the Victorian sociological and socio-psychological discourse, and to fantastic literature – in the short and in the long term.[4]

In its 'Once upon a time' opening it is immediately evident that Kingsley is adapting the fairy-tale framework, which, Gillian Beer highlights, fascinated the Victorians because of its 'concept of transformation' – an appropriate medium for transforming society.[5] It is

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[1] Plato, *Phaedrus*, in *Plato. Plato in Twelve Volumes*, trans. by Harold N. Fowler (Cambridge, MA: Harvard University Press, 1925), IX, 264c.
[2] Shuttleworth, *Mind of the Child*, p.342.
[3] Prickett, *Victorian Fantasy*, p.141 [my emphasis].
[4] Prickett, *Victorian Fantasy*, p.141.
[5] Beer, *Darwin's Plots*, p.97.

likewise clear that Kingsley writes about the concerns of his reality that have preoccupied him elsewhere. His protagonist Tom 'was a little chimney-sweep' who did not attend school, and therefore 'could not read nor write'; 'he never washed himself, for there was no water up the court where he lived', his situation resembling that of Jacob's Island's dwellers. Tom was one of many maltreated child-workers, who 'cried when he had to climb the dark flues, rubbing his poor knees and elbows raw; […] his master beat him, […] he had not enough to eat, which happened every day in the week' – a description which could make a reader very nearly forget that the lengthy first paragraph begins with the classical fairy-tale opening.[6]

But reality *becomes* transformable by Kingsley casting it into a fairy-tale frame, thus also blurring the boundaries of fiction and reality. Tom, although seemingly realistic, is also, in the tradition of the everyman, a representative character, and therefore only in some ways an accurate representation of a chimney sweep's reality. Chimney sweepers were 'numerically less important', compared with child workers in other occupations, but had become 'widely publicized' as tragic figures and symbols for wasted childhoods, as Jane Humphries notes.[7] The aside that Tom was a 'short name, and *you have heard it before*', shows Kingsley knowingly draws on familiar Romantic imagery and potential of what Charles Lamb called 'innocent blacknesses': something good, trapped in the wrong shape, waiting for salvation (5).[8] Numerous references to such contexts such as William Blake's 'Chimney Sweeper', Tom Dacre, lace the chapters of the *Water-Babies*. Like Dacre, Tom's mother was dead, both are orphans, with the father of Kingsley's Tom in the penal

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[6] Kingsley, *Water-Babies*, p.5.
[7] Jane Humphries, *Childhood and Child Labour in the British Industrial Revolution* (Cambridge: Cambridge University Press, 2010), p.210.
[8] Charles Lamb, 'The Praise of Chimney-Sweepers', in: *The Essays of Elia* (London: J.M. Dent, 1906), p.127.

colony ‘Botany Bay’; both Toms ‘weep’ (44).[9] The hope for fairy-tale transformation is thus strengthened: Blake’s Tom dreams of a wonderful release from his suffering; Lamb wishing to ‘pursue’ his sweeper boy ‘in the imagination’, only to ‘shudder at the idea’ of his reality, hopes for a ‘happily ever after’.[10] Accordingly Tom’s hopes for ‘fine times coming’ puncture the harrowing opening, while his situation does not suggest it – ‘Yes’, Tom repeated, unlike Anodos at the end of his journey, only twice: ‘there were good times coming’ (6). Kingsley thus lays out a narrative trajectory in fairy-tale binaries, from evil to ‘good’, with Tom’s current situation being wrong, and what manifests in the vision, and its end product, being ‘good’.

The opening of the *Water-Babies* also illustrates straightaway Kingsley’s dexterity with the narrative apparatus his professional versatility put at his disposal. His political voice which had lamented the suffering of the Bermondsey children remained intact, while narrating the story through Tom moreover facilitated an illusory introspective into the mind and thoughts on the ‘every day of the year’ of the working poor. At the same time this, according to Spencer, *un*natural environment, had to Tom become as normal as ‘the rain and snow and thunder’, simply, ‘the way of the *world*’, rather than merely a part of it(6; my emphasis). Reality is being transformed into fantasy. As Tom’s industrial surroundings are allegorised into hell, and nature enchanted into fairyland, the separation into real and imagined, which in Carroll and MacDonald only occurs through the vision, thus occurs already within the narrative frame in order to distinguish the parts of reality worth aspiring to, and which to leave behind, the ‘surface narrative’ thus acting as interpretative guide to the vision’s imagery.

[9] William Blake, ‘The Chimney Sweeper’, in *Selected Poems*, ed. by G.E. Bentley (London: Penguin, 2005), p.28; There is a second poem, number 37 in the *Songs of Experience*, by the same title.
[10] Lamb, ‘Chimney-Sweepers’, p.127.

Tom's tale begins when he is for the first time taken out of the city to sweep Sir John Harthover's mansion. Instead of the infernal 'thumping of the *pit-engine*'[11], the '*pit-bird*', 'warbling in the sedges'; and instead of the 'black dusty road' and the 'black slag walls', Tom sees 'gay flowers, all drenched with dew' (8-9). The prior absence of water is superseded by its natural, free abundance. Monosyllabic nouns and plosives dominate the language describing the city; rounded diphthongs and soft fricatives highlight nature's liveliness and friendliness as opposed to the hard, cold city. Nature is personified. It is not merely a quiet morning; instead, 'old *Mrs Earth* was fast asleep', the 'great elm-trees' and the 'few clouds' were likewise 'fast asleep', 'waiting for the sun *to bid* them *rise* and *go* about their day's business' (9; my emphasis). Nature gains a voice when the buzzing of the bees appears a 'strange murmuring', and when Tom marvels at the 'enormous trees', he imagines the 'sky *rested* on their *heads*'; the sky, like the sun, gains agency, while the trees gain metaphoric personhood, their crowns rendered as heads (13; my emphasis). By contrast, the allegorical name 'Grimes' marks him as a personification of the narrow sooty world which they had just left behind and its principles: a physically and morally stained man (9).

The fairy-tale binaries are apparently clearly established through themes familiar from Kingsley's writing: the ramble through the good, natural environment of the English landscape, and the infernal, capitalist, built environment of the city, natural and unnatural respectively. Before a 'clear one-for-one correspondence' between vision and frame can be considered, however, it is the concept that establishes dialectic connection between these binaries, in a manner initially resembling the technique applied in *Phantastes*, which is as subtle as noteworthy, as it guides the vision towards its little-discussed practical aim by

[11] The pit-engines point to colliery, another occupation known for child-labour, well-known from art, such as Philip de Loutherbourg's 'Coalbrookdale by Night' (1801), as a symbol of the destruction of nature.

equally little-noted psychological means.[12] The gravitational force acting between the binaries and what they signify is the same as Kingsley had already evoked in his cholera writings. As Tom's weeping is replaced by curiosity and wonder and a keen interest to learn, Nature, firstly, releases him from the inhibiting influence society exerts on Tom's mental capacities, so that his cognitive potential can exert itself in the direction nature intended. Despite 'never [having] been so far into the country before', Tom next expresses an *instinctive* affinity for this environment: he '*longed* to get over the gate and pick buttercups, and look for birds' nests in the hedge', develops an interest in bees, and, as soon as he hears about the sea, he '*longed* to go and […] bathe in it' (9-10;13; my emphasis). The connection between the two worlds, and navigating the vision's imagery is constructed through 'instinct', the same psychological phenomenon by which the 'poor souls' of Bermondsey were drawn to the 'purifying' plants, and Kingsley is equally clear that what prevents Tom from immersing himself in nature is Mr Grimes, who was a 'man of business' and thus linked to the 'great evil of the capitalists' (9).[13]

Kingsley's use of 'instinct' as a natural force in a social and evolutionary context marks a departure from the more common paradigm according to which the more highly developed, and therefore more desirable, faculties could guide evolution more reliably than the lower. In evolutionary psychology and psychiatry, instinct was overwhelmingly negatively charged for most of the century, while simultaneously remaining 'a difficulty' sufficiently ambiguous, 'to overthrow', Darwin himself feared, his 'whole theory'.[14] On the one hand, some, like Maudsley, believed it a threat to human evolution towards perfection. It manifested itself, as it does in Tom, most clearly in the child, which, Maudsley believed it 'could from its early years [display] evidence of inherited insanity': a

[12] Prickett, *Victorian Fantasy*, p.14.
[13] Kingsley, 'Visit', p.3.
[14] Darwin, *Origin*, p.207.

concern that had begun to surface as early as the 1850s.[15] 'Dismissing "that poetic idealism and willing hypocrisy" which "talks of the "purity and innocency of the child's mind"', Maudsley denigrates its 'instincts, appetites, or passions, call them what you may' as the sole cause of 'extreme and perverted action'. 'The veil of any control which discipline may have fashioned is rent', he continues, 'the child is the animal, and reveals its animal nature with as little shamefacedness as the monkey indulges its passions'.[16] Francis Galton, whose *Hereditary Genius* (1869), released only shortly after the *Water-Babies* but epitomising kindred theories surrounding Darwin's works, believed the child came 'burdened by the sins of its forebears in the shape of [...] degenerative traits' such as that of instinct.[17]

On the other hand, intrigued evolutionary psychologists seized upon instinct as the potential link, through its connection to the child and animal and thus to an idea of 'origin', between the human mind and a world as it was intended to be. Spencer had defined instinct as a 'compound reflex action', a forerunner to Carpenter's later concept of 'unconscious cerebration' which Carroll adapted in *Sylvie and Bruno*, and which, as Carpenter believed, 'evolved intellectual products' without intelligence or consciousness 'proper'.[18] While instinct was predominantly linked to behaviours in the animal world, such as those of bees that naturally did the right and proper thing for their species, also mentioned by Carpenter, Holland and Darwin, not all characterised instinct as regressive. Carpenter spoke of '*acquired* instincts', suggesting a principle in touch with inherited origins, which, however, through hereditary transmission of psychological features and psychological evolution constituted an *acquired natural*, and thus moral behaviour, which

[15] Shuttleworth, *Mind of the Child*, p.181.
[16] Shuttleworth, *Mind of the Child*, p.182.
[17] Shuttleworth, *Mind of the Child*, p.335.
[18] Spencer, *Principles*, p.539.

could, in a rhetoric framework such as Organic Memory theory, act as a compass to what is *true*, 'good', and thus 'natural' in modern society – an inherently man-made construct.[19] This highlights another aspect of the *Water-Babies*: a work which most critics have, like Lightman, concluded to be focused ultimately on 'nature filled with religious significance', an ultimately 'pastoral and Romantic' vision, as Talairach-Vielmas summarises.[20] It is, thus, *also* about the teaching and learning experience in Nature, but, *ultimately*, about the correct, 'good', applications of what is learned in society, making the work not only a Romantic, pastoral, and regressive, or even reflective and nostalgic, but a forward-looking vision, one looking to acquire, to evolve, instinct to build a modern society on the basis of science and Christian truth.

Instinct becomes a guiding force to a more differentiated vision than the fairy-tale binaries at first suggest, and in this context, it is crucial to consider where Tom's instinct leads him. As in *Phantastes*, a tense juxtaposition of thesis and antithesis is constructed in anticipation of the fantastic transformation suggested by the freed 'pit-bird' 'midsummer morning'. Tom is jerked from the wide-open, beautiful landscape, back into the chimneys of the Harthover Mansion, which appear *even* more horrid than before. The mansion is the '*largest'* and *most confusing*, with the '*greatest'* number of unusually 'large', 'crooked' and 'anastomosing' chimneys. Plunged into 'pitchy darkness', Tom has an unprecedented sense of feeling of being 'lost' (15; my emphasis). While he had gained a new *awareness* of the discomfort of what had only this morning been 'the way of the world to him' through exposure to nature, he is next confronted with yet another concept: an alternative to his life, and a synthesis of the two concepts he had encountered (6).

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[19] Carpenter, *Principles*, p.355 [my emphasis].
[20] Lightman, *Popularizers*, p.43; Talairach-Vielmas, *Fairy-Tales*, p.18.

