

Trees and Text:

**A Material Ecocritical Exploration of Gen. 2:4b–3:24
in *The Green Bible***

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Abstract

In this study, I employ material ecocritical theory to explore both the depiction of trees in Gen. 2:4b–3:24 in the specific text of the *Green Bible*, and the *Green Bible* itself as a ‘material-discursive’ object. These two analytical approaches represent two modes of enquiry that are unique to material ecocritical discourse: ‘matter in text’ and ‘matter as text’, respectively. Trees are therefore at the centre of this study. Narrated trees are the focus of my textual analysis of Gen. 2:4b–3:24 and real-world trees are the primary natural material from which the text of the *Green Bible* is produced out of a complex assemblage of forestry, manufacturing, publication, distribution, marketing, and interpretation.

I establish that Bennett’s model of distributive agency is compatible with material ecocritical theory and I employ this model in my methodology. I explore the ‘material-botanical’ features of the trees in Gen. 2:4b–3:24 and the numerous agencies exhibited by these trees. This analysis highlights the extent to which the trees of Gen. 2:4b–3:24 have been overlooked in ecological, narrative-critical, and theological readings of the passage, and allows me to propose a unique solution to why eating from the tree of life is not prohibited by Yhwh.

I explore the materiality of Gen. 2:4b–3:24 as it is presented in the *Green Bible* and the materiality of the volume as a whole. I find the use of green text throughout the *Green Bible* inconsistent and that the environmentalist ideology of the volume relies heavily upon an anachronistic stewardship interpretation of Gen. 2:15. Ultimately, my analysis reveals that the explicit environmentalist agenda of the *Green Bible* is undermined by the ambiguous environmental and socio-cultural impacts associated with its production and interpretation.

Contents

1. Introduction	1
1.1 Introducing the study.....	1
1.2 Aims	3
1.3 Introducing material ecocriticism	6
1.3.1 Tracing the development of ecocriticism	7
1.3.1.1 1978-1988 The emergence of ecocriticism.....	8
1.3.1.2 1989-1995 Establishing ecocriticism as an academic field	8
1.3.1.3 1996-2000 <i>The Ecocriticism Reader</i> and UK Green Studies	12
1.3.1.4 2001-2010 Geographical expansion and critical diversification.....	15
1.3.1.5 2011 to present: the emergence of material ecocriticism	18
1.3.1.6 Summary.....	20
1.3.2 Outlining new materialist theory	21
1.3.2.1 (1) Non-human agency.....	23
1.3.2.2 (2) Interconnection.....	25
1.3.2.3 (3) Scale.....	26
1.3.3 The foundations of material ecocritical theory	27
1.4 Introducing the <i>Green Bible</i>	34
1.5 Gen. 2:4b–3:24 in the <i>Green Bible</i> and material ecocriticism: my rationale	36
1.6 Summary	39
2. Literature Review	40
2.1 Introduction.....	40
2.2 Analyses of Gen. 2:4b–3:24 in ecocritical scholarship.....	40
2.2.1 Lynn White Jr, ‘The Historical Roots of Our Ecologic Crisis’	42
2.2.2 Paula Gunn Allen, ‘The Sacred Hoop’	45
2.2.3 Greg Garrard, <i>Ecocriticism</i>	49
2.2.4 Summary: Laurence Coupe, ‘Genesis and the Nature of Myth’.....	50

2.3 Ecological readings of Gen. 2:4b–3:24 in biblical scholarship.....	52
2.3.1 Arthur Walker-Jones, ‘Eden for Cyborgs’	57
2.3.2 R. B. Hamon, ‘Garden and “Wilderness”’	58
2.3.3 Carol Newsom, ‘Common Ground’	59
2.3.4 Mark G. Brett, ‘Earthing the Human in Genesis 1–3’	61
2.3.5 Norman C. Habel, <i>The Birth, the Curse and the Greening of Earth</i>	63
2.3.6 Summary	64
2.4 Analyses of the trees in Gen. 2:4b–3:24 in biblical scholarship.....	64
2.4.1 Terje Stordalen, <i>Echoes of Eden</i>	66
2.4.2 Tryggve N. D. Mettinger, <i>The Eden Narrative</i>	69
2.4.3 Ziony Zevit, <i>What Really Happened in the Garden of Eden?</i>	71
2.4.4 Summary	73
2.5 Examining biblical textual materiality in an ecological context.....	74
2.5.1 Carol Adams, <i>Neither Man nor Beast</i>	74
2.5.2 Rachel Muers, ‘The Animals We Write On’	76
2.5.3 Anne Elvey, ‘A Material Intertextuality’	77
2.5.4 Summary	81
2.6 Academic studies and reviews of the <i>Green Bible</i>	82
2.6.1 Norman Habel, ‘When Earth Reads <i>The Green Bible</i> ’.....	82
2.6.2 David Horrell, ‘ <i>The Green Bible</i> : A Timely Idea Deeply Flawed’	83
2.6.3 Ruth Rosell, ‘ <i>The Green Bible</i> : New Revised Standard Version’	84
2.6.4 Joseph Hong, ‘ <i>The Green Bible</i> : A Model For the Asian Context?’.....	85
2.6.5 Stephen Pattermore, ‘Green Bibles, Justice, and Translation’	86
2.6.6 Dennis Frohlich, ‘Let There Be Highlights’	87
2.6.7 Summary	89
2.7 Literature Review Summary.....	89
3. Methodology	93
3.1 Introduction	93
3.2 ‘Matter in text’: analysing the trees of Gen. 2:4b–3:24	95
3.2.1 (1) Selecting the object of analysis	98

3.2.2 (2) Collecting data from the text	101
3.2.3 (3) Collecting data from alternative versions of the text	107
3.2.4 (4) Collecting data from parallel texts	114
3.2.5 (5) Consolidating and presenting data.....	115
3.3 Applying non-human agency to material ecocritical methodology	116
3.3.1 The mangle	120
3.3.2 Intra-action	121
3.3.3 Actor-Network Theory.....	123
3.3.4 Distributive agency	124
3.3.5 Summary.....	126
3.4 'Matter as text': analysing the <i>Green Bible</i> as a material-discursive object.....	127
3.4.1 (1) Selecting the object of analysis.....	133
3.4.2 (2) Examining the materiality of the text and its effect on its reader(s)	134
3.4.3 (3) Examining the environmental and socio-cultural impacts of the text	143
3.5 Summary	148

4. Matter in Text: Exploring the material attributes of the trees depicted in Gen. 2:4b–3:24 using the <i>Green Bible</i>.....	150
4.1 Introduction.....	150
4.2 Semantic considerations	152
4.2.1 Summary.....	156
4.3 The age of the trees in the garden of Yhwh	157
4.3.1 Summary.....	159
4.4 The scale of the tree plantation and the size of its trees.....	160
4.4.1 Summary.....	162
4.5 Appearance and produce	163
4.5.1 'Pleasant to the sight'.....	165
4.5.2 'Good for food'	168
4.5.3 'Pleasant to the sight and good for food'	171
4.5.4 Summary.....	173
4.6 'Tilling' and 'keeping' the trees	174

4.7 The material-botanical properties of the tree of life.....	176
4.7.1 Why is eating from the tree of life not prohibited by Yhwh?	178
4.7.2 Why is the tree of life in the garden of Yhwh?	184
4.7.3 Summary	185
4.8 'The knowledge of good and evil'	186
4.8.1 Moral discernment	187
4.8.2 Sexual desire	188
4.8.3 Wide-ranging knowledge	189
4.8.4 Summary	193
4.9 The material-botanical properties of the tree of knowledge.....	194
4.9.1 Summary	198
4.10 The material-botanical properties of the fig tree.....	199
4.10.1 Summary	203

5. Matter in Text: Exploring the agency of the trees in Gen. 2:4b–3:24 using the *Green Bible*..... 204

5.1 Introduction	204
5.2 Changing the environment of the primordial earth.....	205
5.2.1 A porous vegetal border	211
5.2.2 Summary	214
5.3 The physiological impacts of the trees	216
5.3.1 Visual impact	217
5.3.2 Taste	219
5.3.3 Sound.....	220
5.3.4 Touch	221
5.3.5 Scent	222
5.3.6 Cover and shade.....	223
5.3.7 The porous sensory boundary	224
5.3.8 Sensory and physiological impacts over scale	225
5.3.9 Summary	226
5.4 The tree of life and the tree of knowledge	227

5.4.1 The tree of life	227
5.4.2 The tree of knowledge	229
5.4.3 Summary.....	232
6. Matter as Text: Gen. 2:4b–3:24 and the <i>Green Bible</i> as a material-discursive object.....	235
6.1 Introduction.....	235
6.2 Gen. 2:4b–3:24 in the <i>Green Bible</i>	236
6.2.1 Summary.....	242
6.3 The material features of the <i>Green Bible</i>	243
6.3.1 Dimensions and bibliographical details	244
6.3.2 Title and cover design.....	247
6.3.2.1 Summary.....	251
6.3.3 Supplementary features.....	252
6.3.3.1 Introductory matter	253
6.3.3.2 Preface	255
6.3.3.3 Introductory essays	256
6.3.3.4 ‘Teachings on Creation Throughout the Ages’.....	261
6.3.3.5 ‘To the Reader’	263
6.3.3.6 Green text	263
6.3.3.7 ‘The <i>Green Bible</i> Trail Guide’.....	268
6.3.3.8 ‘Where Do You Go from Here?’	273
6.3.3.9 ‘Green Subject Index’ and concordance.....	275
6.3.3.10 Summary.....	277
6.4 The environmental and socio-cultural impacts of <i>The Green Bible</i>	280
6.4.1 Marketing the <i>Green Bible</i>	281
6.4.1.1 Summary.....	285
6.4.2 The environmental Impacts of producing the <i>Green Bible</i>	285
6.4.2.1 The <i>Green Bible</i> and its FSC Certification.....	288
6.4.2.2 Summary.....	294
6.4.3 The socio-cultural impacts of the <i>Green Bible</i>	295

6.4.3.1 The socio-cultural impacts of producing and distributing the <i>Green Bible</i> ..	295
6.4.3.2 The socio-cultural impacts of the interpretation of the <i>Green Bible</i>	298
6.4.3.3 Summary	300
7. Conclusion	302
7.1 The main findings of the study	302
7.1.1 Contribution to material ecocritical theory and methodology.....	302
7.1.2 The material-botanical features of trees in Gen. 2:4b–3:24	304
7.1.2.1 The effacement of trees in Gen. 2:4b–3:24.....	304
7.1.2.2 Elucidating the trees depicted in Gen. 2:4b–3:24	305
7.1.2.3 Why is eating from the tree of life not prohibited by Yhwh?	307
7.1.3 The agency of the trees in Gen. 2:4b–3:24	308
7.1.3.1 Changing the environment of the primordial earth.....	309
7.1.3.2 Sensory and physiological impacts of trees on the humans	310
7.1.3.3 The tree of life.....	311
7.1.3.4 The tree of knowledge.....	311
7.1.4 The materiality of the <i>Green Bible</i> and the interpretation of Gen. 2:4b–3:24....	313
7.1.4.1 Gen. 2:4b–3:24 in the <i>Green Bible</i>	313
7.1.4.2 Title and cover	314
7.1.4.3 Green text.....	315
7.1.4.4 The environmental ideology of the <i>Green Bible</i>	315
7.1.5 The environmental and socio-cultural impacts of the <i>Green Bible</i>	317
7.1.6 Reconciling the narratives: the <i>Green Bible</i> as a material-discursive object	319
7.2 Critical analysis of the study	321
7.2.1 Methodology and its application	322
7.2.2 The historical dimension of the study.....	326
7.3 Further applications of the methodology and findings of the study.....	327
7.3.1 ‘Matter in text’: narrative-critical applications.....	327
7.3.2 ‘Matter as text’: the study of textual materiality.....	329
7.3.3 Combining ‘matter in text’ and ‘matter as text’.....	330
7.3.4 Material ecocriticism and moral agency	331

7.3.5 Agency and plant philosophy 334

7.3.6 Theological implications..... 336

Bibliography 339

1. Introduction

1.1 Introducing the study

Writing in 1976, Claus Westermann observed in his commentary on Genesis 1–11 that the trees of Gen. 2:4b–3:24 produced not only appetising fruit, but also a vast assortment of literature.¹ Some four decades later, it is my aim to contribute new knowledge to our understanding of the trees of this highly influential text. In this study, I employ material ecocritical theory in order to explore Gen. 2:4b–3:24 from an innovative ecological perspective. The study has two points of focus: (1) examining the trees depicted within the physical world of Gen. 2:4b–3:24 in the specific text of the *Green Bible*, a speciality bible with an explicit environmentalist agenda.² (2) Examining the materiality of Gen. 2:4b–3:24 as it is rendered in the *Green Bible*, discussing the potential influence of this specific material format upon its readers, and the relationship between the environmentalist ideology of this Bible and the complex global network of natural resources and human efforts that has produced it.³ Whilst these two foci are ostensibly distinct, from the perspective of material ecocritical theory they are intimately interconnected; indeed, trees are both the centre of my narrative-critical analysis of Gen. 2:4b–3:24 and the principle natural material from which the *Green Bible* is constructed.