He emerges, from the wrong chimney, into a 'snow-*white*' room: he is mesmerised by its '*white* window-curtains, *white* bed-curtains, *white* furniture, and *white* walls'; in it slept a 'little *white* lady', like Anodos's ideal, the 'most beautiful little girl Tom had ever seen'; her 'cheeks were almost as *white* as the pillow' (16-7; my emphasis). Her room, despite a man-made construct, evokes nature and reverence: 'the carpet was all over gay little flowers', and of two pictures that 'took his *fancy*', one showed a 'man in long garments, with little children and their mothers', 'laying his hands on their heads', and another a 'kind', 'poor man', 'nailed to a cross' (16). Tom feels 'awed' specifically at the adjacency of divinity and nature-imitated-in-art, for instance, in the floral carpet that resembles that of Anodos's bedroom: it is a built environment facilitating natural childhood. This manifested insight *shows* a natural society is possible, and that it is right: as Tom is instinctively attracted to it. Equally important is the instinctive repulsion enacted in the same scene in the frame's volta, when natural and unnatural built environments, and their embodied effects, clash. In the same symbolically externalised act of 'reflection' as in *Phantastes*, Tom recognises himself in a mirror showing a 'dirty', 'ugly', 'ragged figure with bleared eyes': 'a little *black* ape' entirely opposite to the 'little *white* girl' (16). Like Caliban, he rages at this reflection of his unnatural childhood and awakens the girl, who believes him to be a criminal from his appearance, that draws on the same physiognomic language that Carroll and Tenniel later used. Rejected by his ideal, his 'white lady', and the 'natural' childhood home he had begun to *long* for, Tom escapes in shame. Crucially, he does so after having become conscious of, firstly, what nature had intended for him, secondly, that natural society was possible, but that, finally, it wasn't for everybody – and certainly not for him, who had already been *made* unnatural.

Tom's development is revealed as unnatural, as it has taken a turn into the *wrong* evolutionary direction. But Kingsley's narrative *shows* how this was, unlike what

Fig.31: Tom covered in soot

eugenicists would claimed, not due to his heredity. Kingsley adopts the same, problematic, rhetoric that saw a certain human culture as 'evolutionary perfection', stating that Tom was 'brave, determined', and, most of all, 'English', not an 'untrustable, Irish'. Thus, like Lamb's description of the sweeper boys' 'innocent nigritude', he was, as if by a fairy-tale curse, trapped in the wrong body: a 'curse' such that, Kingsley had written, was attracted by a sinful society (62). This curse of evolutionary degradation is amplified by Linley Sambourne's (Fig.31) whose illustration evokes the same racial undertones common in the description of chimney sweepers as a lower species: as Lamb wrote, 'Africans of our own growth'.[21]

As Reiter had stated, fantasists 'could dramatize' developments indicated by contemporary societal grievances 'more profoundly […] because they could accelerate the process of regression, and show more far-reaching consequences'.[22] Thus, from the moment of Tom's self-recognition begins also his transformation, which is enacted as a dissolution. Beginning from his revelation as 'ape', heightened by the symbolic blackness of the soot in which he is covered and his crooked posture, Tom is during his escape increasingly described in simian terms, as he moves through the forest like 'a small black gorilla' (19). His unmaking is mirrored in nature, in the course of his journey and through a geological metaphor. Tom's natural katabasis leads him, like Alice, 'down', 'down', 'down'; but rather than in one smooth fall, he descends natural 'steps' – the rock strata – which retrace

[21] Lamb, 'Chimney Sweepers', p.127.
[22] Reiter, 'Travelling Beastward', p.219.

the evolution of landscape, strengthening the analogous relationship between the organisation and evolution of mankind and nature (27). Tom first takes a step of 'gritsone', then one of 'limestone' before climbing into 'a dark narrow crack' into a valley of 'green-stalked fern' (27). Kingsley described the same geological layers in *Madam How and Lady Why* when describing the 'mountains of Yorkshire', where 'there lies upon the top of the limestone a hard gritty rock'; the limestone, upon the 'carboniferous' layer which was, in turn, made up of 'plants', such as 'ferns' (Fig.32).[23] Retracing the making of the Earth to the core from which they originate, Tom's escape, by analogy, indicates a downward journey in evolution to his origins, at which he becomes 'quite amphibious' (46).

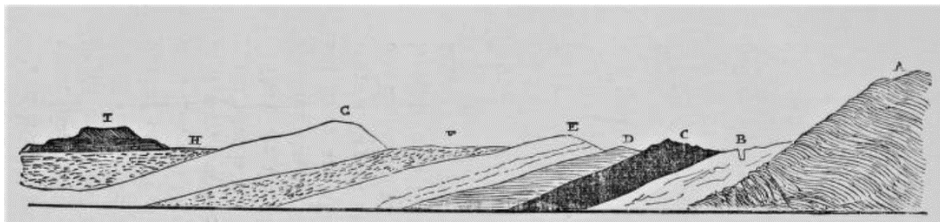

Fig.32: Geological layers in the 'mountains in Yorkshire' described in *Madam How and Lady Why*

What follows is the climax of what had been widely-noted as the moment of a – thus in fact much longer process of – transformation. In a fever, Tom finally 'tumbled himself' into 'the clear cool stream' at the bottom of the valley. Sinking into the river he 'fell fast asleep', into the 'quietest, sunniest, cosiest sleep that ever he had in his life'; the river fairies 'washed' Tom so 'his whole husk and shell had been washed quite off him', to release the 'real Tom' into the river (33;43). This is the moment forecast in Blake's poem, when the sweepers, rescued by an angel, 'wash in the river and shine in the sun'.[24] Tom, it is clear, has died, although Kingsley's fairy-euphemism avoids the word despite Tom's body being found, 'a pretty little tombstone' being put 'over Tom's *shell* in the little churchyard in Vendale' (43).

[23] Kingsley, *Madam How and Lady Why*, p.173.
[24] Blake, 'Chimney Sweeper', p.28.

With regard to the correspondence between frame and vision, it is crucial to disentangle where biological and theological, psychological and sociological meanings of this scene converge and thus determine the direction of the part to come. The scene, it has widely been noted, is saturated in baptismal imagery, signalling Tom's destruction heralds a resurrection. But Kingsley goes further than that. In the absence of a church, Tom hears 'church bells' ring '*in his head*', which accompanies the sacrament of transubstantiation in high-Anglican catechism, promising the resurrection, the forgiveness of sins, salvation and life eternal, for *all* those who *chose* a life in Christ (23). Not only Tom, but society is, vicariously, the subject of this transformation, to be saved from having embarked on the false, unnatural path, which is not inevitable, but a choice – a radical redefinition of the concept in keeping with how Kingsley's sermons unified science and scripture.

Kingsley further reveals how this was to be done. The 'real Tom' is released not unlike in *Wonderland*, by dissolution through water, marking the entering of the psyche into a symbolic underworld, and a psychological process of dissolution. This process is, in Tom's case, informed by evolutionary contexts, such as the 'Laws of Dissolution', that theorised the process of being 'reduced to a lower level of evolution'.[25] Spencer and Lewes transposed such neuro-pathological theories concerning the degeneration of individuals, which is enacted in Tom's descent, to the macrocosmic scale of population health, to express concerns about its decline. However, the neuro-pathologist Théodule-Armand Ribot saw in this process a morality fable, an unveiling of nature's 'construction plans'. In what became later referred to as 'Ribot's Law', he suggested that individual memory disintegrated from the 'unstable' and newest elements to the 'unconscious' to the 'most organised associations', and 'in showing us how memory disorganizes itself, [it] teaches us

[25] Otis, *Organic Memory*, p.24.

how it is organised'.[26] Analogously, in an organic memory framework, this process revealed how Nature was, and how society should be, organised. Kingsley disorganised the child to strip away the unnatural, and reveal the original, intended and natural towards which instinct had led it. Tom's soul, the immortal substance, becomes equivalent to Spencer's inherited self to show how the human 'atom' was organised, and that degenerative traits were less organised, and thus the result of external influence. The premise of salvation becomes equivalent with engineering a natural society upon the model of the 'social atom' through developing natural instincts.

That these could arise from the soul-atom is evident in Tom's transubstantiation. When he enters the river 'the church bells' were ringing '*in his head*' – and in the absence of a church – it is clear Tom leaves the world a hallucinating child (23;31; my emphasis). Kingsley exploits the ambiguous position of the distinct discourse of childhood and hallucination, which was closely related to the concept of instinct. Child-psychiatrists like Maudsley conceived of the child-mind, inherently 'unbalanced' as that of a madman, and, vice versa, regarded imagination and hallucinations, like instinct, as child-like. Warning, on the one hand, that the imagination '*hastens* to fill the *voids of knowledge* with *fictions* and *theories*', as indeed Kingsley is about to, Maudsley also admitted that although 'fictions' were to him untruth, the imagination and hallucination, the producers of such fictions, also 'lead[s] the way', 'create[ed] ideals' and supplied 'the tentative in the process of progressive interaction between the individual and nature'.[27] Such 'positive hallucinations', even the 'phantom-vision' of the 'half-delirious state of brain before death', as in Tom's case, could project 'concrete images' of how to 'advance social order', especially when they sprang from a mind in which 'accurate observation, coherent

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[26] Otis, *Organic Memory*, p.24.
[27] Henry Maudsley, *Natural Causes and Supernatural Seemings* (London: Kegan Paul, 1886), p.116.

thinking and sound judgment' were the 'predominant qualities of character'.[28] Crucially, Tom had just previously intuitively internalised the study of nature as *true*, and recognised what natural society would look like, and that it must be *for all*. Kingsley's narrative *becomes* a hallucination following the study of nature – a reappraisal of the childlike in psychology parallel to Carroll's and MacDonald's belief in the curative use of the imagination and unconscious cerebration – which pointing towards our origins, would, nurtured by science, redirect erring modern society toward the right path, in a science-based, progressive vision for future society.

Finally, the method of Tom's departure frames the meaning of the vision's content for the reader, and is the most political overarching element of the frame. As the evolutionary-psychological and theological backgrounds have shown, Tom's physical death is a necessary narrative caesura to make clear that, although seen through the lens of the individual who is suffering from it, the vision's focus is directed firmly at society. Child death was a prominent literary motif widely employed to convey a social-critical perspective by numerous Victorian writers such Elizabeth Barrett Browning in 'The Cry of the Children' (1843), Charlotte Brontë in *Jane Eyre* (1847), George Eliot in *The Mill on the Floss* (1860), Elizabeth Gaskell in *North and South* (1855), or Dickens in *Bleak House* (1853) or in *A Christmas Carol* (1843) with the impending death of Tiny Tim. In the portrayal of child sweepers, the third rhyme commonly evoked alongside 'sweep' and 'weep', as in Blake, was 'sleep' whose purpose is clear. 'Twere better' for chimney sweepers, an anonymous poem claimed, than 'to *sleep* | *In eternal death, than life to keep* | In hopeless endless dole'.[29] Child death, as in the fairy-tale, holds up the mirror to the sins

[28] Maudsley, *Natural Causes,* pp.186;151;121;153.
[29] [Anon], 'Weep! Sleep!', *Fun* (26 March 1864), p.14 [my emphasis].

Fig.33: Linley Sambourne 'Clear and Cool'

of adult society, targeting, as with Scrooge, especially capitalism.[30] Linley Sambourne's *Punch*-like illustration of Tom's death leaves no doubt about that being its cause showing the lodgings of Jacob's Island next to a sack labelled 'wealth', behind a withered tree (Fig.33).

Kingsley, however, goes further than his contemporaries. Having followed his instinct toward what would reveal a progressive societal vision, Tom does not die passively, as would have been historically most likely, in an accident, from the side-effects of child-workers', 'filthy living conditions' or as the direct result of ill-treatment by employers, such as physical punishment – but through his own actions.[31] Veiling this in the ambiguity of a state of mental disarray and half-dress, does not undermine the point but through recognisable elements suggests more than an accidental death. Sambourne's illustration hints at literature's perhaps most famous ambiguous death by drowning, in *Hamlet*'s Ophelia: like Tenniel and Furniss he was drawing out subtexts illuminating societal contexts.[32]

[30] In alternative versions they are led to a 'beautiful country upon a hill, where they were never seen again but lived happily ever after – their death – although more hopeful through utopian inclination of their end.
[31] Peter Kirby, *Child Workers and Industrial Health in Britain* (Woodbridge: Boydle Press, 2013), pp.4;18.
[32] Sambourne had created numerous illustrations for and inspired by *Hamlet* and other Shakespeare works for *Punch*, these include 'A Rat, A Rat: Polonius Behind the Curtain' (*Punch*, 6 Oct 1877), 'Ouida: "O fie! 'tis an unweeded garden"' (*Punch*, 20 Aug 1881), sketches of 'Polonius and Laertes' (MS FSL ART Box S187.5.3) and 'Hamlet on the Ramparts' (MS FSL. Art Box S187.5.2), Folger Shakespeare Library, Washington DC. As shown through *Alice, Punch* caricaturists used Shakespearean in political caricatures, so that he was certainly aware of their connotations. Kingsley did not work with Sambourne: when the *Water-Babies* was illustrated by him, Kingsley had already died; the process was overseen by his widow Frances, who had hoped for Tenniel as illustrator, having appreciated his illustrations of *Alice* (Frances Kingsley to Alexander Macmillan, 1880, Add MS 54912-135, Macmillan Archive, British Library, London).