¹ Claus Westermann, *Genesis 1–11* (Biblicher Kommentar Altes Testament 1; Neukirchen-Vluyn: Neukirchener Verlag, 1976), p. 288.

² The term ‘speciality Bible’ is now in frequent use in the publishing industry to describe an edition of the Bible that is designed specifically for a particular niche in the market.

³ *The Green Bible* (London: HarperCollins, 2008).

Trees and Text

As I shall discuss below, the field of biblical scholarship has established its own ecological methodologies for reading biblical texts and produced several ecological readings of Gen. 2:4b–3:24. However, this work has largely been accomplished independently of the field of ecocriticism, an interdisciplinary mode of literary criticism, which has the specific aim of examining the relationship between text and the physical world. Hence, I envisage great potential for material ecocriticism, an emerging sub-field of ecocriticism, to contribute new knowledge to our understanding of Gen. 2:4b–3:24, despite the vast quantity of analysis and interpretation that this text has inspired.

Material ecocritical theory is largely concerned with two analytical approaches: (1) ‘matter in text’, which examines the depiction of the material world in texts. (2) ‘Matter as text’, which examines and interprets the ‘material-discursive’ world as ‘narrative’, in light of new materialist theory.⁴ I shall return to discuss both of these approaches in detail below.

In this study, I devise a methodology that allows these two approaches to be undertaken together. I apply this methodology to Gen. 2:4b–3:24 primarily in the text of the *Green Bible*, but also in comparison with other versions of the text in order to (1) analyse the depiction of trees in this narrative; (2) examine the text as it appears in the *Green Bible*, considering its materiality, the potential effects of its specific materiality on its readers, and the relationship between the explicit environmentalist agenda of the

⁴ Serenella Iovino and Serpil Oppermann, ‘Introduction: Stories Come to Matter’, in S. Iovino and S. Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014), pp. 1-17 (2).

1. Introduction

Green Bible and the network of natural resources and human labour from which the product is manufactured, marketed, distributed, and sold.

In order to provide some more detail on the scope and content of this study I shall proceed to outline its aims and to outline the observations and hypotheses that underpin it. I shall then discuss the theoretical foundations upon which this study is based. Material ecocriticism is a sub-field of ecocriticism that is founded upon new materialist theory. I therefore begin by outlining the development of ecocriticism, introducing the relevant areas of new materialist theory and then discussing the chief principles of material ecocriticism. Next, I provide an introduction to the *Green Bible*. Finally, I discuss my reasons for choosing the specific text of Gen. 2:4b–3:24 in the *Green Bible* to demonstrate an application of material ecocritical theory to a biblical text. The chapter then closes with a summary.

1.2 Aims

The aims of my study are as follows:

(1) To contribute to the dialogue between the fields of biblical studies and ecocriticism. I shall achieve this by producing a sustained and detailed interdisciplinary analysis of Gen. 2:4b–3:24 that, for the first time, combines the theory and methodology of material ecocriticism with specialist insight into the text from the field of biblical studies.

Trees and Text

(2) To contribute to the understanding of Gen. 2:4b–3:24 in the field of biblical studies. Using material ecocritical theory and methodology, I aim to deliver an original reading of Gen. 2:4b–3:24 that contributes new knowledge to the body of existing ecological and narrative interpretations of the text undertaken in the field of biblical studies.

Whilst this will not be the first ecological analysis of Gen. 2:4b–3:24 undertaken in the field of biblical studies, the study will be radically different to the ecological and narrative-critical studies that have preceded it in respect to its aims, theory, methodology, and findings. As I shall demonstrate below, previous ecological readings of Gen. 2:4b–3:24 have not explored the trees of this narrative in any depth, and have tended to focus on the depiction of the relationship between humanity and the non-human. Similarly, narrative-critical studies of this passage have tended to focus on the two most prominent trees in the text, the tree of life and the tree of knowledge, and have largely ignored the numerous and diverse species of trees that fill the garden of Yhwh.⁵

(3) To contribute to the understanding of Gen. 2:4b–3:24 in ecocritical scholarship. As I shall illustrate below, ecocritical scholarship has, to date, predominantly understood Gen. 2:4b–3:24 in light of Christian theological tradition, that is in terms of sin, hierarchy of creation, the fall, and the corruption of nature. I aim to contribute to the field of ecocriticism by elucidating Gen 2:4b–3:24 in light of biblical scholarship.

⁵ For brevity, and because this shortened name still conveys the unique agentic properties of this tree, I employ the abbreviated designation 'tree of knowledge' throughout.

1. Introduction

(4) Engaging with material ecocritical theory, I aim to develop a methodology for analysing both ‘matter in text’ and ‘matter as text’ together in the same study. This has not yet been undertaken in material ecocritical scholarship. My hope is that by developing this methodology and presenting it in a way that is adaptable to other contexts, my study will facilitate future material ecocritical analyses of biblical and other texts.

In order to do this, the study will offer an evaluation of the numerous models of non-human agency that feature throughout material ecocritical discourse. At present, material ecocritical theory has not done enough to acknowledge the conceptual differences between these different models. I shall attend to this current gap in knowledge and I suspect that the result of this analysis will hold implications for the manner in which these models are applied in material ecocritical discourse.

(5) In my ‘matter in text’ analysis I shall explore the depiction of trees in Gen. 2:4b–3:24, examining the material properties of the trees and the agencies that they exhibit within the physical world of this passage. I expect to contribute new knowledge to the understanding of the botanical properties of trees throughout Gen. 2:4b–3:24. I shall also explore the narrative ‘problem’ of why no prohibition is placed on eating from the tree of life. This question has received much attention from biblical scholars and I anticipate that an approach that considers the botanical features of this tree may provide an innovative solution. Applying the new materialist concept of non-human agency in a narrative-critical context I shall examine the agencies exhibited by the trees depicted in Gen. 2:4b–3:24, identifying and discussing their

Trees and Text

environmental and sensory and physiological impacts within this narrated world.

(6) In my 'matter as text' analysis I shall explore the materiality of the *Green Bible* in an unprecedented level of detail, focussing particularly upon the pericopé Gen. 2:4b–3:24. I shall discuss the environmentalist ideology of the volume alongside the environmental and socio-cultural impacts associated with its manufacture, distribution, marketing, and interpretation and I anticipate that this will reveal a conflict between the two.

1.3 Introducing material ecocriticism

Within the current body of material ecocritical study, scholars have evaded offering definitions of material ecocriticism in favour of providing introductory chapters and articles that outline the scope of the sub-field.⁶ I do not think that this is an intentional effort to avoid defining material ecocriticism for theoretical reasons, but rather that it is a symptom of the complexity of the sub-field and its wide range of application. Indeed, Michelle Reyes proposes that material ecocriticism could be categorised within the social sciences, natural sciences, or humanities and that its scope includes literary analysis, politics, and religion.⁷

⁶ Serenella Iovino and Serpil Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', *Ecozon@*, 3.1 (2012), pp. 75-91; Serenella Iovino and Serpil Oppermann, 'Theorizing Material Ecocriticism: A Diptych', *Interdisciplinary Studies in Literature and Environment*, 19.3 (2012), pp. 448-475; Iovino and Oppermann, 'Introduction: Stories Come to Matter'.

⁷ Michelle Reyes, [review of *Material Ecocriticism*, by Serpil Oppermann and Serenella Iovino], *Christianity & Literature*, 65.3 (2016), pp. 374-378 (378).

1. Introduction

Material ecocriticism, in my estimation, may be described as the application of new materialist theory within the context of ecocritical theory and analysis. Whilst this description is helpful at a very general level of understanding, it illustrates the difficulty of defining or describing material ecocriticism in a concise manner; to understand material ecocriticism an understanding of both new materialism and ecocriticism is needed. Consequently, I shall proceed to offer an introduction to the field of ecocriticism, outline the theory of new materialism and, having provided a sufficient theoretical foundation, conclude by introducing material ecocriticism.

1.3.1 Tracing the development of ecocriticism

Ecocriticism, a contraction of 'ecological literary criticism', is a critical approach that became established in the 1990s. As its name suggests, the field of ecocriticism may be broadly described as the examination of text in light of environmentalist theory. The theory and scope of the field has changed greatly since its emergence so I have presented the introduction to ecocriticism below as a history, highlighting periods that correspond to specific stages of development in the field. Given the focus of this study, I place particular emphasis upon the manner in which foundational ecocritical studies have discussed and interpreted biblical texts. This is especially helpful given that no study in biblical scholarship has yet provided an outline of the development of ecocriticism or discussed its relation to biblical scholarship.

Trees and Text

1.3.1.1 1978-1988 The emergence of ecocriticism

The term 'ecocriticism' first appeared in William Ruekert's 1978 essay 'Literature and Ecology: An Experiment in Ecocriticism', where he proposed the 'application of ecology and ecological concepts to the study of literature.'⁸

Ruekert was ahead of his time; neither the term 'ecocriticism' nor the specific analytical approach that he had suggested in this paper exerted a great influence upon the academy initially. Instead, the 1980s saw the emergence of a small and diffuse group of scholars in the United States who shared an interest in the study of American nature writing. This group was largely concerned with examining the literature of the Transcendentalist movement, studying writers such as Ralph Waldo Emerson, Henry David Thoreau, and Aldo Leopold. The work of this group was significant, as literary critics had previously paid little attention to this tradition.⁹

1.3.1.2 1989-1995 Establishing ecocriticism as an academic field

In this period, ecocriticism became established as a distinct field of study. Some 11 years after the publication of Ruekert's essay, Cheryll Glotfelty, then a postgraduate, proposed at the annual conference of the Western Literature Association (WLA) that the term 'ecocriticism' should be used to

⁸ William Ruekert, 'Literature and Ecology: An Experiment in Ecocriticism', *Iowa Review* 9.1 (1978), pp. 71-86; reproduced in C. Glotfelty and H. Fromm (eds.), *The Ecocriticism Reader: Landmarks in Literary Ecology* (Athens: The University of Georgia Press, 1996), pp. 105-123 (107).

⁹ Cheryll Glotfelty, 'Introduction: Literary Studies in an Age of Environmental Crisis', in *The Ecocriticism Reader: Landmarks in Literary Ecology*, ed. by C. Glotfelty and H. Fromm (Athens, GA: The University of Georgia Press, 1996), pp. xv-xxxvii (xvii-xviii).