Fig.34: Kate Terry as Ophelia (1854) Fig.35: 'Ophelia', Hugh Diamond Fig.36:'Ophelia', literary illustration

Instead of Tom, Sambourne depicts a symbolic nature fairy, who is, like Ophelia typically, crowned with flowers and straw (Figs.34-36). She is perched upon a 'willow that grows aslant a brook'[33], the site of Ophelia's drowning, but further infernalising narrative reality, as a hollow willow tree also recalls the tree-graves of suicides in Dante's *Divine Comedy*.[34] Although Ophelia, according to Gertrude, drowns in 'madness'– like Tom, a disturbed state of mind – the grave digger asserts she was 'wilfully' seeking 'her own *salvation*'. As she so 'drowned herself wittingly', he adds, 'had [she] not been a gentlewoman she should have been buried out of Christian burial'.[35] But, with 'self-murder' still criminal in the Victorian age, the Christian burial issue – the symbolic granting of eternal rest in God's kingdom – is echoed in Tom's demise. He mutters: 'I must be quick', 'the bells […] will stop soon', 'then the door will be shut, and I shall never be able to get in at all' (31-2).

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[33] Willows acquired the characteristic shape depicted by Sambourne from industrial use of its branches, they rot to hollow through pollution as that of the illustration's river.

[34] The Ophelia scene's links to suicide retained currency throughout the century. The song 'In a Tree by a River' from W.S. Gilbert and A.S. Sullivan's operetta 'The Mikado' (1885) describes a melancholy self-murder, through a plunge from a willow into a brook, becoming 'the Suicide's grave' (W.S. Gilbert, 'The Mikado', *The Complete Annotated Gilbert and Sullivan*, ed. by Ian Bradley (Oxford: Oxford University Press, 2016), p.713), encapsulating the political tensions of the scene. The Willow's folkloric associations with grief and in-between worlds form the backdrop to Pan's dream-like appearance at the near- drowning of little Otter in Kenneth Grahame's *Wind in the Willows*.

[35] William Shakespeare, *The Tragedy of Hamlet, Prince of Denmark* [First Folio, 1623], The Arden Shakespeare, Third Series ed. by. Ann Thompson and Neil Taylor (London: Bloomsbury, 2006), 4.3.138; 5.1.1-2;12-13;3-25.

'Tom was mistaken', the narrator explains, as '*God's house* […] belongs to all alike', the 'church doors are left often […] for everybody who likes to come in' (32). With Kingsley an outspoken critic of the church, and a Christian socialist, the narrative already signals, before the vision begins, that a natural society must treat for everybody equally.

Working-class suicides were a highly publicised phenomenon at the time the *Water-Babies* appeared. Suicides had 'quintupled since the middle of the last century', the number of children 'under sixteen […] rapidly swelling', and drowning constituted 'three quarters' of the cases.[36] Contemporary newspapers reveal that 'unsound state of mind', episodes of 'insanity', 'melancholy', or states in which the senses were otherwise adversely affected, such as by 'alcoholism' did not disqualify such a death to be classed as suicide: they were, in fact, its most common circumstance.[37] Tom's death, in fact, recaptures a suicide Kingsley had previously framed in precisely these terms in *Alton Locke* (1850), a fact unlikely to be a coincidence. Douglas-Fairhurst highlights how *Water-Babies* reworks numerous themes from earlier works, such as also the pre-suicidal auditory hallucination in *Yeast* (1851).[38] In 'The Lowest Deep', an entire chapter dedicated to the subject, Locke mentally prepares for what is explicitly called 'suicide', while gazing at the 'reflexion of Saint Paul's' in 'the lurid stream' of the Thames, which 'pointed down — down — down', all nature, the 'river-eddies' and a 'black wherry' hurrying 'downward': imagery parallel to that of Tom's demise.[39] Locke witnesses also the inebriated textile worker Jemmy Downes plunging himself into one of Bermondsey's stagnant sewers, depicted in

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[36] [Anon], 'Suicide', *Blackwood's Edinburgh Magazine*, 127 (1880), pp.723;726;730.
[37] Cf. 'Suicide', *Kentish Mercury* (16 February 1861), p.5; 'Distressing Suicide', *Coventry Herald* (18 July 1862), p.23; *The British Newspaper Archive brings* up c.5000 articles per year containing the phrases 'suicide' and 'drowning', in the months the *Water-Babies* was first serialised alone; many specify Bermondsey as site of the 'self-murder'.
[38] Douglas-Fairhurst, 'Introduction', pp.xviii-xix.
[39] Charles Kingsley, *Alton Locke, Taylor and Poet: An Autobiography* (London: Macmillan, 1905), pp.258;259; The parallels are even more striking as Locke subsequently surmises to a fever in which he, in a dying-hallucination, lives through the creation and intended order of the world, morphing through the evolution of species, which will be discussed below.

Sambourne's illustration, after the failed Chartist revolution, and his family having died of cholera.[40]

That Sambourne, through the depiction of Bermondsey links the two deaths without the author's instruction suggests the resonance of Tom's death within contemporary discourse of suicide. Psychiatric literature highlights that it occurred most frequently after admonishment or 'ill-treatment', or in 'imitation'. A case cited in the *Journal of Psychological Medicine and Pathology* had thus similarly described a 'child of eleven years old' who 'drowned himself, because his mother committed suicide' and in the *Water-Babies*, the river sings to Tom, 'play by me bathe in me, mother and child', suggesting that his mother had already gone to the river (25;44).[41]

While suicide could be regarded as '*merely* a product of the general condition of society', which meant that 'in any given state of society a certain number of persons must put an end to their own life', it was, however, more frequently linked to a certain *class* of people: it was 'essentially a *poor* man's *remedy*'.[42] Child suicide's 'sang-froid' cold-bloodedness and matter-of-fact execution, as seemingly rational conclusion of the causing circumstances, were especially remarked upon.[43] With suicide the apparently *only* antidote to the social and biological condition of the poor, 'every man who wilfully terminates his life does so necessarily, with the idea of *improvement of his condition*', *Blackwood's* wrote, stating 'self-murderers' 'act knowingly with a view to some presumed advantage'.[44] *Alton Locke*'s chapter title alluding through the Psalms' 'de profundis' to the 'salvation' Ophelia is also accused of seeking, 'self-murder' constitutes the *ultimate* 'intensely

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[40] Kingsley, *Alton Locke*, p.259.
[41] [Anon], 'Suicide amongst Children', *Journal of Psychological Medicine and Pathology* (1856), p.297.
[42] 'Suicide', p.719 [my emphasis].
[43] 'Suicide amongst Children', p.297.
[44] 'Suicide', p.723; cf: Psalm 130:1;5;7: 'Out of the depths have I cried unto thee, O Lord', 'my soul doth wait', to 'redeem Israel from all his iniquities'; Kingsley had compared the working class to the Israelites.

individual' expression of the 'pursuit of happiness' and 'universal appetite for calm' through which the working class could engineer their own happiness in Victorian society: an intensely powerful reworking of the motif of child death that cuts two ways.[45]

Kingsley exploits suicide's utopian and dystopian connotations. On the one hand, he prefigures later evolutionary pessimistic visions, as Thomas Hardy's *Jude the Obscure* (1894-5), in which Little Jude's murder-suicide, 'Done because we are too many', was the consequence of popular science writing widely demonising the working classes as a hereditary risk to society: to Kingsley a dystopia, yet a eugenic societal utopia.[46] As child suicide was, firstly, the '*final* version of un*natural* childhood', it was, as opposed to passive, collateral child death *actively*, intentionally, and immorally engineered into the opposite of what is naturally intended, a symbol of current governance's impending evolutionary suicide – of society and the human race.[47] As Tom's death is an active one, it, on the other hand, is also an act of judgement, and instead of the 'degraded and depleted body of the nineteenth-century labourer' functioned 'as a focus for racial and imperial angst', the fantastic providing writers of a socialist inclination, such as also William Morris, with a stage to portray 'a concrete example of the injurious impact of capitalism' and to imbue the workers themselves with agency to learn and to construct the intended future, which was for all: a powerful image in a post-Chartist capitalist society.[48]

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[45] 'Suicide', p.720.
[46]'Suicide amongst Children', p.296.
Thomas Hardy, *Jude the Obscure* (Oxford: Oxford University Press, 2002), p.325; cf. Patricia Gallivan, 'Science and Society in *Jude the Obscure*', in *The Novels of Thomas Hardy*, ed. by Anne Smith (London: Vision Press, 1979), pp.126-44; Hardy had read Maudsley who writings on working class degeneration and eugenics.
[47] Shuttleworth, *Mind of the Child*, p.339.
[48] Phillippa Bennett, *Wonderlands: The Last Romances of William Morris* (Oxford: Peter Lang, 2015), p.27.

A world 'more fantastic a thousand times than Dante's *divina commedia*': Purgatory, soul-volcanoes and social reform[49]

That Tom's death, in his transubstantiation, promised salvation, and in its evolutionary-psychological and sociological basis is thus a science-based Christian socialist vision of how to *really* construct an earthly paradise is significant for reapproaching the way in which the vision adapts the purgative dream-narrative and the utopian literary tradition. Utopia, as conceived by Thomas More, was a deliberate play on words on the English homophones 'eu' and 'u', making utopia at once 'no place' and 'a good place'. It aimed to portray an at least partially 'secular equivalent to salvation', aiming to offer '*hope* in an uncertain world' requiring adjustment.[50] Gregory Claeys highlights Utopia's traditional link with the afterlife as an evaluation of this world, and its isolation, often on an island, or in space and time being akin to the distance afforded by death, all of which underlines the macrocosmic relevance of Tom's individual death.[51] Kingsley, however, offers not only *hope* for salvation, but *real* salvation, in secular *and* theological terms.

While Tom indeed leaves the world for a place of uncertain existence to find a good version of the one he has left, that world is however also *part* of *this* world, and, in fact, even *more real* and *more true* than what is visible in it to its living members, as a comparison of the beginning of Tom's journey with Kingsley's Natural History writing clarifies. When Tom awakes, he therefore

> found himself swimming about in *the* stream, being about four inches, or—*that I may be accurate*—3.87902 inches long and having round the parotid region of his fauces a set of external gills (I hope you understand all the big words) just like those of a sucking eft […]. (37; my emphasis)

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[49] Charles Kingsley, 'How to Study Natural History', in *Scientific Essays and Lectures* (London: Macmillan, 1890), p.303.
[50] As defined in the *Penguin Dictionary of Literary Terms and Literary Theory*, 'utopia', 'from Greek *ou "not"* + *topos* "place" […] a pun on eutopia "place (where all is) well"' (London, 1992; p.1016).
[51] Gregory Claeys, *Searching for Utopia: The History of an Idea* (London: Thames & Hudson, 2011), p.8.

When Tom awakes into new life, he does not find himself in *a* mythological stream, but in *the* stream he had fallen into. And yet, having been 'turned into a water-baby', he inhabits the microscopic region that, Kingsley proclaimed in his lecture 'How to Study Natural History', could be found in any 'one spoonful of water' in which one could 'behold a whole "Divina Commedia" of living forms more fantastic a thousand times than those with which Dante peopled his unseen world'.[52] Dante's journey in the *Comedy*'s Inferno and Purgatorio was a 'prelude to the soul's ascension' through the experience in a realm that was to make one feel 'abashed at the ignorance and weakness of mortal man': the experience of the study of nature which Kingsley believed returned the psyche to its healthy, intended state through the 'religious effect of the study of natural history'.[53]

That Kingsley rhetorically manipulates Tom's journey to appear more scientific than its realistic narrative frame is evident in his use of such scientific terms as 'gills' and 'fauces' through which he makes the fantastic part of his journey seem even more scientific than his own Natural History writings, such as *Glaucus*, in which he had assured his readers, there were 'no microscopes', nor any such 'big words' to be found.[54] Thus, by evoking both Dante, and even more scientific Natural Science, the *Water-Babies* becomes, as Prickett had believed, a 'theological instrument', while simultaneously remaining grounded in science. As Kingsley had impressed on Maurice: the 'physical science in the books is *not* nonsense, but accurate earnest'[55] Based on his understanding of natural science as a means of recovering the original state of the psyche, Kingsley adapts but swaps the order of Dante's three-stage vision of Inferno, Purgatorio and Paradiso. Tom

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[52] Kingsley, 'How to Study', p.303.
[53] Kingsley, 'How to Study', p.304; Alison Milbank 'Imagining the Afterlife: The Fantasies of George MacDonald and Charles Kingsley', in *Behind the Back of the North Wind: Critical Essays on George MacDonald's Classic Children's Book,* ed. by John Pennington, Roderick McGillis (Hamden: Winged Lion Press, 2011), p.90.
[54] Kingsley, *Glaucus*, p.99 [my emphasis].
[55] Prickett, *Victorian Fantasy*, p.141; Kingsley, *Letters*, p.245.

therefore *first* experiences his purgatorial cleansing, so what is revealed to him in the real 'atom of society' is then juxtaposed with Inferno – the realm of the most unforgivable sins of reality, embodying those influences – before he proceeds to Paradiso: the Utopian reconstruction of society.