1. Introduction

describe the work of the small body of scholars studying American nature writing.¹⁰ Glotfelty's proposal was supported and the term 'ecocriticism' increased in usage. In the following year at the University of Nevada, Reno, Glotfelty became the first scholar to be employed in the United States as professor of Literature and Environment.

In 1992, Glotfelty invited a group of scholars and writers to gather at the University of Nevada in a session hosted by the WLA to found the Association for the Study of Literature and Environment (ASLE).¹¹ The mission of ASLE was twofold: (1) to 'promote the exchange of ideas and information pertaining to literature that considers the relationship between human beings and the natural world';¹² (2) to encourage 'new nature writing, traditional and innovative scholarly approaches to environmental literature, and interdisciplinary environmental research'.¹³ For the first time ASLE created a network for those with interests in literature and the environment to meet, exchange ideas and share research; the organisation established a community in which the field of ecocriticism, and other ecologically motivated endeavours in the arts and humanities, could develop. The attendees of this first gathering were largely based in North America and ASLE had just 54 members in its first year, though membership had risen to 750 by 1995.¹⁴ The network formed by ASLE was cemented in the following year when it established its biennial conference and journal, *Interdisciplinary Studies in*

¹⁰ Michael P. Branch and Sean O'Grady (eds.), 'Defining Ecocritical Theory and Practice', <http://www.asle.org/wp-content/uploads/ASLE_Primer_DefiningEcocrit.pdf> (2016) [accessed 27 November 2016].

¹¹ ASLE, 'Vision & History', <<http://www.asle.org/discover-asle/vision-history>> (2016) [accessed 27 November 2016].

¹² Glotfelty, 'Introduction', p. xviii.

¹³ Glotfelty, 'Introduction', p. xviii.

¹⁴ Cheryll Glotfelty, 'Preface', in G. Garrard (ed.), *The Oxford Handbook of Ecocriticism* (Oxford/New York: Oxford University Press, 2014), p. ix; Glotfelty, 'Introduction', p. xviii.

Trees and Text

Literature and Environment (ISLE), which have become the premier academic gathering and the most highly-respected journal in the field.

Glotfelty describes the period 1996-2000 as the time in which ecocriticism became international and started to be adopted by scholars in countries around the world.¹⁵ This is largely true, but 1994 saw the establishment of ASLE Japan, the first international affiliate organisation of ASLE.¹⁶ This first affiliate organisation had the same academic vision as the North American ASLE, but had a greater focus upon the literature of Japan. The language barrier and geographical distance between these organisations seems to have contributed to the field developing in a regional manner. In the early 1990s ecocriticism was a largely North American endeavour focussed upon examining the writings of the Transcendentalist movement. To give some idea of the scale and scope of the field, from 1990-1995 seven edited ecocritical volumes were published and they largely explored the depiction of nature, wilderness, and environment in various North American literary works.¹⁷

1995 saw the publication of the first monograph in the field of ecocriticism, Lawrence Buell's *The Environmental Imagination*.¹⁸ Buell set out to explore the depiction of the natural environment of North America in the writings of Thoreau, but in doing so he identified the need to explore the wider concept of environmental perception, the role of nature in the history of

¹⁵ Glotfelty, 'Preface', p. x.

¹⁶ ASLE Japan, 'About us', <<https://www.asle-japan.org/english/about-us/>> (2017) [accessed 6 January 2017].

¹⁷ Glotfelty, 'Preface', p. ix-x.

¹⁸ Lawrence Buell, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (London/Cambridge, MA: The Belknap Press of Harvard University Press, 1995).

1. Introduction

Western thought and the consequences of the emerging mode of ecocentric thinking.¹⁹ In this volume, Buell offered a definition of ecocriticism: 'the study of the relation between literature and environment conducted in a spirit of commitment to environmentalist praxis'.²⁰ This definition of the field is very broad in that its scope reaches far beyond the confines of examining North American nature writing to 'literature' as a whole (presumably including poetry, prose, drama, film etc.), but it is also limiting as assumes that all practitioners of ecocriticism are motivated by an environmentalist ethic. Buell did not devote any significant space to elucidating this definition; it was presented as an endnote within his study, so it is unclear what future potential for the field he anticipated and why he felt it was important to include an ethical dimension. Nevertheless, this was the first published definition of ecocriticism; as such, it has been cited many times in ecocritical scholarship and is still used today.

Buell's monograph became a foundational work in the field of ecocriticism. However, the study has a North American focus and the history of environmental perception that Buell traces is limited to North American literature.²¹ Whilst I can accept that the study must have a specific focus, I am surprised to find that Buell does not acknowledge the influence of the Bible on the development of the Western literary tradition and the role of biblical texts and their reception in shaping the Western conception of the physical world. The observation that ecocritical discourse has largely failed to engage with the field of biblical studies in a sustained and detailed manner is

¹⁹ Buell, *The Environmental Imagination*, p. 1.

²⁰ Buell, *The Environmental Imagination*, p. 430.

²¹ Buell, *The Environmental Imagination*, pp. 31-142.

Trees and Text

key to this study; I shall discuss this observation further below, particularly in respect to ecocritical analyses of Gen. 2:4b–3:24.

1.3.1.3 1996-2000 *The Ecocriticism Reader* and UK Green Studies

In the period from 1996-2000 the scope of ecocriticism widened beyond the analysis of American nature writing to include the exploration of urban environments, ecofeminist perspectives and rhetorical studies.²² During this time, the international impact of ecocriticism also widened with 18 volumes being published in French, German, Japanese, and Korean.²³ Marking the start of this period was the foundational *Ecocriticism Reader* edited by Glotfelty with assistance from Harold Fromm.²⁴ This ambitious volume compiled a selection of previously published and original studies that explored the connection between literature and the environment from a variety of analytical perspectives and using a range of methodologies. The study had a deliberate focus upon North American ecocriticism and mentions nothing of the establishment of the field in Japan.²⁵

In the introduction to this volume, Glotfelty focused upon defining ecocriticism, outlining ecocritical theory and proposing a range of methodologies for ecocritical analysis and it was evident that at this point the scope of ecocriticism had developed far beyond its initial focus on North

²² Glotfelty, 'Preface', p. x.

²³ Glotfelty, 'Preface', p. x.

²⁴ Cheryl Glotfelty and Harold Fromm (eds.), *The Ecocriticism Reader: Landmarks in Literary Ecology* (Athens: The University of Georgia Press, 1996).

²⁵ Glotfelty, 'Introduction', p. xxv.

1. Introduction

American nature writing.²⁶ Glotfelty defined ecocriticism as the 'study of the relationship between literature and the physical environment'.²⁷ Her definition was therefore broader than the earlier definition proposed by Buell as it avoided any assumption about the motivation of ecocritical study.

It is clear from her introductory chapter to the *Ecocriticism Reader* that Glotfelty is a visionary and it seems that she chose this broad definition in order to accommodate the great diversity that she anticipated in the future of the field.²⁸ Indeed, her definition is still in usage and relevant today, despite the numerous and diverse developments in ecocritical theory that have taken place since this time. Crucially for this study, Glotfelty's definition applies to the sub-field of material ecocriticism, which is primarily informed by new materialist, rather than environmentalist, theory whereas Buell's earlier definition does not. Glotfelty elucidated the theoretical scope of her definition through an engagement with the science of ecology and wrote that ecocriticism:

shares the fundamental premise that human culture is connected to the physical world, affecting it and affected by it. Ecocriticism takes as its subject the interconnections between nature and culture, specifically the cultural artifacts of language and literature. As a critical stance, it has one foot in literature and the other on land; as a theoretical discourse, it negotiates between the human and nonhuman.²⁹

It was at this point, then, that ecocriticism began to develop as an interdisciplinary field. This is evident throughout the *Ecocriticism Reader*, which engages with areas of study including, but not limited to, theology,

²⁶ Glotfelty, 'Introduction', pp. xv-xxxvii.

²⁷ Glotfelty, 'Introduction', p. xviii.

²⁸ Glotfelty, 'Introduction', pp. xxiv-xxv.

²⁹ Glotfelty, 'Introduction', p. xix.

Trees and Text

religion, modern history, landscape theory and taxonomy.³⁰ Whilst there is little mention of biblical texts in the volume, two articles provide interpretations of Gen. 2:4b–3:24; Lynn White Jr.'s 'The Historical Roots of Our Ecologic Crisis' and Paula Gunn Allen's 'The Sacred Hoop'.³¹ I discuss these articles in detail below; here, it shall suffice to observe that both articles demonstrate an understanding of Gen. 2:4b–3:24 that is informed by its interpretation in the Western Christian theological tradition rather than a direct engagement with the text itself or critical biblical scholarship.

Finally, it is important to acknowledge that *The Ecocriticism Reader* had a huge impact upon the field, facilitating expansion across disciplinary boundaries in numerous and diverse directions. Indeed, just three years later Buell commented on the diversity of the field describing it as a 'concourse of interlocking but semi-autonomous projects'.³²

Across the Atlantic Ocean, just as ecocriticism had developed out of North American scholars exploring their heritage of Transcendentalist nature writing, in the United Kingdom scholars began to explore their heritage of nature writing, initially focussing upon the Romanticist tradition and the modern period and examining works by authors such as William Wordsworth, Samuel Taylor Coleridge and D. H. Lawrence. In 1998, ASLE

³⁰ Glotfelty provides a summary of the studies featuring in the *Ecocriticism Reader*, Glotfelty, 'Introduction', pp. xxv-xxxii.

³¹ Lynn White Jr., 'The Historical Roots of Our Ecological Crisis', in C. Glotfelty and H. Fromm (eds.), *The Ecocriticism Reader: Landmarks in Literary Ecology* (Athens: The University of Georgia Press, 1996), pp. 3-14; originally published in *Science*, 155.3767 (1967), pp. 1203-1207: I cite the text in *The Ecocriticism Reader* below; Paula Gunn Allen, 'The Sacred Hoop: A Contemporary Perspective', in C. Glotfelty and H. Fromm (eds.), *The Ecocriticism Reader: Landmarks in Literary Ecology* (Athens: The University of Georgia Press, 1996), pp. 241-263; originally published in Paula Gunn Allen, *The Sacred Hoop: Recovering the Feminine in American Indian Traditions* (Boston: Beacon Press, 1986), pp. 54-75: I cite the text in *The Ecocriticism Reader* below.

³² Lawrence Buell, 'The Ecocritical Insurgency', *New Literary History*, 30.3 (1999), pp. 699-712 (706).

1. Introduction

UKI, the affiliate branch of ASLE for the United Kingdom and Ireland was founded, and in 2000 Laurence Coupe's edited volume *The Green Studies Reader*³³ showcased the work of ecocritics in this region. Throughout this volume, there are brief references to biblical texts; Gen. 1:26; 2:4b–3:24; Revelation.³⁴ Whilst these biblical references are made in passing rather than being the focus of analysis it is important to acknowledge that *The Green Studies Reader* approached these biblical texts in the same manner as *The Ecocriticism Reader*, demonstrating an understanding of these texts that was based upon their interpretation in the Western Christian theological tradition. Finally, this volume attempted to replace the term 'ecocriticism' with 'green studies'.³⁵ However, in the years that followed, 'green studies' did not become widely used in the academy and the original term 'ecocriticism' prevailed.

1.3.1.4 2001-2010 Geographical expansion and critical diversification

This period saw further expansion in the field of ecocriticism. During this time, affiliate organisations of ASLE were founded in Korea, Europe, India, Canada, Australia, New Zealand China, India, the Caribbean, Finland, Spain

³³ Laurence Coupe (ed.), *The Green Studies Reader: From Romanticism to Ecocriticism* (London/New York: Routledge, 2000).