Commencing the purgatorial journey in which Dante is led by his guide the poet Virgil, Tom is, accordingly, led by instinct and Nature's laws – more specifically, cause and effect, who are embodied in Mrs Doasyouwouldbedoneby and Mrs Bedonebyasyoudid. The two fairy-sisters judge the immoral inclinations of Tom's soul in the process of its dissolution, by making their effect visible without the temporal delay. Tom's consciousness had imported to the afterlife acquired capitalist ideals. He had, then, dreamed of 'the fine times' when 'he would be a man, and a master sweep', drink, smoke and gamble and 'have apprentices' who he would 'beat' and 'bully', 'just as his master did to him' (6). Accordingly, as he is now his own master, he breaks the chrysalis of caddisflies for his own amusement, preventing them from growing 'beautiful wings', such as the 'pretty pair of wings' dying children gain in the tale (51;86). The analogy with Tom's own death makes clear that this is the influence of the same morals that inhibited him from ever growing into a man – as Sambourne's illustration amplifies, which shows the caddisfly with an algae-brush resembling that of a chimney-sweeper (Fig.37).

Fig.37: Caddisfly with sweeper brush

But in this fantastic realm, the otherwise silenced lower and oppressed class speaks back, and, as *it is* Nature, speaks truth. Tom continues his bad habits, stealing sea-confectionary

– rewards intended for others, to whom he feeds stones, in order to consume the treats himself – echoing the starvation of the poor at the hands of the wealthy who profited from their work. In return Nature 'shrieked' at him 'like the cats in Struwelpeter [sic.]': '"Oh, you nasty horrid boy"'', and the regressive nature of this ideology becomes embodied when Tom grows prickles 'all over': 'just like a sea-egg' (51;118). His reversion on the evolutionary scale refers to the same idea of recapitulation MacDonald used in *Lilith*. What is significant is that Tom's soul really had 'preserved a chronicle of the species' and their 'complete evolutionary process', as Jessica Straley explains.[56] Those who had opposed Darwin had done so on a cerebral basis, because mankind apparently possessed a Hippocampus Major unique in the animal kingdom – an argument ridiculed by Kingsley as the 'great hippopotamus debate' (82). Kingsley took the side of Huxley in that it was impossible to erect 'a cerebral barrier between man and the apes', as 'Nature has provided us [...] with an almost complete series of gradations from brains little higher than that of a rodent, to brains little lower than that of man'. This emphasised that the difference between man and animal was one of difference by degree, not by kind – an argument here transferred to the different social classes.[57] Straley thus narrows the 'basic plot' of the *Water-Babies* down to the doctrine 'good boys will evolve into men while naughty ones remain beasts'.[58]

Kingsley, however, went even further. Man was superior to animal, but remained so by grace of obeying God's moral law in nature; and when boys will not be good, they will not only remain, or grow into beasts, they will lead their entire species to extinction – a process not compounded by hereditary threat posed by the working class, but by the corrupting philosophies of the governing classes. That Darwin's doctrine was, to Kingsley,

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[56] Straley, 'Beasts and Boys', pp.587-8.
[57] T.H. Huxley, *Man's Place in Nature* (New York: Appleton, 1863), p.115.
[58] Straley, 'Beasts and Boys', p.584.

no different from Natural Theology in its principles is asserted that through its embodiment in Paley's watchmaker-analogy. Mrs Bedonebyasyoudid admits she '*cannot help* punishing people when they do wrong', because she was 'wound up once and for all, so long ago', like 'old Grimes' would 'wind up his watch' (106). While nature so apparently functioned like the 'mechanistic God' MacDonald had dismissed, it facilitated Kingsley's Christian Socialist vision of equality, which is thus shown to be a natural law, natural to the human soul and society.[59]

As *Sylvie and Bruno* shows, fairies consistently served a scientific function in Victorian culture, as Bown noted.[60] But as Keene adds they also acted 'as an enchanted mirror in which to reflect, question and distort […] problems of an industrializing society', and the 'fairy tales of science' played 'an important role' in 'positing future directions' also 'in the consideration of what the sciences were, and should be'.[61] Kingsley's books, in this sense, acted, firstly, as revealers of truth, and secondly, to apply this truth to the improvement of society, as would please God 'the architect of modern science'.[62]

The *Water-Babies* proceeds to enact this at the deepest point of Tom's journey traditionally reserved for the revelation of insight, where he now learns what he is made of and by which laws he is governed. Beyond the realm of the two fairy sisters, at Peacepool, the 'centre of creation', Tom encounters Mother Carey, a Mother Nature figure, and a response to Darwin's uncaring Nature, who 'makes new creatures […] out of the sea-water', but does not do so by 'snipping' and 'stitching', but '*makes the creatures make themselves*' (146; my emphasis). Evolution as the handmaid of a non-interfering God is the opposite of how 'some grown people who ought to know better' think of nature as

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[59] MacDonald, 'Wordsworth's Poetry', p.250.
[60] Bown, *Fairies*, pp.1-2.
[61] Keene, *Science in Wonderland*, pp.16;18.
[62] Francis, 'Paley to Darwin', p.455.

functioning 'as men do': they could exercise God-like control through their own laws (145-6). The choice of words for the misrepresentation of nature's working as 'snipping' and 'stitching' stands out especially with the *Water-Babies* as a reworking of *Alton Locke,* whose prefatory essay 'Cheap Clothes and Nasty' asserted the 'Malthusian' *laissez-faire* capitalism, a man-made system that drove boys such as Alton or Tom into death, was against God's moral law of nature and thus bound to 'become *extinct*'. 'God is not mocked', his 'curse', the relentless working of His laws, 'will find out the priest' of this system and the 'partakers of their sins'; the disciples of a system of *un*natural selection, a false interpretation of Darwin.[63] Nature does not function like men, but men function like Nature, and as creatures make themselves, it follows logically that their unmaking is also their own doing.

In a scene similar to the Dormouse's curative tale, and Anodos's fairy-tale, the revelation of truth thus follows the revelation of untruth in form of a fairy-tale, which enacts the chapter's epigraph from Longfellow's 'The fiftieth birthday of Agassiz'. There, 'Nature, the *old* nurse' who 'took The child upon her knee | Saying: "Here is a story-book | *Thy Father has written for thee*': God himself speaks to the soul of the child directly through nature.[64] The story-book in the *Water-Babies* comes from a 'most wonderful waterproof book' produced from 'the cracks of the rocks', like the 'soul gem' was crystallised from the mines of the mind in MacDonald, the fossilised morality tale provided by Nature herself intends the purification of the soul in this purgatorial part of Tom's journey.

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[63] Charles Kingsley, 'Cheap Clothes and Nasty', in *Alton Locke, Taylor and Poet: An Autobiography* (London: Macmillan, 1905), pp.lxii-lxiii.
[64] Henry Wadsworth Longfellow, 'The Fiftieth Birthday of Agassiz, Birds of Passage', *The Complete Poetical Works* (London: Bell & Daldy, 1864), p.245; While the referential link to Blake's 'Chimney Sweeper' has been widely noted in modern criticism, it was the Longfellow poem which was more commonly associated with Kingsley by his contemporaries. Both Frances Kingsley and George Day chose it as their epigraph for their respective biographies, with Day using it to cement his claim that 'nature was speaking' to Kingsley, as God did to the child. The last stanza also makes clear the link to Tom, as the 'boy does not return' to his 'mother at home'; Kingsley, *Letters*, pp.1;4;5; Day, *Naturalists*, pp.133;147.

Entitled ‘The History of the great and famous nation of the Doasyoulikes’, its title again constitutes a link to the surface-narrative: A phrase first used by Kingsley, but popularised by Matthew Arnold in his essay ‘Doing as one Likes’, which encapsulated the dangers of *laissez-faire* capitalism (124). That nation led comfortable lives in the Cockaigne-like country of Readymade, another link to the textile industry, in which inhabitants did not have to ‘use their wits’, leading inevitably to psychological degeneration (125).

Kingsley also uses a geological metaphor to encapsulate the psychological processes that convey the revelation in the necessary conclusion of this unnatural situation. A nearby volcano acts as a reminder of the looming presence of God’s law; the dangers of disobeying it are ignored despite the fairy warning the Doasyoulikes ‘all she could’ with ‘smoke coming out its top’ - yet ‘they did not face the facts’. Consequently, as the fossil account proves, the ‘mountain had blown up’, wiping out, first, two thirds of the population (126). But as the ‘wits’ of those who survived had been usurped by their selfishness, they accepted the fate of the less fortunate, and instead of engaging with the danger through scientific observation and learning from nature to preserve their race, they told a ‘cock-and-bull’ story about an ‘angry deity’ – a hint to those calling cholera God’s judgment (128). But the ‘curse’ caught up with them: having grown ‘no better than savages’, ‘foolish’ so ‘they can hardly think’, Tom declares ‘they are *all* apes’ – and finally, ‘*all* dead and gone’, having become, as Kingsley predicted, ‘extinct’ (128).[65] Merging Darwin’s evolution with the Old Testament, dissolution becomes a choice and a ‘failure to obey His law’; Kingsley asserts that the unsettling idea of extinction was thus neither new nor against the Bible.[66] Observing God’s law in action, Tom is warned he was ‘very near being turned into a beast once or twice’, but experiences his catharsis, realising

[65] Kingsley, ‘Cheap Clothes’, p.lxii.
[66] Kingsley, ‘Cholera II’, p.144.

that 'if [nature] can turn beasts into men, [it] can by the same laws of circumstance, and selection, and competition, turn men into beasts' (129).[67]

The social function of science fairy-tales to which Keene alludes was even more specific in the Victorian periodical press, where it also arose from the synthetic relation to non-fiction articles published in the same journal. As Kingsley's *Water-Babies* appeared in *Macmillan's Magazine*, among articles on the textile industry and essays on evolutionism, its prose, Douglas-Fairhurst puts it, 'gives the impression of being the result of someone putting the rest of *Macmillan's* contents into a bottle and vigorously shaking them together'.[68] The *Magazine* was founded in 1859, and George Worth notes its topical range reflected the 'extensive and strong […] roots of *Macmillan's Magazine* in Christian Socialism' which had, in turn, emerged out of the Chartist Movement, the situation of the working poor being a matter of personal concern to the Macmillan brothers.[69] In the immediate aftermath of the *Origin*, Sumpter stresses, Alexander Macmillan, 'from the beginning', aimed to 'bring out another side' to the Darwin he considered too 'red in tooth and claw', and to 'embrac[e] evolution as divine revelation', as in the *Water-Babies*.[70] But most importantly, the founders saw the aim of the publishing house in aiding their 'great Taskmaster to reduce the world into order, beauty and harmony'.[71] And thus, 'despite liberal championing to accommodate *all* theories', contributions to *Macmillan's Magazine* showed the tendency to amalgamate them into a 'master narrative, a symbolic framework that revealed a Creator in the universe', often by using dreams and visions, regarding 'the language of vision as the language of God'.[72] The role of the fairy-tale of the *Water-Babies*

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[67] Kingsley, 'How to Study', pp.296-7.
[68] Douglas-Fairhurst, 'Introduction', p.xxiv.
[69] George G. Worth, *Macmillan's Magazine: 1859-1907: 'No Flippancy or Abuse Allowed'* (Aldershot: Ashgate, 2003), p.11.
[70] Sumpter, *Press and Fairy Tale*, p.79.
[71] Worth, *Macmillan's Magazine*, p.6.
[72] Sumpter, *Press and Fairy Tale*, pp.75;79.

in the *Macmillan's Magazine* was thus not unlike that of a Prophet acting as mediator between truth and an erring society.

The imagery of Old Testamentary prophecy is, in fact, even more pervasive than the references to the Blake or Longfellow poems, and runs through the *Water-Babies* like a steady undercurrent, as a comparison between Tom and Moses, the original prophet water-baby, shows. Moses is entrusted to the river during the infanticide of Pharaoh's regime; a child of the enslaved class, his basket is, like Tom, covered in dirt, in 'slime' and 'pitch' before he floats into the river; his name means 'drawn out of water'.[73] Kingsley had already compared the relationship of the maltreated working classes and their oppressors, to the situation of the Israelites enslaved in Egypt, and God's law is revealed to Tom through a fiery mountain and in stone tables, just as Moses had received 'tablets of stone, and a law, and commandments which [God has] written so thou mayest teach them'.[74] Unlike the Romantic models of Blake's Tom Dacre and Longfellow's boy, Moses is not merely saved and recovered to Arcadian lands, but becomes a revealer, a prophet, and a teacher of God's law. After Tom's catharsis, he knows, instinctively, that he must go where he does not want to go, exclaiming, without hesitation 'I'll go this minute!', as Moses overcomes his aversion to returning to Pharaoh's court (128). The Exodus narrative speaks closely to Kingsley's political convictions. As Moses is granted a new life through his river journey, his being recovered and adopted by Pharaoh's own family stresses the artificiality of the inequality of the classes. The pattern of Moses's story is a vehicle for the aims of Kingsley's social reform. Tom next commences his journey to Inferno, as Moses confronts the sinful Kingdom of Egypt, to which Kingsley had compared London. And Tom's teachings, the adherence to Natural law, will eventually manifestly lead to a better

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[73] Exodus 2:3;10.
[74] Exodus 24:12.

world for an entire nation, the utopia of a promised land ‘flowing with milk and honey’.[75] This parallel stresses that the personal catharsis is, unlike in the dream-narrative, not *the* central part of the narrative, but an integral first step on a longer the path to social reform which begins in the individual, as Tom is now on the threshold of the next stage of his journey.

While this revelation rationalises destruction in a metaphoric sense – revelation in natural disaster was law-giving, but prophetic as it foretold future consequences – the question of theodicy, if suffering was necessary, lingers – especially as a benevolent Creator and extinction are reconciled in the emotionally-charged catastrophe of child death.[76] It is in the analogy through which natural forces act prophetically between the macrocosm of nature and the microcosm of psychology, to produce truth from unconsciousness into consciousness that Kingsley unifies consolation and truth, and he was not the only one to use such metaphors.

The destructive ‘South West Wind, Esquire’ in John Ruskin’s *The King of the Golden River* (1850) reveals immorality to the child-protagonist Gluck, initiating a fairy-tale transformation toward a Utopian society. George MacDonald’s *At the Back of the North-Wind* the story of the dying London cab boy Diamond, is, as Milbank notes, ‘MacDonald’s equivalent of the *Water-Babies*’ and overlaps with it substantially in subject matter and narrative structure.[77] Like Tom’s fairies, North-Wind is a natural force who reveals the workings of nature in the hallucination of a dying child. She is also revealed as destructive, when she states on one of their journeys that she must ‘sink a ship’ with ‘a good many

[75] Exodus 3:8.
[76] Prophet is from ‘pro’ (‘before’) and ‘phēnai’ (‘speak’).
[77] Milbank, ‘Imagining the Afterlife’, p.90.

people on it', and Diamond asks her to reveal her true name, the underlying meaning of her actions.[78] Her response is, however, evasive:

> 'People call me by dreadful names, and think they know all about me. But they don't […]. Sometimes they call me Bad Fortune, sometimes Evil Chance, sometimes Ruin; and they have another name for me which they think the most dreadful of all'.[79]

Diamond cannot comprehend how the fairy could be 'cruel', and he decries the death of the passengers, saying it '*won't* do them any good'; North-Wind responds, but only 'hurriedly', 'It must. It must'.[80] Like Kingsley at the beginning of the *Water-Babies*, MacDonald avoids the word 'death', yet, unlike Kingsley, he evades an explanation and the chapter breaks off, and the implicit paradox of Diamond's impending death remains unsolved. A sentence is added to the beginning of following chapter in the later publication as a novel that makes this omission even more plain: 'I must not go on describing what cannot be described'.[81]

In lieu of an explanation, MacDonald – not as author, but as an editor of *Good Words for the Young* – lets the chapter of another author speak – namely, a chapter on volcanos from Kingsley's fairy-tale *Madam How and Lady Why,* published in the same number as *North-Wind*. Its opening apparently seamlessly seems to respond to Diamond's question about the purpose of destructive nature:

> Why, you ask, are there such terrible things as volcanos? Of what *use* can they be? They are of use enough, my child; and of many more uses, doubt not, than we know as yet, or ever shall know. But of one of their uses I can tell you. They *make*, or *help to make*, diverse and sundry curious things, from gunpowder *to your body and mine*.[82]

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[78] George MacDonald, *At the Back of the North-Wind* (London: Broadview, 2011), pp.92;97.
[79] George MacDonald, 'At the Back of the North-Wind', in *Good Words for the Young*, 2 (1869), p.182.
[80] MacDonald, *North-Wind*, p.97.
[81] MacDonald, *North-Wind*, p.96.
[82] Charles Kingsley, 'Madam How and Lady Why', in *Good Words for the Young*, 2 (1869), p.182.

As Kingsley switches from macrocosm to microcosm for the purposes of analogy in the *Water-Babies*, so he does here. As God speaks to the Israelites descending upon 'Mount Sinai 'like a devouring fire on the top of the mount', its 'smoke' ascending like the smoke 'of a furnace', 'the whole Mount quaked greatly', Kingsley uses the same language in *Madam How and Lady Why*.[83] Earthquakes and volcanos reveal the embodiment of nature's divine principle as the 'blast-furnaces underground, in which Madam How pounds and melts old rocks', 'to spread them out over the land above' (Fig.38).[84] *Re*forming destructions, all these processes have in common the refinement of indestructible, nourishing, life-bringing particles: Tom's psyche, the social atom, and the nutrient trace particles that become part of human bodies, and the word of God: helping us make us make ourselves.[85]

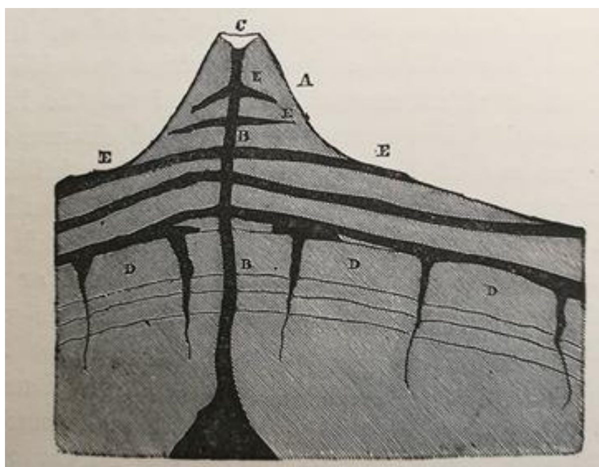

Fig.38: Volcanoes, *Madam How and Lady Why*

Kingsley did really believe that what was revealed through the indestructible microscopic particle of Tom's psyche was to be a model for the living, as his own encounters with child death, such as those of the sons of his publisher Alexander Macmillan in 1857, and of his friend Thomas Henry Huxley in 1860 show. Kingsley writes to Macmillan, reassuring him that there was an underlying purpose to his son's early passing: his 'life was short – true. But it was surely not a useless one'.[86] Kingsley compares the child's life and death to a 'chrysalis existence', that gave way to '*true* life, the *free*, *royal* and *noble* life' after the

[83] Exodus 19:3;16;18; Exodus 24:17; This is consistently the way in which the Old Testament God reveals himself to his prophets: Elijah is addressed through 'a great and strong wind' which 'rent the mountains, and brake in pieces the rocks', 'an earthquake' and 'a fire'. The fire of God as 'consuming' and 'refining' is also used in Isaiah and Malachi (cf. I Kings 19:11-12; Isaiah 33:14; Malachi 3:2).
[84] Kingsley, *Madam How and Lady Why*, pp.46-7.
[85] Kingsley, *Madam How and Lady Why*, p.47.
[86] Charles Kingsley to Alexander Macmillan, 1857, MS 54911, Macmillan Archive, British Library, London.

liberated child souls ‘break into full-winged flight’, the very contemplation of which was ‘*making one ashamed of oneself every day*’ – as he had said of the study of nature.[87] As Kingsley reveals in the analogy of *North-Wind* with the volcano, the child soul, was the essence, the natural state of mankind, contradicting the likes of Galton who had seen moral education as influencing the fundamentally savage child. The child-soul was Spencer’s idea of man as a ‘social atom’, the soul the ur-particle, a *divine* atom, establishing in perishable life the continuum of an indestructible physical entity: a scientific idea, debated at Kingsley’s time, but, more specifically, in an essay, entitled ‘The Indestructability of Force’, which immediately precedes the first chapter of the *Water-Babies* in *Macmillan’s Magazine*.[88] Its author declares ‘the fact that underlies this universal destruction’ imminent in nature ‘is Indestructibility’.[89] He supports his claim with Faraday, elaborating

> A particle of oxygen […] is ever a particle of oxygen. If it enter into composition and disappear as oxygen—if it pass through a thousand combinations, animal, vegetable, mineral—if it hid for a thousand years and then be evolved, it is oxygen still, with all its first qualities.[90]

By analogy it must be true for any form of matter that ‘when a certain amount of force disappears, or seems utterly annihilated, it is manifesting elsewhere as some other force’.[91] Kingsley had noted the same thermodynamic phenomenon:

> Every leaf which drops from the bough, to return again into its gases and its dust, is working out chemical problems which have puzzled a Boyle and a Lavoisier, and about which a Liebig and a Faraday will now tell you that they have but some dim guess.[92]

God’s law reveals itself in the small and in the humble, as it does in Tom, a child, or in a pebble upon which Kingsley demonstrated ‘How to study Natural History’, which revealed

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[87] Charles Kingsley to Thomas Henry Huxley, 1860 <http://aleph0.clarku.edu/huxley/letters/60.html >.
[88] The ‘psyche’ (‘ψυχή’) is ‘only referred to in connection with the dead’ and what remains of their selves after life, as opposed to the ‘pneuma’ (‘πνεῦμα’), the life-giving breath or ‘spirit’, which, as North-Wind, ceases as soon the body has died, as it does once Diamond has reached the land at her back; ‘Psyche’, in *Oxford Dictionary of Classical Myth and Religion*, p.150.
[89] Anon, ‘The Indestructability of Force’, *Macmillan’s Magazine* (August 1862), p.337.
[90] ‘Indestructability’, p.337.
[91] ‘Indestructability’, p.338.
[92] Kingsley, ‘How to Study’, p.303.

the 'wildest tales' of the evolution of the earth.[93] Rather than reusing a Romantic trope, Kingsley reworks the image of the child as 'father of the Man' within the framework of evolution and psychology, the child and its constitution being the prophet of his 'new natural theology'.

News from 'The-other-end-of-Nowhere'

Fig.39: Hell in the *Divine Comedy*

Having entered through the soft floor of the volcano Erebus, Tom rises, like the atom in the molten lava, into new land of 'mountain-loaves' and 'island-cakes' that form the land of the final part of his journey (144). Embarking to 'the other-end-of-nowhere', the topographical positioning of Tom's destination indicates that it is, in every sense, the opposite of what is to be aspired to: the other end of utopia ('no place') being a dystopia, or Inferno. This opposition is produced by the same merging of natural, mythological, Christian and psychological imagery that Kingsley had maintained throughout the *Water-Babies*. Erebus was an underwater volcano discovered in Kingsley's lifetime named after the mythological entrance to hell located at the South Pole, and Tom's purgatorial journey ends at the North Pole, from where he is instructed to go 'backwards', to the 'other end' (144;147). Purgatorio and Inferno, are in Dante also located on opposite sides of the globe (Fig.39). As de Boer and Sanders point out, 'in Dante's *Divine Comedy* hell is a fiery cavity that reaches to the centre of the earth', the centre of a volcano, the 'obvious interconnection […] between the devil's subterranean realm and the eternal world of the living'.[94] Erebus

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[93] Kingsley, 'How to Study', p.296.
[94] Jelle Zellinger de Boer ad Donald Thedore Sanders, *Volcanoes in Human History: The far-reaching effects of major eruptions* (Princeton: Princeton University Press, 2002), p.3.

is in Roman mythology the deity of Tartarus, the region equivalent to Dante's Inferno whose gate's inscription reads 'Abandon all hope, ye who enter here'.[95]

But despite Tom's journey being modelled on Dante's narrative structure, the changes to this structure convey, notably, Kingsley's altered trajectory of their psychological experience. While Dante is shown the terrors of Inferno, the unsavable sinners for whom there is no hope, *before* undergoing the journey through Purgatory, Tom's soul is purged first to *become* the prophecy that has purified him, which is thus brought to this region of 'no hope' to facilitate its salvation. Kingsley thus continues to redefine theological vocabulary through scientific psychological processes. Tom thus sets out to perform a *real* miracle, to bring hope where there is none believed to be found, to cure the social grievances which initially compared to divine punishment. As Kingsley was a universalist, who believed all will, in the end, be forgiven, and Tom therefore now sets out to reverse, after having understood the unmaking of his own sinful self, the misdirected evolution of society, seemingly doomed and on its path to extinction, and redirect it into its evolution to perfection. Replicating Tom's catharsis, by the same principles, on a social scale, Kingsley proves that through understanding the laws of God through science, mankind could turn from the architect of its own damnation to that of its own salvation.