³⁴ Theodor W. Adorno and Max Horkheimer, 'The Logic of Domination', in L. Coupe (ed.), *The Green Studies Reader: From Romanticism to Ecocriticism* (London/New York: Routledge, 2000), pp. 77-80 (77); Richard Kerridge, 'Maps for Tourists: Hardy, Narrative, Ecology', in L. Coupe (ed.), *The Green Studies Reader: From Romanticism to Ecocriticism* (London/New York: Routledge, 2000), pp. 267-274 (273); Kenneth Burke, 'Hyper-Technologism, Pollution and Satire', in L. Coupe (ed.), *The Green Studies Reader: From Romanticism to Ecocriticism* (London/New York: Routledge, 2000), pp. 96-103 (102).

³⁵ Laurence Coupe, 'General Introduction', in L. Coupe (ed.), *The Green Studies Reader: From Romanticism to Ecocriticism* (London/New York: Routledge, 2000), pp. 1-12 (4); Coupe, *The Green Studies Reader*, pp. 302-303.

Trees and Text

and Latin America, and new areas of study became established including ecolinguistics, animal studies, postcolonial ecocriticism, queer ecology, toxic discourse, transatlantic dialogue, and visual media.³⁶ In the period 2001-2005, 23 volumes were published in the field and two foundational monographs from this period discussed the state of the field; Greg Garrard's *Ecocriticism* and Buell's *The Future of Environmental Criticism*.³⁷ Here, it is relevant to discuss the manner in which these two studies engaged with biblical texts.

Garrard's *Ecocriticism* explored the key concepts of the field devoting chapters to areas of study such as pollution, the pastoral mode, wilderness, apocalypse, dwelling (humans living alongside nature) and animals. Crucially, Garrard's work demonstrated the most sophisticated understanding of biblical texts in the field of ecocriticism up to that point. In his chapter on wilderness, Garrard acknowledged the range of different ways in which the Bible as a whole depicts wilderness environments, whilst later he discussed the difficulty of interpreting the command of Gen. 1:28 to exert dominion over nature within the context of the contemporary environmental crisis.³⁸ However, as I shall discuss below, Garrard's chapter on pastoral literature offers a brief treatment of Gen. 2:4b–3:24 that relies heavily upon the interpretation of the text in Western Christian theological tradition rather than through an engagement with the text itself. Whilst *Ecocriticism* engaged with biblical texts with a greater academic rigour than any previous

³⁶ Glotfelty, 'Preface', p. x.

³⁷ Glotfelty, 'Preface', p. x; Greg Garrard, *Ecocriticism* (London/New York: Routledge, 2004), I cite the second edition below; Greg Garrard, *Ecocriticism* (2nd edn.; London/New York: Routledge, 2012); Lawrence Buell, *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination* (Oxford/Malden, MA/Carlton: Blackwell Publishing, 2005).

³⁸ Garrard, *Ecocriticism*, pp. 68, 117-118.

1. Introduction

ecocritical study, there was still scope for more sophisticated engagement with biblical scholarship in the field.

A similar observation about the understanding of biblical texts can be made of Buell's *The Future of Environmental Criticism*. This monograph provided the first critical summary of ecocriticism, tracing its history, outlining the range of contemporary ecocritical approaches, discussing tensions within the field and criticisms of it, and discussing its future within the wider context of literary and cultural studies. In his introductory chapter, Buell paraphrases Gen. 1:28 and, like Garrard, demonstrates an awareness of differing interpretations of this passage and their relation to the contemporary environmental crisis.³⁹ Buell makes this point not to engage with Gen. 1:28 and its historical interpretation in any detail, but to illustrate the 'antiquity and durability of environmental discourse'.⁴⁰ However, in a related endnote, Buell expands upon the historical interpretation of Gen. 1:28 in an environmentalist context, exhibiting some knowledge of theology and source criticism.⁴¹ Buell's endnote served to highlight the potential for ecocriticism to engage with biblical scholarship, but it would be several years until this began to happen.

Of most importance to the present study during this period was Coupe's 2009 article 'Genesis and the Nature of Myth', published in *Green Letters*, the flagship journal of ASLE UKI.⁴² I shall discuss this article in detail below, but for the purposes of this overview it is sufficient to acknowledge

³⁹ Buell, *The Future of Environmental Criticism*, p. 2.

⁴⁰ Buell, *The Future of Environmental Criticism*, p. 2.

⁴¹ Buell, *The Future of Environmental Criticism*, p. 150.

⁴² Laurence Coupe, 'Genesis and the Nature of Myth', *Green Letters: Studies in Ecocriticism*, 11.1 (2009), pp. 9-22.

Trees and Text

that this was the first ecocritical study to engage with the interpretation of biblical text at a critical level and it demonstrated the potential for further interdisciplinary studies of this kind to follow.

1.3.1.5 2011 to present: the emergence of material ecocriticism

Material ecocriticism emerged in the period from 2011 to present.⁴³ What follows is a brief overview of the development of material ecocriticism; I shall return to discuss material ecocritical theory and the relevant material ecocritical studies below.

As I have outlined above, numerous sub-fields have developed throughout the history of ecocriticism. However, material ecocriticism is a particularly important development in ecocritical theory, as it is the only area of study within the field that does not employ ecological theory as the starting premise from which it attempts to analyse the physical world. Instead, material ecocritical theory is informed by new materialism, which perceives the physical world in a manner that is compatible with, but radically different from, ecological theory. Within the field of ecocriticism, then, material ecocriticism offers a unique and innovative perspective from which ecocritics may explore the relationship between literature and the physical world.

The first material ecocritical studies were published in 2012, but, as Iovino and Oppermann identify, in the previous year a significant number of

⁴³ The emergence of material ecocriticism is not the only development to happen during this period of ecocritical scholarship; I have simply delineated this period because it is helpful in the context of the focus of this study.

1. Introduction

examples of material ecocriticism *avant la lettre* were published.⁴⁴ Two of these publications by the poet and biblical scholar Anne Elvey are particularly relevant to this study. Elvey's monograph *The Matter of the Text* explored the relationship between textual interpretation and the physical world using the depiction of the senses in the Gospel of Luke in exemplification.⁴⁵ Elvey also contributed an essay entitled 'The Matter of Texts' to Axel Goodbody and Kate Rigby's edited volume *Ecocritical Theory: New European Approaches*.⁴⁶ This essay was based upon chapter two of her monograph, 'A Material Intertextuality', but was reworked for an audience specialising in ecocriticism.⁴⁷ I shall discuss Elvey's work in detail below.

Iovino and Oppermann's foundational *Ecozon@* article, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity' introduced material ecocriticism.⁴⁸ In this article Iovino and Oppermann discussed the emergence of new materialist thinking and proposed how it may be employed within the context of ecocritical discourse, naming this approach 'material ecocriticism'. Later that year, an issue of *ISLE* dedicated to material ecocriticism featured a diverse range of studies by ecocritical scholars and scholars with an interest in new materialism, which developed the theory, and application of this new approach.⁴⁹ Finally, in 2014, Iovino and

⁴⁴ Iovino and Oppermann, 'Introduction: Stories Come to Matter', p. 11.

⁴⁵ Anne F. Elvey, *The Matter of the Text: Material Engagements between Luke and the Five Senses* (Sheffield: Sheffield Phoenix Press, 2011).

⁴⁶ Anne F. Elvey, 'The Matter of Texts: A Material Intertextuality and Ecocritical Engagements with the Bible' in A. Goodbody and K. Rigby (eds.), *Ecocritical Theory: New European Approaches* (Charlottesville, VA: University of Virginia Press, 2011), pp. 181-193.

⁴⁷ Anne F. Elvey, 'A Material Intertextuality', in A. F. Elvey, *The Matter of the Text: Material Engagements between Luke and the Five Senses* (Sheffield: Sheffield Phoenix Press, 2011), pp. 28-43.

⁴⁸ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity'.

⁴⁹ *Interdisciplinary Studies in Literature and Environment*, 19.3 (2012).

Trees and Text

Oppermann published their edited volume *Material Ecocriticism*.⁵⁰ This collection of studies firmly established the sub-field, mapping out the underlying theory of material ecocriticism and showcasing a range of applications of material ecocritical theory. Whilst the corpus of material ecocritical scholarship is relatively small, it is highly advanced from a theoretical perspective as it employs new materialist thinking.

1.3.1.6 Summary

By way of summary of this overview of ecocriticism, three observations about the present state of the field are helpful. Firstly, the focus of the field has grown far beyond its initial interest in North American nature writing. Since the publication of the foundational *Ecocriticism Reader*, studies in the field have engaged with a range of disciplines, thinkers, and theories. The field has also expanded geographically beyond its initial confines of North America and branches of ASLE have been established all around the world, with each branch devoting some attention to regional literature. This diversity is exemplified by recent edited volumes such as Goodbody and Rigby's *Ecocritical Theory: New European Approaches*, Garrard's *Oxford Handbook of Ecocriticism*, and Oppermann's *New International Voices in Ecocriticism*.⁵¹ The present study follows this interdisciplinary trend, applying and

⁵⁰ Serenella Iovino and Serpil Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014).

⁵¹ Axel Goodbody and Kate Rigby (eds.), *Ecocritical Theory: New European Approaches* (Charlottesville, VA: University of Virginia Press, 2011); Greg Garrard (ed.), *The Oxford Handbook of Ecocriticism* (Oxford/New York: Oxford University Press, 2014); Serpil Oppermann, (ed.), *New International Voices in Ecocriticism* (London/Lanham, MD: Lexington Books, 2015).

1. Introduction

developing material ecocritical theory and methodology in a biblical studies context.

Secondly, the location of ecocriticism within the humanities has also undergone change. Ecocriticism began as a branch of literary criticism; however, the interdisciplinary nature of the field helped to catalyse a wider environmental turn across the humanities and arts beginning in the late 2000s. This broader area of study became known as the environmental humanities and ecocriticism is now perceived as a distinct field within this area alongside the fields of environmental history, environmental philosophy, and ecotheology.⁵² This change has been accommodated by ASLE, whose scope is now focussed upon inspiring and promoting intellectual work in the environmental humanities as a whole.⁵³

Finally, despite the interdisciplinary nature of ecocriticism, the field has largely neglected biblical scholarship to date; this study seeks to establish a link between the two fields and demonstrate that they have much potential to contribute new knowledge to each other.

1.3.2 Outlining new materialist theory

Before proceeding to discuss material ecocriticism, it is necessary to first outline new materialist theory, which provides a substantial amount of the theoretical foundation of material ecocriticism. This task is especially necessary within the context of this study as to date the field of biblical

⁵² Greg Garrard, 'Introduction', in G. Garrard (ed.), *The Oxford Handbook of Ecocriticism* (Oxford/New York: Oxford University Press, 2014), pp. 1-26 (23).

⁵³ ASLE, 'Vision & History'.

Trees and Text

scholarship has largely overlooked new materialism. New materialist theory is highly complex and fraught with concepts and neologisms that originate from a range of diverse disciplines. It is therefore not possible to provide a comprehensive guide to new materialist theory in this space, but this is not my aim; here I shall discuss the areas of new materialist theory that are relevant to this study and provide a clear explanation of all relevant concepts and terms.