The land at which he arrives, like Dante's realm, consists of circles representing worsening types of modern sins damaging to body and soul – specifically, that, of the child. The first region is 'Waste-paper-land', where people 'make worse books out of bad ones' with which they make 'very good trade, especially among children' is a condemnation of those bad books that were criticised by Carroll in his mockery of Watts. From the parallelism in the phrase 'make worse books out of bad', with Mother Carey and Madam How's ways of

[95] Dante Alighieri, *The Divine Comedy,* trans. by C.H. Sisson (Oxford: Oxford University Press, 1993), p.56.

creating he makes clear that it is those playing God and misapplying science to the detriment, rather than to the benefit of society. Next, in, the ‘territory of tuck’, they ‘steal receipts out of Madame Science’s big book to invent poisons for children’ (155). Kingsley addresses another way in which the physical health of the population is damaged deliberately through ignoring natural laws in favour of commerce, a discourse echoed in Carroll’s treatment of alcohol in *Sylvie and Bruno*. This opposite character of the *Water-Babies*’s Inferno realm is sustained by an apparent switch of narrative genre, which shifts from the imitation of a natural history fairy-tale to satire. Due to its Swiftian character Kingsley’s tale has been most frequently compared to eighteenth century literature, as however becomes apparent, it has much in common with nineteenth-century fantasy and the psychology meanings that underpin it. The petrified realm of sin resembles the Goblin-infested mines of the mind in *Phantastes* and the *Princess* novels, and like MacDonald’s Bulika, an allegory of the sins of urban modernity, Tom finds ‘to his surprise’, that ‘the Other-end-of-Nowhere’ was ‘much more like This-end-of-Nowhere’ (155).

But in accordance with Kingsley’s universalist rendering of hell, it builds on theories of dynamic psychology so that sources for mental deterioration, and, as a result of it, physiological degeneration symptomatic of social grievances alluded to could be reversed. The penultimate realm, the island of the Tomtoddies, is reserved for another recognisable problem from Victorian psychology: for bad education. A parody of Swift’s Laputa, the island of intellectuals who have lost touch with the practical application of knowledge, as Shuttleworth notes, accommodated Victorian concerns about ‘forced education’, so-called ‘cramming’, and its presumed ‘disastrous evolutionary consequences for children’.[96] The children on the island are ‘not allowed playthings’, and live in fear of the ‘Great Examiner’, who forces into their heads the Gradgrindian ‘facts, facts, facts’, which

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[96] Shuttleworth, *Mind of the Child*, pp.132-3.

resemble the sort of education revealed as practically useless at the beginning of *Alice's Adventures*, Vane's mathematical education of the Little Ones in *Lilith*, and the ordinary methods of 'parents and teachers' which Mrs Bedonebyasyoudid condemns (116). The Tomtoddies degenerate even further than monkeys or sea-urchins: their 'brains grew big, and their bodies grew small, and they were all changed into turnips' (165). Tom observes the death of a particularly compliant turnip, a detail, which Shuttleworth notes, resembled accounts of 'precocious children' who 'expired before the ages of 6 or 8' of contemporary educational literature.[97] Kingsley, it was clear, does not only criticise that Tom had no education, but also the unnatural education that would have been available had he lived.

The final destination of Tom's Inferno is most indicative of how the Water-Babies reflects Kingsley's engagement with the unconscious, and its role in reforming society on a scientific basis. Reserved for the most unnatural of sins, for child-labour, this place is a city resembling a 'lunatic asylum' – although it was 'not built quite of the same materials' (169). This image was utilised shortly after Kingsley also by Carroll to cast those irresponsibly in charge of childhood in the land-world into the role of lunatics. Noting that this asylum was of a different 'material', Kingsley suggests, like Carroll later would, that for the figurative, moral madness contained therein, there *was*, contrary to such views as Galton's or Maudsley's on the medically insane, hope.

The 'inmates' of this realm were confined to chimneys, a modern version of Dante's fiery graves. In one of these Tom's former master is stuck. The scene is an uncanny confrontation of the purified, and now-adolescent Tom with the reflection of what he would have become had he grown older in his former environment on earth. As one of the fairies knows, the former master's name is 'Thomas Grimes', his first name being the full

[97] Shuttlworth, *Mind of the Child*, p.133.

version of Tom, and he is suffering in hell the same treatment he had inflicted on Tom, which the latter had himself dreamed of inflicting as a future master on his sweeps (175). It is the juxtaposition of two souls, in diametrically opposed states, as they are a reflection of how they have become affected by the environments they have created.[98]

Through Grimes stuck in a chimney, Kingsley sheds light on the psychological dimension of this encounter. It recaptures again Kingsley's volcano metaphor: he had compared volcanos to 'the *chimneys* of the great blast-furnaces underground' *in Madam How and Lady Why*.[99] As Tom has experienced catharsis through a volcano representing his own psyche, and has now entered Inferno through a volcano, a collective psyche, as a prophet, and indeed as prophecy, it becomes evident that this is the encounter of that prophecy with the soul's unideal. Grimes, being stuck in the chimney, virtually suffers the punishment for blocking out the innate law of nature that was contained in the soul from rising into his consciousness. As 'social atom' it would have guided him in creating a

Fig.40: Thomas Grimes, stuck in a chimney, and Tom

[98] The opposition is drawn out through their portrayal by Sambourne. While the sooty Grimes wears the sweepers' suit and top had, his contorted facial features and wide eyes recall portrayals of insanity, Tom instead wears bathing trunks, associated with rock pooling as natural history study Kingsley had advocated in *Glaucus* – the opposite of Grimes's salmon-poaching. He thus adds to Kingsley's literary portrayal of Tom's development, by portraying a trajectory in which a boy taking seriously his leisure time in the water-world, would naturally become 'a great man of science'. The dynamic of the image, and Tom and Grimes comparable situation in society at this stage of story apparently resembles that of Alice and the originally pipe-smoking Caterpillar (cf. Appendix VIII;IX).

[99] Kingsley, *Madam How and Lady Why*, p.47.

better society, instead, he has become complicit in the ‘Massacre of the Innocents’. As Tom’s encounter reminds him of his mother, who he learns is dead, his catharsis occurs as it awakens something in him that makes him cry ‘like a great baby’ and long to be ‘a little chap in Vendale again’ – the green valley in which the journey of Tom’s liberation began by discovering his instincts that guided him, eventually to a journey of revering a state of the mind and soul that would lead to a better society. Thus, in an important departure from the Dantean paradigm, Grimes is forgiven, and sent to sweep the ‘crater of Etna’, figuratively a purifying of his stained soul, ‘where he is sweeping to this day’ – until the revelation that Tom has modelled can rise into his consciousness.

That an encounter with a prophetic vision of nature resolves an adult man’s sinful life through an impulse to change given in altruistic love, especially of the parent – is an indication that the end of the *Water-Babies* also completes the unfinished business of his realistic novel of social criticism, *Alton Locke*. The fantastic visionary narrative acts to the earlier novel, and, in fact, to Kingsley’s oeuvre, in Frederic Jameson’s sense, as its unconscious: a perspective that highlights the potential, and subsequent appeal of a narrative mode that cuts loose the unconscious from its society. Not only the fact that in both Locke and Tom two young workers die at the hands of his society, they also share a vision. Shortly before his death Locke hallucinates a ‘roaring’, ‘sulphurous’ volcano in a ‘brain fever’: ‘lava-streams [erupting] from the crater of that great soul-volcano’ which erupts into his consciousness a teleologic vision of the origin of the world, life and consciousness, and morality.[100] Reborn as creatures from every stage of creation, he becomes, like Tom, a ‘baby-ape’, a point at which Locke recognises his position on the evolutionary spectrum when seeing his ‘face reflected in a pool’ as Tom does in the mirror

[100] Kingsley, *Alton Locke*, pp.263;270.

– It conversely resembles that of a human child.[101] He observes in himself the formation of the moral instinct when 'the germs of a new and higher consciousness—[the] yearnings of love' for the 'mother-ape' stir in him.[102] Kingsley here not only affirms Huxley's cerebral fluidity theory, in which Huxley had criticised scientists must have '*erroneously* tak[en] no account of the human soul'.[103] He also provides no less than a scientific redefinition of the soul. When the fifth commandment arises, as a natural instinct, it is evident Christian moral law and natural law are fully aligned, and through Spencer's concept of the inherited self, the essence of organic memory theory, fully congruous.

This sheds light at what happens within Grimes. As the juxtaposition of the fairy-tale binaries in the narrative frame that resolved Tom's suffering, this consideration of thesis and antithesis stimulates in Locke's mind the synthesis of insight. As in Grimes, it 'reawakened in [his] mind' like an '*old*' thought, so he becomes conscious of the product of the '*unconscious logic of association* [which] is often *deeper* and *truer* than any syllogism' rising to his consciousness – the personal catharsis which Kingsley envisioned would enable societal change.[104] While Locke, in 1855, had witnessed the failure of the Chartist revolution, an attempt to reform society, died and the novel ended, Tom's death asserts how what Locke had hoped for is indeed still possible, and how. His narrative, although commencing in death, leads him to a hypothetical utopia, in which he 'is now a great man of science' who 'can plan railroads, and steam-engines, and electric telegraphs' – 'all this he learned when he was a water-baby underneath the sea' (179).

Locke's vision follows a conversation with 'scientist-clergyman' on the possibility of miracles – implicitly, the restoration of society, and the salvation of Locke's people. This

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[101] Kingsley, *Alton Locke*, p.268.
[102] Kingsley, *Alton Locke*, pp.268-9; In Judaism and Protestantism, which Kingsley represented 'Honour thy Mother and Father' is the fifth commandment; in Catholicism it is the fourth (Exodus 20:1-21).
[103] Hale, 'Other Bulldog', p.1004.
[104] Kingsley, *Alton Locke*, pp.291-2.

salvation which would require a miracle, as the language of Kingsley's sermons had implied, could require no less than Old-Testamentary miracles that had saved the Israelites. The scientist-clergyman, albeit fictional, speaks in the voice of Kingsley himself, to explain that miracles did not, as Locke believed, break 'laws of nature', but only break its 'customs'. Christ's miracle of the reversal of 'premature death' – pertinent in the context of both Christ's own death, by which Tom was moved in Ellie's room, but also that of Tom and Locke – were a 'restoration of the law of Nature', conditional upon it having been breached first.[105] Modern science and 'modern discoveries of medicine'– such as that that could cure cholera, prevent child death, and improve the lives of the working poor, but being conditional on their occurrence – were miracles: a 'vindication of the laws of nature from the disorder or diseases'.[106]

That miracles, the cleric cryptically adds, were the overcoming of habit was something 'the electric telegraph ought already have taught you'.[107] While this comment seems cryptic, electric telegraphs are also among the things Tom has learned to build without having been exposed to technology on his underwater journey. *Alton Locke* and the *Water-Babies* appeared in the same decade as Alexander Bain's *The Senses and the Intellect*, which popularised the by-then well-known telegraph-metaphor, for the transmission of knowledge from the nervous system, the unconscious mind, to consciousness proper, which MacDonald had also by then adapted in fiction. Through the use of the term 'habit', in Ribot's terms, parts of the psyche formed later and by society, such influences as Spencer's 'commercial law' – they could be more easily dissolved.[108] Men were merely in the habit of restraining the natural instinct, the law of the natural world, in which cruelty,

[105] Kingsley, *Alton Locke*, pp.289;291;292.
[106] Kingsley, *Alton Locke*, p.292 [my emphasis].
[107] Kingsley, *Alton Locke*, p.291.
[108] The *Water-Babies* appears within the same 5 years in which MacDonald's *Phantastes* (1858) and Bain's *The Emotions and the Will* (1859) which also employ these metaphors.

which Kingsley had struggled to place within its moral framework, was merely a revelation where it had to be reinstated, all the more forcefully. Rather than condemning this side of double consciousness, as Wigan, or fearing the products of unconscious cerebration, like Cobbe, he dismisses also the negative connotation with the carnal and animal, as Mother Carey confirms when she provides Tom with a water-dog as guide as it 'goes by instinct and *therefore cannot go wrong*' (147; my emphasis). As the true guide of human evolution, Kingsley joins the fellow scientifically-educated fantasists in stressing its essential role in human natural and intellectual development, and social governance. Upon this Kingsley's literary vision puts greater emphasis than those of MacDonald or Carroll, as his condemnation focused more acutely on current social structure as a malevolent, and conscious disobeying of its laws.[109]

Tom's journey concludes when he is transported 'up that great hole' to the 'land-world', the volcanic eruption of insight into its implementation in the world, an ascent that is unlike Alice's or Anodos's awakening. It is not a return to the reality which Tom came from, not a restoration to life, which is clear in the continuing symbolic language: Tom 'looked for seven years' to understand where he has arrived, and he re-encounters Ellie who has waited for Tom 'many a hundred years' (178). According to the three stages of the Dantean journey, Kingsley's equivalent of Paradiso puts into sharp contrast that the England in which Tom could achieve what he was naturally intended to achieve is still centuries away. Kingsley's utopia vision does not dwell on this future state unlike More, or such later utopias as William Morris's *News From Nowhere* (1890) or H.G. Wells's *A Modern Utopia* (1905), in which these constitute the main part of the novel – and the rules

[109] Cf. Arthur Ladbroke Wigan, *A New View of Insanity*; Frances Power Cobbe, 'Unconscious Cerebration' in earlier chapters, and others who continued to see the unconscious as dangerous throughout the century.

were written upon the soul – and the task to study them, and to purge themselves, was the readers'.