New materialism (also referred to in scholarship as ‘new materialisms’, ‘the new materialism(s)’, neo-materialism’ or ‘the material turn’) is a mode of thought that originated in the 1990s and which now spans diverse disciplines including philosophy, science studies, theoretical physics, and anthropology.⁵⁴ I am yet to find a concise definition of new materialism in any study of the subject; I have found that lengthier descriptions of its development, scope, and potential tend to be preferred and this seems to be to represent the diversity of this mode of thought. In the simplest terms, new materialism provides an ontological model: it seeks to conceptualise the world, and indeed the wider universe, from a non-anthropocentric perspective by acknowledging the interconnection and interdependence between all things. This perspective is a response to recent developments in physics such as quantum mechanics, the theory of relativity and strings theory, which have challenged the dualistic and mechanistic Cartesian-Newtonian understanding of matter that dominated Western thinking in the

⁵⁴ Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews and Cartographies* (Michigan, MI: Open Humanities Press, 2012), pp. 13-16.

1. Introduction

modernist period.⁵⁵ The Cartesian-Newtonian conceptualisation of our world perceives our whole universe as a largely predictable and inert backdrop containing resources for the use of ‘agentic’ humans; according to this ontology, the universe may be reduced to sentient humans employing mathematical formulas to calculate how the non-human world will behave. New materialist thinking disputes these assumptions, arguing that they are no longer sustainable and proposes alternative non-anthropocentric theories to understand the complex and dynamic material world in which we live.⁵⁶ This mode of thought has been designated ‘materialism’ as it stands in contrast to the wider cultural turn in Western thinking since the 1970s that has privileged language, discourse, culture, and values over the physical world.⁵⁷ The prefix ‘new’ is used to distinguish it from earlier theories that have been described as ‘materialism’; Marxist materialism, for example. I have identified three theoretical concepts that are central to new materialism and central to the application of new materialism in this study:

1.3.2.1 (1) Non-human agency

Traditional Western thinking defines agency as the capacity to act in a given environment and maintains that agency is restricted to humans, who possess

⁵⁵ Diana Coole and Samantha Frost, ‘Introducing the New Materialisms’, in D. Coole and S. Frost (eds.), *New Materialisms: Ontology, Agency and Politics* (London/ Durham, NC: Duke University Press, 2010), pp. 1-43 (7-8, 11-12).

⁵⁶ Barbara Bolt, ‘Introduction: Toward A “New Materialism” Through the Arts’, in E. Barrett and B. Bolt (eds.), *Carnal Knowledge: Towards a ‘New Materialism’ through the Arts* (London/New York: I. B. Tauris, 2012), pp. 1-14 (3).

⁵⁷ Coole and Frost, ‘Introducing the New Materialisms’, p. 3; Bolt, ‘Introduction’, p. 3.

Trees and Text

both consciousness and intentionality.⁵⁸ New materialism calls for agency to be redefined so that it is understood not in purely anthropocentric terms but in ways that acknowledge the agentic capacity of the whole material world. In Karen Barad's landmark new materialist monograph *Meeting the Universe Halfway*, she argues that 'matter is neither fixed and given nor the mere end result of different processes. Matter is produced and productive, generated and generative. Matter is agentic, not a fixed essence or property of things.'⁵⁹ In other words, regardless of the classifications and understandings imposed upon things by traditional Western thinking, new materialism perceives all 'matter', that is to say that all physical things at all levels of scale, and all things traditionally considered to be non-physical including cultural systems, discourse, and even thought to be dynamic and agentic, having the capacity to affect, and to be affected by other things.

In exemplification, Jane Bennett's foundational new materialist article 'The Agency of Assemblages and the North American Blackout', explores the electrical power grid through an engagement with new materialist theory.⁶⁰ In this example, Bennet proposes that agency is not restricted to the human workers who maintain and administrate electrical power, but rather agency is evident in the 'assemblage' of individual human and non-human entities that

⁵⁸ Carl Knappett and Lambros Malafouris, 'Material and Nonhuman Agency: An Introduction', in C. Knappett and L. Malafouris (eds.), *Material Agency: Towards a Non-Anthropocentric Approach* (New York: Springer, 2008), pp. ix-xix (ix).

⁵⁹ Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (London/Durham, NC: Duke University Press, 2007), p. 137.

⁶⁰ Jane Bennett, 'The Agency of Assemblages and the North American Blackout', *Public Culture*, 17.3 (2005), pp. 445-465.

1. Introduction

contribute to the functioning of the power grid as a whole, including electrons, trees, wind, profit motives, and economic theory.⁶¹

Before proceeding, it is helpful to add that the concept of non-human agency is not unique to new materialist theory. There are numerous models proposing how non-human agency should be understood and to which non-human things it applies. I shall discuss these ideas in depth below, as they are crucial to exploring the agency of trees in Gen. 2:4b–3:24 within a material ecocritical context.

1.3.2.2 (2) Interconnection

Whilst new materialism acknowledges agency in a range of things - humans, animals, plants, water, financial markets, consumer waste, the internet - it does not understand these things as discrete entities that function independently of each other. Instead, new materialism perceives the universe as an interconnected series of systems in which all things can be understood as vibrant and dynamic agents or 'actors' in relationship with each other and capable of affecting and being affected by each other.⁶² Indeed, new materialist theory rejects the notion of the binary division between nature and culture that is characteristic of thinking in the Western tradition and proposes instead that these two categories have always been intrinsically interconnected as 'naturecultures'.⁶³

⁶¹ Bennett, 'The Agency of Assemblages', pp. 446, 448.

⁶² Serpil Oppermann, 'From Ecological Postmodernism to Material Ecocriticism: Creative Materiality and Narrative Agency', in S. Iovino and S. Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014), pp. 21-36 (22).

⁶³ Dolphijn and van der Tuin, *New Materialism: Interviews and Cartographies*, p. 48.

Trees and Text

Crucially, however, a variety of models have been used to describe this kind of interconnection and I shall return to discuss these below, as each is associated with a specific conception of non-human agency. For now, it is helpful to note that the notion of interconnected and entangled systems is central to my analysis. These interconnections are evident in both the narrative of Gen. 2:4b–3:24, where elements such as Yhwh, humans, soil, water, and trees interact, and evident in the *Green Bible*; a material artefact produced by natural materials and human labour and marketed, distributed, sold, interpreted, and disposed of through a variety of cultural systems.

1.3.2.3 (3) Scale

New materialist theory acknowledges the agency of things across all scales of size, from the sub-atomic to the astronomical. Indeed, Bennett argues that even microscopic things such as hormones possess agency; whilst hormones are situated within the bodies of humans (and animals), they can be produced unconsciously and stimulate physiological responses unconsciously; hunger, anger, stress.⁶⁴ New materialist theory therefore facilitates the examination of the agencies and relationships between things at greater ranges of scale than traditional ecological thinking, which has largely been concerned with examining relationships at macroscopic level of scale; humans, animals, plants, litter.⁶⁵

⁶⁴ Bennett, 'The Agency of Assemblages', p. 456.

⁶⁵ Barry Commoner, *The Closing Circle: Nature, Man, and Technology* (New York: Alfred A. Knopf, 1971), pp. 33-46; Glotfelty, 'Introduction', p. xix.

1. Introduction

The notion of scale will become important below when I come to discuss the agency of trees in Gen. 2:4b–3:24. New materialism conceptualises the agency of the trees in this narrative on a variety of scales, ranging from the manner in which trees might draw microscopic nutrients from the ground (this observation relies on extra-textual assumptions, and I shall discuss the implications of this further below) to the impact of the trees as whole organisms on the wider environment. Having introduced the new materialist concepts central to the application of material ecocriticism in this study, it is now possible to discuss material ecocriticism.

1.3.3 The foundations of material ecocritical theory

As I outlined above, material ecocriticism was introduced in the foundational 2012 article 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', co-authored by Serenella Iovino and Serpil Oppermann.⁶⁶ In this introductory article, Iovino and Oppermann do not define material ecocriticism, but instead propose the general concepts that underpin this analytical approach. They do this by first acquainting the reader with new materialist theory, and then discussing how this mode of thought may be applied to the field of ecocriticism in its exploration of the relationship between text and the physical world. Drawing upon new materialist theory, Iovino and Oppermann first acknowledge the agency of all matter, both

⁶⁶ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity'.

Trees and Text

human and non-human, and the interconnection between human and non-human.⁶⁷ Next, they argue that:

If matter is agentic, and capable of producing its own meanings, every material configuration, from bodies to their contexts of living, is 'telling,' and therefore can be the object of a critical analysis aimed at discovering its stories, its material and discursive interplays, its place in a 'choreography of becoming'.⁶⁸

This dense and complex sentence summarises the basis of material ecocritical theory. I shall break down the sentence to elucidate the terms and concepts employed by way of providing an introduction to the theory of this sub-field.

(1) **Matter is agentic.** As I discussed above, through an engagement with new materialist theory, material ecocriticism calls for a revised understanding of 'matter' and 'agency' so that agency is understood as the capacity to act in a given situation and all physical things at all levels of scale may be considered agentic. Furthermore, material ecocriticism acknowledges the physicality of things that are traditionally considered to be abstract or non-physical – the internet, financial markets, thought, and discourse and, as such, ascribes agency to these things too.

I shall return to discuss non-human agency in greater detail in the methodology that follows. For the purposes of clarifying the scope of this study, it should be noted that whilst Lovino and Oppermann have paid some

⁶⁷ Lovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 79.

⁶⁸ Lovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 79.

1. Introduction

attention to the ethical dimension of material ecocritical theory, there is more work to be done in outlining how the concept of moral agency fits into the wider material ecocritical vision of non-human agency.⁶⁹ Before elucidating this observation, it should be noted that in the field of ethics itself, there is no universal definition of the term 'moral agent', but moral agency is widely agreed to apply to those who can (1) be held morally responsible for their actions, and (2) discern between 'right' and 'wrong'.⁷⁰

In respect to Gen. 2:4b–3:24, one might expect a material ecocritical analysis of this text to explore its depiction of moral agency, given that the passage features numerous issues relating to the moral agency of both humans and non-humans; the establishment of rules relating to conduct (Gen. 2:16–17), the contravention of these rules (Gen. 3:6), and the corresponding punishment (Gen. 3:14–19). However, this endeavour is currently limited by a lack of theoretical and methodological foundation in material ecocritical discourse. Iovino and Oppermann have not yet developed their concept of 'material ethics' sufficiently to enable an examination of moral agency in 'matter in text' and 'matter as text' analyses.⁷¹ Of greatest importance in this respect are the questions of how moral agency might be defined and what things might possess moral agency. I think that this gap in material ecocritical discourse is due to its

⁶⁹ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p 85.

⁷⁰ Lewis F. Petrinovich, *Human Evolution, Reproduction, and Morality* (London/Cambridge, MA: MIT Press, 1998), pp. 209-210. Elizabeth Cripps, *Climate Change and the Moral Agent: Individual Duties in an Interdependent World* (Oxford: Oxford University Press, 2013), p. 208.

⁷¹ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p 85.

Trees and Text

present focus on exploring the literary and the material, as opposed to the ethical, reflecting the primary foci of ecocritical discourse as a whole.

According to material ecocritical ontology, of course, the material and the ethical are not discrete categories, but rather elements that contribute to wider assemblages such as the materiality and ethics of an individual human, or, on a larger scale, the material and ethical elements that contribute to the destruction of a rainforest. In this way, there is certainly scope for material ecocritical discourse to include an ethical dimension in future studies, and I return to discuss this further in the concluding chapter of this thesis. Owing to the current gap in material ecocritical discourse, however, the primarily textual analysis that follows shall not explore moral agency in relation to Gen. 2:4b–3:24 in the *Green Bible*. This approach has the advantage of remaining close to the present aims of ‘matter in text’ and ‘matter as text’ analysis, which are still relatively young; indeed, this study will contribute to the development of methodologies for these approaches.