Due to its origins in social criticism and politics, and the Christian Socialist magazine in which it was first published, Sumpter compared Kingsley's vision to the rural utopianism anticipating the 1890s socialist fantasies of Morris and Wells, which focus far more specifically than the visions of Carroll and MacDonald upon the practical dimensions of misapplication of science, and moral degeneration of the mind, the role of education.[110] His work was thus also understood as more than a literary contribution, but a contribution to social reform, met even with approval by critics of the church, such as T.H. Huxley, who wrote to Kingsley:

> [It] is clear to me that if that great and powerful instrument for good or evil, the Church of England, is to be saved from being shivered into fragments by the advancing tide of science–an event I should be very sorry to witness, but which will infallibly occur if men like Samuel of Oxford are to have the guidance of her destinies–it must be by the efforts of men who, like yourself, see your way to the combination of the practice of the Church with the spirit of science.[111]

As a narrative rooted in the theological primarily for its claim to moral truth, but expressed to natural truth, in a future space separate from, but governed by the same laws, *The Water-Babies* anticipated what Helen Kingstone highlights was typical of '[w]riters of fin-de-siècle utopian fiction', and those who followed them. These more frequently projected 'their narratives into the future, [so] they could put themselves at an imaginary distance from their present and look back on it with artificial hindsight': a powerful 'alternative mode of writing modern history […] from a position of distanced authority'.[112] The explicitly political nature of Kingsley's text – the science-based prophetic narrative extrapolating utopia – offered coherent solutions, and provided a framework to secular

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[110] Sumpter, *Press and Fairy Tale*, pp.88;105.
[111] Thomas Henry Huxley to Charles Kingsley (1860), *Life and Letters of Thomas Henry Huxley,* 3 vols., ed. by Leonard Huxley (Cambridge: Cambridge University Press, 2012), I, p.320.
[112] Kingstone, 'Imaginary Hindsight', p.43.

writers such as Wells, even while maintaining theological imagery for the same authoritative effect, as it was Nature herself that revealed truth: a narrative trick. Nature performed a double role as both the object of scientific study, and therefore provider of empirical fact, but also as the Nature of Natural theology, in which what Nature revealed was inherently moral, and therefore, good. The malfunctions the juxtaposition with it revealed, and the disaster resulting from them, were preconditional for a synthesis, and a return – or indeed progress – to an intended state. Thus, it was such equally utopian, or dystopian narratives as *The Time Machine* (1895), *The Island of Doctor Moreau* (1896) that resurface as a distinct narrative form around the *fin de siècle* parallel to the disintegrated narratives of *Lilith* and *Sylvie and Bruno*, seeking to reconcile, not practicalities, but philosophies: a task whose limits lay in the mind, not in society. Carroll's and MacDonald's texts leave the reader to think, like their protagonists trapped between worlds, whereas Kingsley's prompt the reader into action to vindicate those protagonists in and beyond their own present worlds.

4. Transcending Wonderland: Conclusion

'Life, what is it but a dream'
Lewis Carroll, *Through the Looking-Glass*[1]

Kingsley's, MacDonald's and Carroll's dreams, sympathetic to the weaker, relentlessly exposed society in order to equip mankind with the psychological wherewithal, and thus the possibility to create a better society. Thus, they presented a powerful language to the inheritors of the fantastic tradition. It was through the same psychological imagery, the same optical metaphors of earlier Victorian fantasists that H.G. Wells articulated the interpersonal and intercultural horrors already exposed in the vivisection debate by Carroll, in the *Island of Doctor Moreau*. Like Vane after he finally recognises Lilith's true nature, Prendick returns from Moreau's island of Beast-Men with the gift of double-vision, and could now not help but diagnose – see and know – the true nature of men when he saw 'animals half wrought into the outward image of human souls'.[2] It was the same principle as Alice, microscopically small, uncovering a mind under attack of harmful ideologies, or Tom's 'divina commedia' magnifying in a 'drop of water' the sin of mankind, that gave Wells the tools to see through, expose and digest the horrors of Empire, and, although projected onto Mars it performed precisely that function in the *Wars of the World*.[3] A story so powerful it resurfaced in the time of the looming world wars and regularly thereafter, it still used not only the same imagery, but nearly the same wording:

> No one would have believed in the last years of the nineteenth century that this world was being watched keenly and closely by intelligences greater than man's and yet as mortal as his own; that as men busied themselves about their various concerns they were scrutinised and studied, perhaps almost as narrowly as a man *with a microscope might scrutinise the transient creatures that swarm and multiply in a drop of water*.[4]

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[1] Carroll, *Looking-Glass*, p.223.
[2] H.G. Wells, *The Island of Doctor Moreau* (New York: Bantam, 2004), p.138.
[3] Kingsley, 'How to Study', p.303.
[4] H.G. Wells, *The War of the Worlds* (New York: Bantam, 2003), p.3 [my emphasis].

The dangers of such irresponsible scientists as Vane, made visible in the *Invisible Man*'s adaptation of polarisation, gave insight into the same fourth dimensional mindscape of selfish desire that underpinned the magic mirrors in *Narnia*'s wardrobe, or *Harry Potter*'s mirror Erised. These metaphors still perform a psychological function: through them authors grapple with the human psyche, individual, collective – with the human condition – in search of origins, to find guidance for the future.

When Tolkien had described Fantasy as the 'Escape of the Prisoner' – not 'the Flight of the Deserter' – and Maxwell exulted the 'guiding radiance' of his 'inner world of dreams' on his pursuits in the waking world, it seems all too easy to dismiss the claim of fantasy's escapism, the dream's meaninglessness.[5] The prophetic visions for which Wells used the tools his Victorian predecessors had put at his disposal, his own 'realistic wonderlands', must, surely, put out of the question that the imagination, the fantastic, itself being the 'legitimate product of science', was indeed 'capable of generating science in its turn'.[6] Yet, as the double-vision becomes a curse to Prendick, and his tale, not unlike Vane's, ends with the words 'I hope, or I could not live. And so in hope, and solitude, my story ends' – their fate is as that of Wells himself.[7] In one of his final works, *The Conquest of Time* (1942), Wells wrote that, as the content of the works devised when he was 'still mentally adolescent', was 'so completely in accordance with current experience that it might have been written yesterday', he proposed 'to reprint it no more'. 'No one would believe it then, and now everybody would say "We all know that." So why reprint it any more?'[8]

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[5] Tolkien, 'Fairy-Stories', p.69; Maxwell, *Letters and Papers I*, p.443.
[6] Wells, 'George MacDonald', p.233.
[7] Wells, *Doctor Moreau*, p.139.
[8] H.G. Wells, *The Conquest of Time* (London: Watts, 1942), p.1.

This thesis has aimed to show the how the fantastic visions of the Victorians emerged from their engagement with psychological science. Yet, such emotional responses, further, beg the question what purpose they served then, now, and what function we anticipate them to fulfil in a time in which fantastic narratives are unbroken in their popularity, yet critical and popular perceptions of them as escapist persist. As the science of dreaming has surpassed its segregation of the dream's functions into the 'gates of ivory' and the 'gates of horn', it is as crucial to ascertain and differentiate the variety of the ways in which the fantastic, and specifically, fantastic dreams and visions, interact with scientific discourses, and science itself. On this, the present study of the circumstances of these narratives' conception can shed light.

As the mutually illuminating study, for instance, of MacDonald's university days and *Phantastes* has shown, the fantastic visions, firstly, serve a *documentary*, and a *biographical* function. Fantastic visions became a treasure trove of theories that preoccupied the Victorian mind, and meanings implied by them. Their scientific content, can, in turn, allow insight into author biographies, works, and genres, as it expands their critical scope, as in the case of the apparently carefree nonsense of the *Alice* novels, which in a scientific light appear as mediators, and conquerors of the difficulties Bettelheim believed fantastic tales enchanted. Secondly, as Carroll's seemingly endless stringing up of new fragments upon the thread of his story in *Sylvie and Bruno* demonstrated, especially these phenomenological visions served a *discursive*, a *contextual* function. They can shed light on what theories were perceived 'as dangerous', and for what reasons. Taking a problem out of its complex intellectual context, and, as in an experiment, they could thus examine it within other epistemological frameworks, as Carroll had done with the question of free will in the context of evolutionary psychology, the 'moral atmosphere' or Esoteric Buddhism in *Sylvie and Bruno,* allowing and illuminating new connections and

implications to become apparent. They could, thirdly, be *projective*, a far mirror serving as warning or hope, as in *Lilith*'s Bulika or the *Water-Babies*'s future of Tom as 'great man of science', which, at times, was intentionally or not, and depending on its claim to truth, manifests as *prophetic*, as many of Wells's tales.

Lastly, the function of the fantastic vision could indeed be *scientific*: it could be *innovative*, make a scientific contribution, or have a scientific impact. It could indeed describe, drawing on contemporary scientific knowledge, scientific theory that was yet to be discovered, as MacDonald had done in his theory of dream-phases. Although the visions of Victorian fantasy are not themselves "science", they could perform scientific *explanatory* functions. As Willis highlighted, the potential of these narratives for 'mobilising science', that is to communicate and disperse scientific knowledge in non-traditional ways, is significant, especially with view to adaptation of such narratives as *Alice's Adventures in Wonderland* in this context, for instance in Robin Gilmore's *Alice in Quantumland* (1994), Margaret Boysen's *Alice, Climate Change and the Cat Zeta* (2016), and other texts of the type that have harnessed the fantastic vision's narrative potential for discovery, questioning and making sense of the unknown and unlikely.

With that in mind, it appears perhaps a contrast, that this thesis has established the origin of many of these visions' metaphoric, meaning-transferring, elements in theological contexts. The Christian moral concerns of authors, all members of the clergy at, at least a period, of their lives, dedicated, but unconventional in their search for religious truth, may seem outdated, but still haunts modern fantasy, 'phantom-wise', through the imagery they contributed to popularising.[9] The continuing currency of this imagery derives not strictly from their religious function, but their *emotional* power that transcends their religious

[9] Carroll, *Looking-Glass*, p.223.

origins, as with adaptations of mythological imagery. The man-eating Moloch informs the atheist Marx as much as MacDonald's *Lilith*, to recur again in the agnostic Wells's *Time Machine*'s Morlocks. Through this imagery, however, the visions make visible emotional responses to the state of society and the causes of it, performing thus an essentially scientific function: a scientific function for which Victorian fantasists had, indeed, conceived them, haunting their adaptations just as phantom-wise. It is, however, I argue, the fact that they were conceived to perform a scientific function and popularised as doing so, that makes them, even in adaptation, so readily applicable as analytical tools to society.

It is the theological and mythological imagery for which critics, like Manlove and Prickett, often characterise fantasy as 'backward-looking' and dominated by a sense of 'nostalgia'.[10] This holds true to an extent, for instance with regard to their reworking of chivalric imagery and the Romance tradition, in which fantasists often betray a streak of treacherous, and almost always anthropocentric, idealism. Victorian fantasists did indeed rehabilitate fantasy and the childlike, seemingly nostalgically, in an age that had become all but its opposite. As, however, their biographical and scientific backgrounds reveal, this was not a Romantic escape, but one to solve real social problems, to combat fears, but not elusively, through threatening punishment alone: but through transformation developing the psychological tools of being able to do so.

It is illuminating that Jameson highlighted the adaptations of the Romance narrative, whether fantastic or realistic, for the purposes of offering a 'salvational perspective'.[11] Salvation, in the science-based psychological visions of MacDonald, Carroll and Kingsley, was only possible through engagement with confronting the 'difficult issues', for which

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[10] Cf. Prickett, *Victorian Fantasy*, Colin Manlove, *Christian Fantasy: From 1200 to the Present* (Notre Dame: University of Notre Dame Press, 1992).
[11] James, *Political Unconscious*, pp.104-5.