(2) **Matter is capable of producing its own meanings.** This concept too is central to material ecocritical theory and corresponds with two distinct types of material ecocritical analysis.⁷² In their later co-edited volume *Material Ecocriticism*, Iovino and Oppermann designate these two approaches ‘matter in text’ and ‘matter as text’.⁷³ These two analytical approaches form the methodological basis for this study, which, for the first time in material ecocritical analysis, applies the approaches alongside each other.

⁷² Iovino and Oppermann, ‘Material Ecocriticism: Materiality, Agency, and Models of Narrativity’, p. 79.

⁷³ Iovino and Oppermann, ‘Introduction: Stories Come to Matter’, p. 2.

1. Introduction

'Matter *in text*' explores the manner in which the material world is depicted in texts ('texts' in the general sense, including film, drama, etc.). This mode of analysis differs to the exploration of the physical world in text conducted within the wider field of ecocriticism as it is informed by new materialist thinking, so applies concepts such as non-human agency and the interconnection of the natural and cultural to the exploration of narrative worlds. Iovino and Oppermann offer several examples of this, including Thomas Hardy's depiction of the fictional space Egdon Heath in his novel *The Return of the Native*; this space is particularly striking as it is depicted with human intelligence and agency; it 'listens' and 'awaits in anticipation of a crisis'.⁷⁴

'Matter *as text*' explores the manner in which the 'material-discursive' world, that is to say both the physical and the cultural, may be conceptualised as an interconnected narrative. For example, invoking biosemiotic theory, Wendy Wheeler argues that the natural world is permeated by 'signs, meanings, and purposes which are material and which evolve'.⁷⁵ Consider any living organism, even a single-celled organism; it is engaged with sign-relations as it reacts and responds to signals from its environment. The biological processes within the organism and between the organism and its environment may be described as interpretations; responses to the 'text' of its internal regulatory mechanisms and its

⁷⁴ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', pp. 80-81.

⁷⁵ Wendy Wheeler, 'The Biosemiotic Turn: Abduction, or, the Nature of Creative Reason in Nature and Culture', in A. Goodbody and K. Rigby (eds.), *Ecocritical Theory: New European Approaches* (Charlottesville, VA: University of Virginia Press, 2011), pp. 270-282 (279).

Trees and Text

environment.⁷⁶ Next, consider a lightning strike causing a power cut to a city, a flood submerging a field of crops, an earthquake. Whilst all of these exemplify the agency of non-living material things, in each of these examples the agency of matter catalyses events that may then be interpreted in narrative terms in myriad ways. For example, news coverage may attribute the cause of the flood to climate change or plants submerged by floodwater may respond to the 'text' of their changed surroundings by closing their stomata to prevent further damage.⁷⁷ I shall discuss the theory underpinning these two analytical approaches in detail below, when I discuss the methodology that I shall use in this study. Here, it is important to note that these two approaches take material ecocritical analysis in two directions; a literary direction that is concerned with the depiction of the physical world in text, and a material-discursive direction that is concerned with re-conceptualising the physical world as narrative using new materialist theory. In this study, I use the text of Gen. 2:4b–3:24 in the *Green Bible* to demonstrate that these two directions can be employed together.

(3) **Material configuration.** This term is employed to underscore the heterogeneous nature of the material world. Both living organisms, 'bodies', and their environments, 'their contexts of living', are material configurations and should not be understood as discrete units of matter, but rather as

⁷⁶ Wheeler, 'The Biosemiotic Turn', p. 271.

⁷⁷ Iovino and Oppermann, 'Introduction: Stories Come to Matter', p. 7.

1. Introduction

complex entities in which all kinds of matter and agency function as an interdependent whole.⁷⁸

(4) **Material-discursive interplays.** Put simply, the physical and the discursive are not two distinct categories, but parts of an interconnected whole. This study contains an example of material-discursive analysis, as I examine the *Green Bible* as a material artefact alongside the narratives of its production, distribution, marketing, and interpretation.

(5) **Choreography of becoming.** This is a descriptive term taken from Diana Coole and Samantha Frost's edited volume *New Materialisms: Ontology, Agency and Politics*.⁷⁹ The term is used to underscore the dynamic and agentic nature of the material world perceived by new materialist theory. Coole and Frost argue that matter is not static, but rather is ever-changing or 'becoming'.⁸⁰ Whilst they do not explain why they choose to compare the dynamicity of the material world to the process of choreography, this is seemingly because of the constant interplay between different types of matter at all levels of scale.

In summary, material ecocriticism seeks to explore the relationship between text and the physical world through an engagement with new materialist theory. Material ecocriticism perceives the world as a material-discursive realm in which all things, whether physical entities such as humans, animals,

⁷⁸ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 83.

⁷⁹ Coole and Frost, 'Introducing the New Materialisms', p. 10.

⁸⁰ Coole and Frost, 'Introducing the New Materialisms', p. 10.

Trees and Text

and plants, cultural systems such as financial markets and advertising campaigns, and intellectual activities such as interpretation and discourse possess agencies and are interconnected and interdependent. As such, material ecocriticism is concerned with two modes of analysis; 'matter in text', the exploration of the physical world in text, and 'matter as text', the exploration of the physical world as narrative. Having provided an introduction to material ecocritical theory, I shall proceed to offer an introduction to the *Green Bible*; the material object that I shall analyse using this theoretical framework in this study.

1.4 Introducing the *Green Bible*

The *Green Bible* was published by HarperCollins in 2008 and remains the only speciality Bible themed around environmental issues. The *Green Bible* is best known for its use of green text to highlight verses that in some way relate to the non-human world or to the contemporary concept of environmental stewardship. The volume also contains numerous supplementary features that explore the relationship between the Bible and contemporary environmentalism and according to its rear cover it is '[t]he first Bible printed on paper from environmentally and socially well managed forests'. I shall discuss all these distinctive attributes in detail below.

This *Green Bible* is available in three editions: the flagship cotton/linen cover (ISBN 9780061627996), paperback (ISBN 9780061951121), and as

1. Introduction

an e-book for Kindle and NOOK formats (ISBN 9780062116369).⁸¹ In addition, I have found that there are specific UK and US versions of the *Green Bible* that differ in content slightly, though notably there is no mention of these different versions on the publisher's website.⁸² These volumes feature different text on their rear covers and different introductory chapters; Dave Bookless, co-founder of the environmental organisation A Rocha UK, authors the introduction to the UK *Green Bible* whilst in the US version this task is undertaken by author and environmentalist J. Matthew Sleeth. Despite these regional differences to the *Green Bible*, the NRSV translation, which features US spelling, punctuation, and numbering style, is employed in both the UK and US versions of the volume. The choice of HarperCollins to use the NRSV translation over against any other translation is explained neither in the pages of the *Green Bible* nor on the HarperCollins website.

The corollary of these observations regarding the various editions and versions of the *Green Bible* in circulation is that there is no one singular *Green Bible*. For the purposes of this study, I have decided to examine the UK paperback edition of the *Green Bible* and I refer to this specific edition and version throughout this study.

I chose to examine the UK paperback edition of the *Green Bible* for two reasons. Firstly, because the paper jacket of this format reinforces the connection between trees as the primary raw material from which the Bible is constructed and trees as the object of my textual analysis of Gen. 2:4b–3:24.

⁸¹ <https://www.harpercollins.com/9780062116369/the-green-bible> [accessed 2 February 2018]. Please be aware that the content of this webpage has changed throughout the course of my research and may continue to change.

⁸² <https://www.harpercollins.com/9780062116369/the-green-bible> [accessed 2 February 2018].

Trees and Text

This connection is slightly less obvious in the cotton/linen cover edition. Similarly, I ruled out an engagement with the electronic version of the text as so much of the materiality of this text would be dependent upon the device that I viewed it on, and again the plastic/metal/glass casing of a device would detract from the connection of the text to trees.

Secondly, I encountered the *Green Bible* for the first time in this paperback format; I discovered it in a local bookshop in 2010, and purchased it after flicking through its pages.⁸³ It is this very copy of the *Green Bible* that I refer to throughout this study and by continuing to engage with this specific copy, I am able to retain something of my initial experience of engaging with the materiality of this text. It is important to note that my personal copy is in excellent condition, so is representative of the volume in its newly manufactured form.

1.5 Gen. 2:4b–3:24 in the *Green Bible* and material ecocriticism: my rationale

My reasons for studying the specific text of Gen. 2:4b–3:24 in the *Green Bible* are as follows. Firstly, material ecocritical discourse has, to date, avoided outlining any specific methodological guidelines for the analysis of ‘matter in text’ and ‘matter as text’ and neither have both approaches been applied together to explore the same object of study. I decided to examine Gen. 2:4b–3:24 in the *Green Bible* using material ecocritical theory because

⁸³ I purchased the *Green Bible* in 2010 primarily because I was looking for an NRSV translation in paperback and it was on sale. Retrospectively, it seems that my copy of the *Green Bible* has since exerted a considerable degree of influence on me; some eight years after buying it, I have completed this detailed study on the volume.

1. Introduction

with the trees of this passage as the focus of my ‘matter in text’ analysis and trees being the primary natural material from which the *Green Bible*, the focus of my ‘matter as text’ analysis, is constructed I am able to combine both material ecocritical approaches together. As such, this approach lends symmetry and coherence to my analysis as a whole, and contributes original knowledge to both biblical and material ecocritical scholarship. Furthermore, the study evokes the diptych format established in material ecocritical study, where two contrasting but complementary and connected analyses are juxtaposed alongside each other.⁸⁴

In respect to choosing the specific text of Gen. 2:4b–3:24, I decided to study this text firstly because it functions as a discrete and, for the most part, coherent narrative unit, so it is suitable for an analysis of this kind. There are some narrative omissions in the text, which may ostensibly appear to be inconsistencies. For example, Yhwh places a prohibition upon eating from the tree of knowledge, but no prohibition is explicitly declared about eating from the tree of life, even though this is also clearly undesirable (Gen. 2:16–17; 3:22). However, I do not believe that any of these inconsistencies are great enough to impede me reading the text as a discrete literary unit and I shall address any relevant inconsistencies in the analysis below.

Secondly, Gen. 2:4b–3:24 has exerted a tremendous influence upon Western culture; this relatively short pericopé has inspired countless interpretations over many centuries and across a range of media including literature, art, film, television, music, and advertising. However, within

⁸⁴ Iovino and Oppermann, ‘Theorizing Material Ecocriticism’; Kate Rigby and Greta Gaard, ‘Open Closure: A Diptych on Material Spirituality’, in S. Iovino and S. Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014), pp. 283-300.

Trees and Text

Western culture Gen. 2:4b–3:24 has typically been understood in predominantly anthropocentric terms; it is widely known as a creation narrative whose overarching themes are temptation, disobedience, original sin, and the corruption of nature. I therefore saw great potential to analyse the text from a non-anthropocentric or ecocentric perspective, redressing the role of the trees, and indeed the other non-human elements at work within the narrative.⁸⁵

I chose to examine Gen. 2:4b–3:24 primarily as it appears in the *Green Bible* for the following reasons. Firstly, the *Green Bible* is a contemporary text, so I encounter and analyse it within a cultural and historical context familiar to me. Analysing a text from a different culture or a different period in history is not necessarily problematic for material ecocritical analysis, but choosing a text from a time and culture close to my own present location will allow me to focus upon material ecocritical issues in my analysis without having to stray too far into historical or cross-cultural issues.⁸⁶

Secondly, the *Green Bible* has an explicit environmental agenda so I anticipate great potential for it to be analysed from a material ecocritical perspective, examining the materials and processes that have produced, marketed and distributed it to readers. I anticipate that the explicit environmental agenda of the *Green Bible* may actually conflict with what the text is able to express through not only its textual content but also its

⁸⁵ I use the term 'ecocentric' with caution in this context given that material ecocriticism seeks to describe the world as an interconnected whole rather than a dualist realm in which humanity and nature are diametric opposites.