Bettelheim had noted, enchantment was purposed.[12] Escape therefore led to into worlds rooted in science to deal with its problems: although they are worlds located in the imagination, these imaginative worlds that have the real worlds from which they escaped *in mind* at all times. The authors' scientific, and especially psychological knowledge thus illuminates a dimension of their work which has only been tantalisingly sparingly explored in the works of their immediate successors thus indicating avenues for future scholarship. Further, such a focus on scientific discourses and authors' engagement with them, their history and literary history, sheds light on narrative continuities in the way in which fantastic visions are being harnessed in contemporary scientific discourses in which writers, facing contemporary challenges of the Anthropocene, such as in Climate Change Fiction ('Cli-Fi'), reveal and address looming ecological Armageddon, often through empowered voice of the child, draw on as their Victorian predecessors. As the specific narrative frameworks of introspective, phenomenological, and external visions of Victorian fantasy thus continue to cater to different author visions and objectives, personal and universal problems, this science-historical and narrative methodological approach provides fertile ground for discussions for the future study of fantastic visions.

Fantasy, imagination and psychology are not only kindred conceptions linguistically, they are sister phenomena acting like call and antiphon. Drawing a clear line between fantastic and realist remains as slippery as it had been to Victorian psychologists. It is perhaps best expressed through the metaphor MacDonald had borrowed from Corinthians, the transcendence form one to the other is like 'seeing through a glass darkly', and 'seeing more clearly, as well as also being seen' – a process of diagnosis, being revealed to oneself, reflecting through oneself on one's environment, its influences, acknowledging effects, causes, and thus one's own role in a complex system. The transcendent quality of

[12] Bettelheim, *Enchantment*, p.3.

these literary visions, their inhabiting of both worlds, and the in-between, the visions, whether conclusive or not, are always productive of cognitive value. They open up worlds of cognitive development, lands that make us wonder, that make us question. They become our own diagnostic device, our magnifying glass, held up to society, to diagnose its (mal-)functions. Thus, *Alice* has accompanied and navigated history, from the Victorians, to the times of Margaret Thatcher, Tony Blair and Brexit – confirming, that there will remain a need for the diagnostic, visible-making, and curative potential of fantasy to generate 'clear thought' in 'eucatastrophe', for the fantastic vision to occupy the middle of society, literature and thought, as long as we continue to be 'all mad here'.

Fig.41: 'We're all mad here': Cheshire Cat disappearing

Appendix

I. Arts Curriculum, King's College Aberdeen 1850
(P.J. Anderson, *The Arts – Curriculum* (Aberdeen: University of Aberdeen, 1892), p.17)

1st Session: Greek, Latin, each two hours daily (£3 3s.); English, three hours weekly (£1 1s.).
2nd Session: Mathematics, two hours daily (£3 3s.); Greek, Latin, each one hour daily (£1 1s.); Natural History, one hour daily (£3 3s.).
3rd Session: Natural Philosophy, eight hours weekly (£3 3s); Logic,† eight hours weekly (£2 2s.); Mathematics, one hour daily (£1 1s.).
4th Session: Moral Philosophy, eight hours weekly (£3 3s.); Chemistry, one hour daily (£3 3s.); Natural Philosophy, one hour daily (£1 1s.).

II. H.G. Wells to George MacDonald, 24 September 1895

Dear Sir,

I have been reading your *Lilith* with exceptional interest. Curiously enough I have been at work on a book based on essentially the same idea, namely that, assuming more than three dimensions, it follows that there must be wonderful worlds nearer to us than breathing and closer than hands and feet. I have wanted to get into such kindred worlds for the purposes of romance for several years, but I've been bothered by the way. Your polarization and mirror business struck me as neat in the extreme. For my own part, I've never quite got out of this world. In my own book *The Wonderful Visit* (of which I will send you a copy in the course of a week or so—so soon as it is published, that is) I have done the complement of *Lilith*. You make a man go out of the three-dimensions and I make a visitor from the outside come into it. But different as the books are, the mother idea is the same beyond question. It's curious, is it not, that after this new idea has been lying neglected for years, it should be worked at simultaneously in this way?

Yours very truly,

H.G. Wells

III. William Gregory to George MacDonald, 14 April 1845 (MS MacDonald 1/1/1, King's College London)

MACDONALD 1/1/1

Edinburgh 14th April
1845

My dear Sir

I would sooner have answered your letter, had any thing occurred to me that was likely to suit you. I am not at present aware of any situation which would answer your purpose, although from time to time I hear of such things, or am likely to hear of them. I do not think that it is at all necessary for you to go abroad, because I have now a school in Edinr. conducted on the same principle, with a first rate German Assistant. There is also a practical school in Glasgow College, besides one or two Laboratories of private lecturers here which are open for working students. I have made the Laboratory fee £5.5 for 3 months or £2.2 per single month, and the private lecturers make it £1.10 per month. This places practical instruction within the reach of all, as, in addition to this small fee, the student has only to provide some small articles of apparatus which are his own and which may cost from 30/ to £2. or £3. He can then work all day in the Laboratory.

I am going to lecture on Organic Chemistry during Summer, and these Lectures will be open to my Laboratory pupils.

If, therefore, you think of pursuing chemistry, you can do it here, and I need not say that I shall be glad to assist your progress. Indeed when you have been some time in my Laboratory or in that of Dr. Wilson or Dr. Anderson, I shall be better able to recommend you as qualified for any chemical situation. I may myself be in want of a paid assistant next year, and although at present you are not qualified for the duties of such a situation, you may probably become so in no long period. I cannot make any promise on the subject, and if I can, I shall get a second assistant from Germany when my present one leaves me: but I shall give you if you should come here, every opportunity of qualifying yourself as an assistant; and it is likely that, by and bye, those trained in my laboratory will have a preference if I am able conscientiously to recommend them. I remain

yours very truly

William Gregory

IV. MS David Elginbrod, 'Count von Funkelstein'
(MS ABHER : 2010.012.4, Aberdeen Museums Archives, Mintlaw, pp.267;26)

V. Lewis Carroll, 'Rolleston's Anatomy Class'

VI. Georgina Edwards [College Archivist, Brasenose College], 'Vanes at Brasenose', E-mail, 15 Nov 2016 Henry Vane (Second from right), Brasenose College Boat Club, Torpids Boat Race 1873

VII. *Good Words for the Young*, 3 (1 January 1869), p.116

out in his sleep, and Diamond thought she ought to know, and did not contradict her:

for anything he knew, it might be so indeed. He let them talk on about him, and said nothing; and when, after their astonishment was over, and Miss Coleman had given him a sponge-cake, it was decreed that Mrs. Crump should take him to his mother, he was quite satisfied.

His mother had to get out of bed to open the door when Mrs. Crump knocked. She was indeed surprised to see her boy; and having taken him in her arms and carried him to his bed, returned and had a long confabulation with Mrs. Crump, for they were

still talking when Diamond fell fast asleep, and could hear them no longer.

GEORGE MACDONALD.

MADAM HOW AND LADY WHY.

BY THE AUTHOR OF "THE WATER BABIES."

No. III.—VOLCANOES.

YOU want to know why the Spaniards in Peru and Ecuador should have expected an earthquake.

Because they had had so many already. The shaking of the ground in their country had gone on perpetually, till they had almost ceased to care about it, always hoping that no very heavy shock would come; and being, now and then, terribly mistaken.

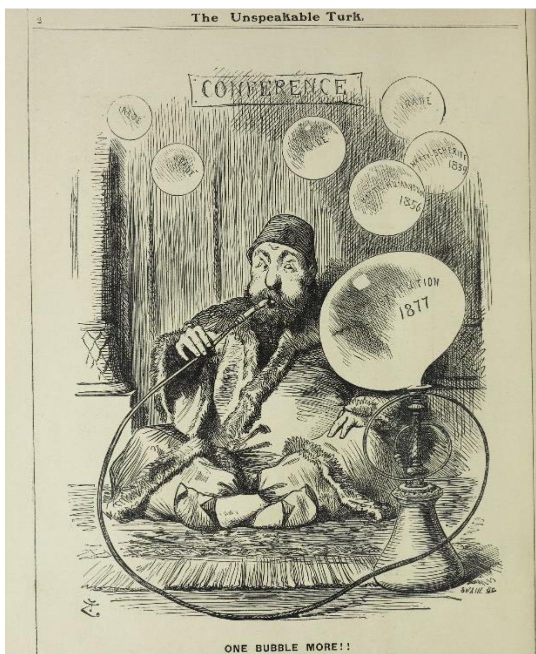
For instance, in the province of Quito, in the year 1797, from thirty to forty thousand people were killed at once by an earthquake. One would have thought that warning enough: but the warning was not taken: and now, this very year, thousands more have been killed in the very same country, in the very same way.

They might have expected as much. For their towns are built, most of them, close to volcanoes—some of the highest and most terrible in the world. And wherever there are volcanoes there will be earthquakes. You may have earthquakes without volcanoes, now and then; but volcanoes without earthquakes, seldom or never.

How does that come to pass? Does a volcano make earthquakes? No; we may rather say, that earthquakes are trying to make volcanoes. For volcanoes are the holes which the steam underground has

VIII. Hookahs & Feeding Bottles

The visual resemblance between the hookah and feeding bottles, apparent also from other Tenniel illustrations, lends itself to caricaturing the Caterpillar's precarious situation of apparently adult superiority. In AAUG the Caterpillar smokes a hookah, despite the image showing it smoking a pipe.

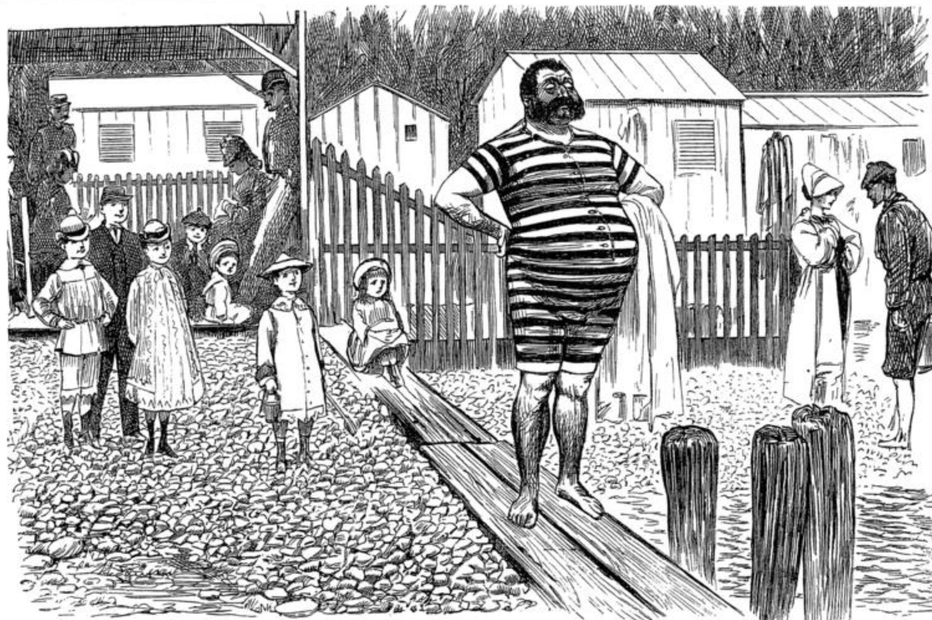


Top left: John Tenniel, 'What will he grow to?', *Punch* (25 June 1881), [n.p.]
Top right: Feeding Bottle, in Sarah Chavez, 'Murder Bottles', Nourishing Death (15 August 2013) <https://nourishingdeath.wordpress.com/2013/08/15/murder-bottles/> [8 May 2019]
Bottom left: John Tenniel, 'The Unspeakable Turk', *Punch* (6 January 1877), p.2
Bottom right: Lewis Carroll, Alice and Caterpillar, *AAUG*, p.49 (The British Library, London)

IX. <u>Victorian bathing suits</u>

Tom is depicted by Sambourne, first, as a sooty, but apparently black-skinned child, then pale-skinned yet still nude, next as a boy wearing a loin cloth, and eventually an older boy wearing swimming trunks typical for boys aged ten or over.

90 PUNCH, OR THE LONDON CHARIVARI. [SEPTEMBER 1, 1877.



STUDY AT A QUIET FRENCH WATERING-PLACE.

"NOW, THEN, MOSSOO, YOUR FORM IS OF THE MANLIEST BEAUTY, AND YOU ARE ALTOGETHER A MOST ATTRACTIVE OBJECT; BUT YOU'VE STOOD THERE LONG ENOUGH. SO JUMP IN AND HAVE DONE WITH IT!"

<u>Top</u>: George du Maurier 'Study at a French Watering-Place' (1 September 1877), p.90
<u>Bottom</u>: George Du Maurier, 'Bain de Mer', *The Victorian Web* <http://www.victorianweb.org/periodicals/punch/seaside/3.html> [24 April 2019].

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