⁸⁶ There are obviously historical and cross-cultural issues related to the specific text of Gen. 2:4b–3:24 and I do engage with these in my 'matter in text' analysis.

1. Introduction

physical form. Ostensibly, the purpose of the *Green Bible* is to demonstrate the message of environmental stewardship within the biblical canon. However, this is, to some extent, undermined by the materiality of the text, which is embedded in a network of things heavily connected to the present environmental crisis; publishing, marketing, consumerism, capitalism, distribution. Finally is the issue of data availability; I can readily access a copy of the *Green Bible* and access sufficient data related to its production, distribution, marketing, and reception.

1.6 Summary

In this chapter, I outlined the scope of this study and its aims. In short, this interdisciplinary study will engage with material ecocritical theory in order to examine both the depiction of trees in Gen. 2:4b–3:24 in the specific text of the *Green Bible* and the *Green Bible* as a ‘material-discursive’ object produced from a complex assemblage of natural materials and cultural systems. Given the interdisciplinary nature of this study, I provided some foundational information on ecocriticism, new materialism, and material ecocriticism; this was essential as the following chapters will build upon this information and develop it in the course of examining Gen. 2:4b–3:24 in the *Green Bible* from both textual and material perspectives.

2. Literature Review

2.1 Introduction

Broadly speaking, two observations underscore the gap in knowledge that this study seeks to address. Firstly, to date there have been no analyses of Gen. 2:4b–3:24, or indeed any other biblical texts, undertaken in the field of biblical studies that refer to themselves as material ecocritical analyses, or which demonstrate an understanding of material ecocritical theory and methodology. Secondly, within the sub-field of material ecocriticism no studies have devoted any significant attention to biblical texts. However, it is insufficient to note the absence of studies in these areas. Indeed, biblical scholarship has produced a number of ecological readings of Gen. 2:4b–3:24 and this text has been subjected to several analyses within the wider body of ecocritical scholarship. I shall therefore begin this chapter by examining these two distinct areas of study. Following this, I address three further relevant areas of study: (1) specific analyses of the trees in Gen. 2:4b–3:24 undertaken in biblical scholarship, (2) studies that investigate the materiality of biblical texts in an ecological context, and (3) the analysis of the *Green Bible* in biblical scholarship.

2.2 Analyses of Gen. 2:4b–3:24 in ecocritical scholarship

I shall begin by discussing the interpretation of Gen. 2:4b–3:24 in the field of ecocriticism as this will underscore the potential for biblical scholarship to

2. Literature Review

contribute a more sophisticated understanding of the text in the field. Despite the tremendous influence of Gen. 2:4b–3:24 upon Western culture and the prominent depiction of the physical world within the narrative, few studies within the field of ecocriticism have attempted an analysis of this text. Furthermore, as I highlighted in ‘Garden and "Wilderness"’, my ecocritical reading of Gen. 2:4b–3:24, on the occasions when this passage has been discussed within ecocritical discourse, studies have typically demonstrated an understanding of the pericopé that is informed by its interpretation in Christian theological tradition and wider Western culture, rather than a rigorous engagement with the text itself or contemporary biblical scholarship.¹ By way of elucidating this observation, I shall examine four studies associated with the field of ecocriticism that engage with Gen. 2:4b–3:24 in depth. I have chosen these studies on the basis of their depth of engagement with this passage and/or their influence within the field of ecocriticism. I shall demonstrate that whilst each of these studies examine Gen. 2:4b–3:24 within an ecocritical context, none of them devote significant attention to the trees, or indeed the wider physical world, depicted in this text. Hence, I illustrate that there is great potential for this present study to contribute new knowledge to the understanding of Gen. 2:4b–3:24 within the field of ecocriticism.

The earliest (proto-)ecocritical studies offering interpretations of Gen. 2:4b–3:24 were reprinted in the *Ecocriticism Reader*; White’s ‘The Historical Roots of Our Ecologic Crisis’² and Allen’s ‘The Sacred Hoop’.³ Whilst these

¹ R. B. Hamon, ‘Garden and "Wilderness": An Ecocritical Exploration of Gen. 2:4b–3:24’, *The Bible and Critical Theory*, 14.1 (2018), pp. 63-86 (64).

² White, ‘Ecologic Crisis’.

Trees and Text

studies were published before ecocritical theory and methodology had become established, Glotfelty was clear that they should be recognised for their contribution to the origins of the field and that they were representative of the contemporary field.⁴

2.2.1 Lynn White Jr, 'The Historical Roots of Our Ecologic Crisis'

This essay provoked tremendous debate in both the academy and the church when it was published in 1967 and half a century later it continues to exert considerable influence upon debates in ecotheology and ecological hermeneutics.⁵ White was neither a theologian nor a biblical scholar, but a medieval historian. In this essay, he traced the emergence of environmentally deleterious science and technology in the West.⁶ Controversy arose from White's assertion that Christianity is 'the most anthropocentric religion the world has ever seen', and his inference that the cause of the present environmental crisis can be traced back to the anthropocentric ideology of Western Christianity.⁷ Whilst White does not cite any biblical texts in his essay, his interpretation of Genesis 1–3 is central to demonstrating his thesis. He believes that the text is a predominantly anthropocentric narrative that is responsible for informing the anthropocentric worldview of Western Christianity.⁸ White does not outline the reading

³ Allen, 'The Sacred Hoop'.

⁴ Glotfelty, 'Introduction', pp. xxv-xxvi.

⁵ Elspeth Whitney, 'Lynne White Jr.'s "The Historical Roots of Our Ecologic Crisis" After 50 Years', *History Compass*, 13.8 (2015), 396-410.

⁶ White, 'Ecologic Crisis', pp. 6-8.

⁷ White, 'Ecologic Crisis', p. 9-10.

⁸ White, 'Ecologic Crisis', p. 9.

2. Literature Review

methodology he employs to reach his interpretation of Genesis 1–3, but rather presents his interpretation as an accurate summary of the text. He writes:

Man named all the animals, thus establishing his dominance over them. God planned all of this explicitly for man's benefit and rule: no item in the physical creation had any purpose save to serve man's purposes. And, although man's body is made of clay, he is not simply part of nature: he is made in God's image.⁹

It therefore seems that there are two assumptions underpinning White's interpretation of Genesis 1–3. (1) That Genesis 1–3 can be read as a discrete and coherent literary unit. (2) That the commission to subdue and exert dominion over the natural world in Gen. 1:26–28 can be used as an interpretive lens through which to understand the whole of Genesis 1–3.

White's assumption that Genesis 1–3 functions as a coherent literary unit fails to acknowledge the narrative division evident between Gen. 1:1–2:4a; 2:4b–3:24 that has been recognised in modern biblical scholarship since the time of Julius Wellhausen. Consequently, White's interpretation gives the erroneous impression that Genesis 1–3 consistently and coherently presents a hierarchical, anthropocentric and dualist world in which nature is distinct from, and subjugated below, humanity.¹⁰ Nowhere does the text state that the act of the first human naming the animals constitutes the establishment of dominion over them. Neither is it consistently clear throughout Genesis 1–3 that Yhwh planned the physical world for the benefit

⁹ White, 'Ecologic Crisis', p. 9.

¹⁰ Whilst White uses the term 'man' this seems to be an androcentric synecdoche for humanity rather than to distinguish between male and female, as he understands that both are created in God's image; White, 'Ecologic Crisis', p. 9.

Trees and Text

and rule of humanity. Whilst this may apply to the physical world depicted in Gen. 1:1–2:4a, and one could argue that the garden of Yhwh is planted for the benefit of the first human (Gen. 2:9), nothing in Gen. 2:4b–3:24 states that humans rule over any element of the non-human world. Similarly, it is not clear throughout Genesis 1–3 as a whole that the physical world has been created specifically to serve the purpose of humanity; the thorns and thistles of Gen. 3:18 hamper human agricultural endeavours and the snake of Genesis 3 does not behave in a subservient manner.

White's assumption that Genesis 1–3 should be understood primarily as a text that advocates human dominion over the natural is also undermined by the narrative division between Gen. 1:1–2:4a; 2:4b–3:24. Nothing in Gen. 2:4b–3:24 suggests that the humans of this narrative are subject to the command of Gen. 1:26–28. Furthermore, the very understanding of 'dominion' requires careful interpretation; as Richard Bauckham has demonstrated, it is anachronistic to apply a contemporary understanding of dominion over the natural world to this ancient pre-industrial text.¹¹

In addition to this problematic interpretation of Genesis 1–3, White argues that a hierarchical worldview was proposed by early Christian theologians Tertullian and Irenaeus to further galvanise his point that Western Christianity is inherently anthropocentric, though he does not offer any citations of their writings to substantiate this claim.¹² It is not the case, then, that Genesis 1–3 is an inherently anthropocentric text that has

¹¹ Richard Bauckham, 'Human Authority in Creation' in R. Bauckham, *God and the Crisis of Freedom: Biblical and Contemporary Perspectives* (Louisville, KY: Westminster John Knox Press, 2002), pp. 128-177 (141).

¹² White, 'Ecologic Crisis', pp. 9-10.

2. Literature Review

facilitated the environmentally deleterious behaviour of Western Christianity, but rather, as Elaine Pagels demonstrates, that in Western Christian tradition and Western culture as a whole Genesis 1–3 has typically been interpreted in a predominantly anthropocentric manner.¹³ Furthermore, attributing the environmental degradation caused by Western science and technology to Western Christianity is far too simplistic as it fails to consider the influence of other ideologies central to Western culture such as capitalism, consumerism, and industrialism. White's interpretation of Genesis 1–3 has therefore clearly been informed more by the subsequent interpretation of the text in Christian theological tradition rather than through an engagement with the text as a discrete literary unit or in dialogue with contemporary biblical scholarship.

2.2.2 Paula Gunn Allen, 'The Sacred Hoop'

Paula Gunn Allen was a Native American poet, literary critic, lesbian activist, and novelist. Her contribution to the *Ecocriticism Reader*, 'The Sacred Hoop', is a chapter taken from her foundational monograph of the same title, which offers a collection of 17 essays that explore Native American traditions with a specific focus upon the position of women in this culture.¹⁴ In 'The Sacred Hoop' Allen argues that the primary difference between Native American and Western literature stems from their contrasting ontologies.¹⁵ To illustrate this observation, she compares a Cheyenne story of creation with Gen. 2:4b–

¹³ Elaine Pagels, *Adam, Eve and the Serpent* (New York: Random House, 1988), p. xix.

¹⁴ Paula Gunn Allen, *The Sacred Hoop: Recovering the Feminine in American Indian Traditions* (Boston: Beacon Press, 1986).

¹⁵ Allen, 'The Sacred Hoop', p. 242.

Trees and Text

3:24. Here, I shall focus upon the manner in which Allen interprets the physical world depicted in this pericopé.

As with White's reading of Gen. 2:4b–3:24, it becomes apparent that Allen's understanding of the text has been informed by its interpretation in Christian theological tradition. Firstly, Allen anachronistically describes the garden of Yhwh as 'Paradise'; a word that neither features in the Hebrew text of Gen. 2:4b–3:24 nor in a variety of subsequent English translations (see, for example, Gen. 2:4b–3:24 KJV, NIV, NRSV).¹⁶ Whilst it is true that the idyllic life depicted in the bounteous garden of Yhwh is, to some degree, compatible with the notion of paradise of classical Greek tradition, it is inaccurate to conflate the two, as Allen does, as they originate from differing historical and cultural contexts.¹⁷

Secondly, Allen believes that the Judeo-Christian worldview is hierarchical and imposes this on her understanding of the natural world depicted in the text. It is true that a hierarchical worldview has long been an element of Judeo-Christian theological tradition, originating from the writings of Philo and Paul.¹⁸ However, Allen does not demonstrate any engagement of any scholarship that supports or challenges her adoption of this position and seemingly assumes that this worldview is common to all Jews and

¹⁶ Allen, 'The Sacred Hoop', p. 244.

¹⁷ The concept of paradise originated from the Golden Age of Greek mythology and it was the Septuagint translation of the Hebrew word גן into παράδεισον (Gen 2:8, 10) that lead to the garden of Yhwh becoming associated, and sometimes conflated, with paradise in Christian theological tradition and wider Western culture; Jean Delumeau, *History of Paradise: The Garden of Eden in Myth and Tradition* (New York: Continuum, 1995), p. 3; Terje Stordalen, *Echoes of Eden: Genesis 2–3 and Symbolism of the Eden Garden in Biblical Hebrew Literature* (Biblical Exegesis and Theology, vol. 25; Leuven: Peeters, 2000), p. 84; Ziony Zevit, *What Really Happened in the Garden of Eden?* (London/New Haven, CT: Yale University Press, 2013), p. 102.

¹⁸ William R. G. Loader, 'Sexuality and Ptolemy's Greek Bible', in P. McKechnie and P. Guillaume (eds.), *Ptolemy II Philadelphus and his world* (Leiden: Brill, 2008), pp. 208-232 (p. 219).

2. Literature Review

Christians.¹⁹ Hence, she writes that 'God commands first; within the limits of those commands, man rules; woman is subject to man, as are all the creatures, for God has brought them to Adam for him to name'.²⁰

Allen's understanding of Gen. 2:4b–3:24 is therefore problematic. In this passage, Yhwh is the first, and only, character to issue any commands, and the hierarchical distinction between Yhwh and man becomes ambiguous when the first human attains God-like discernment (Gen. 3:22). Furthermore, it is not clear that the act of naming animals constitutes dominion over them and there is nothing explicit within the text to suggest that the animal kingdom, or indeed the wider natural world, is subordinate to humanity as Allen asserts.²¹ Allen is correct in her observation that Gen. 3:16 explicitly promotes a hierarchy of male over female, though had she engaged with contemporary biblical scholarship, she would have been aware of key feminist critical readings of the text by Phyllis Trible and Phyllis Bird that have challenged this literal understanding.²² Similarly, her failure to engage with biblical scholarship leaves her unaware of the intrinsic connection between humanity and nature depicted in the Hebrew text of Gen. 2:4b–3:24 through the striking linguistic connection between אדם and אדמה (Gen. 2:7; 3:19, 23), which is pivotal to understanding the depiction of the physical world portrayed in the pericopé. Allen therefore aligns herself with White,

¹⁹ Allen, 'The Sacred Hoop', p. 245.

²⁰ Allen, 'The Sacred Hoop', p. 245.

²¹ Allen, 'The Sacred Hoop', pp. 244-245.

²² Phyllis Trible, 'Eve and Adam: Genesis 2–3 Reread', *Andover Newton Quarterly*, 13 (1973), pp. 251-258 (257-258); Phyllis A. Bird, 'Male and Female He Created Them: Gen. 1:27b in the Context of the Priestly Account of Creation', *Harvard Theological Review*, 74.2 (1981), pp. 129-159 (158).

Trees and Text

understanding the physical world of Gen. 2:4b–3:24 as a hierarchical, androcentric, and dualist realm.

The studies of White and Allen are of interest not just because of their interpretations of Gen. 2:4b–3:24, but also because of the prominent status ascribed to them as proto-ecocritical studies in the *Ecocriticism Reader*, the foundational text of the field. It seems that Glotfelty and Fromm, as editors of the volume, were satisfied with the manner in which White and Allen analysed Gen. 2:4b–3:24, understanding the text primarily through its interpretation in Christian theological tradition and Western culture rather than examining the text as a discrete literary unit and engaging with biblical scholarship.²³

It is not possible to quantify the extent to which the treatment of biblical text in these prominent studies informed later ecocritical analyses that engaged with texts from the Bible. Nevertheless, as I discuss below, it was some 13 years until Coupe acknowledged the need for ecocriticism to enter into dialogue with biblical scholarship, and even since this time only my own study 'Garden and "Wilderness"' has responded to Coupe. Ecocriticism has therefore developed as an interdisciplinary field that has largely lacked dialogue with biblical scholarship. Considering the importance of the Bible in Western culture and the specialist historical, social, and literary insight into the Bible offered by biblical scholarship, this has arguably been to the detriment of ecocritical scholarship.

²³ Glotfelty, 'Introduction', pp. xxvii, xxx.

2. Literature Review

2.2.3 Greg Garrard, *Ecocriticism*

Nearly a decade after the *Ecocriticism Reader*, Garrard's highly influential *Ecocriticism* consolidated contemporary ecocritical theory and remains an important contribution to the field today.²⁴ Of all the studies examined here, Garrard devotes the least amount of attention to Gen. 2:4b–3:24, though his work deserves attention given its continuing importance to the field of ecocriticism. As I acknowledged above, on the whole Garrard demonstrates an appreciation of the heterogeneous nature of the Bible in this study, though his understanding of the physical world depicted in Gen. 2:4b–3:24 raises some questions. Garrard discusses the text in his chapter on the literature of the pastoral genre and proposes that 'Genesis 3, the story of Man's fall, is essentially an elegy of lost pastoral bounty and innocence'.²⁵

This interpretation is problematic for the following reasons. Firstly, it is not evident within Genesis 3 that the garden of Yhwh is depicted as a place of pastoral bounty and Garrard does not state which verse(s) in this pericopé support this deduction. Secondly, Garrard seemingly understands Genesis 3 as the story of 'the fall' without acknowledging that this is a later interpretation of Gen. 2:4b–3:24 perpetuated in Christian theological tradition.²⁶ Thirdly, whilst Gen. 2:4b–3:24 as a whole portrays an idyllic life in the garden of Yhwh to which the humans are unable to return, there is no lamentation of the end of this lifestyle in the text. Furthermore, there are arguably more prominent themes in Gen. 2:4b–3:24 than the demise of the

²⁴ Garrard, *Ecocriticism*; first edition 2004, second edition cited below.

²⁵ Garrard, *Ecocriticism*, p. 42.

²⁶ Garrard, *Ecocriticism*, p. 42; Marguerite Shuster, *The Fall and Sin: What We Have Become As Sinners* (Cambridge/Grand Rapids, MI: Wm. B. Eerdmans, 2004), pp. 3-4.

Trees and Text

idyllic pastoral life; more space in the text is devoted to the disobedience of the humans, the revelation of discernment and the emergence of agriculture. Fourthly, it is not clear that the text depicts a loss of innocence; this can only be concluded if the text is read in light of its interpretation in the Christian theological tradition, where the humans' disobedience is understood as sin. The text depicts only the revelation of knowledge of good and evil to the humans and this knowledge is actually quite ambiguous; the only explicit change to the humans is the realisation of their nudity (Gen. 3:7).

Overall, then, it is evident that Garrard understands the physical world of Gen. 2:4b–3:24 as two distinct regions: the garden of Yhwh, in which humans enjoyed an idyllic pastoral life, and the land outside it, in which 'fallen' humanity dwells.²⁷ Garrard therefore presents a differing understanding of the physical world in Gen. 2:4b–3:24 to White and Allen; he perceives that this world is divided spatially, rather than hierarchically. More significant than this distinction, however, is the fact that the interpretations of Gen. 2:4b–3:24 offered by White, Allen and Garrard are *all* primarily informed by Western Christian theological tradition rather than through an engagement with the text itself or biblical scholarship.

2.2.4 Summary: Laurence Coupe, 'Genesis and the Nature of Myth'

By way of concluding this section on ecocritical analyses of Gen. 2:4b–3:24, I shall discuss Coupe's 'Genesis and the Nature of Myth', which offers a contrast to the readings of the text offered by White, Allen, and Garrard.

²⁷ Garrard, *Ecocriticism*, p. 42.

2. Literature Review

Indeed, as mentioned above, the study represents a turning point in ecocriticism as a whole as it identifies the need for ecocritical analyses of biblical texts to be informed by biblical scholarship. The interpretation of Gen. 2:4b–3:24 offered in this study is not Coupe's own, but that of the theologian Anne Primavesi; it is Coupe's aim to present Primavesi's work to an ecocritical audience.²⁸ Coupe reveals (1) that Primavesi contests the assumption that Gen. 2:4b–3:24 depicts a hierarchical universe comprising God, man, woman and nature in descending order of status.²⁹ (2) That the concept of original sin associated with the text is the result of a much later interpretation accredited to Augustine.³⁰ He therefore demonstrates that Primavesi's work challenges the earlier interpretations of Gen. 2:4b–3:24 offered by White, Allen, and Garrard, which are reliant upon the interpretation of the text in Christian theological tradition (he does not refer to these studies explicitly, but he is presumably familiar with them given their prominence in the corpus of ecocritical study).

Coupe concludes by arguing the need for ecocritics to revisit the text of the Bible, reading it not in light of its interpretation in the Christian theological tradition but from an ecological perspective.³¹ This is to say that Coupe is calling for the Bible to be read with the understanding that humanity is part of, rather than separate from, the natural world.³² It therefore follows that a dialogue between the fields of biblical scholarship and ecocriticism is necessary to facilitate this endeavour. In this study, I offer a logical

²⁸ Coupe, 'Genesis and the nature of myth', p. 9.

²⁹ Coupe, 'Genesis and the nature of myth', pp. 14-16.

³⁰ Coupe, 'Genesis and the nature of myth', pp. 16-17.

³¹ Coupe, 'Genesis and the nature of myth', p. 21.

³² Coupe, 'Genesis and the nature of myth', pp. 21-22.

Trees and Text

progression from Coupe's thesis, presenting a material ecocritical analysis of Gen 2:4b–3:24 refined by specialist insight from the field of biblical scholarship.

2.3 Ecological readings of Gen. 2:4b–3:24 in biblical scholarship

As one might expect, biblical scholarship has produced more sophisticated ecological readings of Gen. 2:4b–3:24 than those offered by the field of ecocriticism. However, as I shall demonstrate below, these readings have devoted little attention to exploring the trees and the wider physical world of Gen. 2:4b–3:24. I therefore maintain that the material ecocritical analysis of trees in the text presented in this study addresses a current gap in knowledge.

Before proceeding, it is helpful to provide an outline of the development of what has become known in scholarship as 'ecological hermeneutics': the interpretation of the Bible from an ecological perspective. This outline is not intended to be a comprehensive history as this can be found elsewhere.³³ My aim here is to offer an understanding of the wider theoretical and methodological contexts of the studies that I engage with below, and what follows is a summary of the three major approaches to ecological hermeneutics.

The earliest studies in ecological hermeneutics emerged in the 1970s and were characterised by the methodological assumption that the Bible as a

³³ David G. Horrell, 'Ecological Hermeneutics: Reflections on Methods and Prospects for the Future', *Colloquium* 46.2 (2014), pp. 139-165; Tina Dykesteen Nilsen and Anna Rebecca Solevåg, 'Expanding Ecological Hermeneutics: The Case for Ecolonialism', *Journal of Biblical Literature*, 135.4 (2016), pp. 665-683 (665-674).

2. Literature Review

whole promotes a message of responsible environmental stewardship.³⁴ According with current designations for this body of work, I shall refer to this enterprise as the ‘stewardship approach’ throughout this study.³⁵ Practitioners of this approach have never explicitly identified its aims and methodologies. However, this work has typically been undertaken by Christian theologians seeking to demonstrate the ecological message within the Bible in a response to two stimuli. (1) The reception of White’s provocative essay, ‘The Historical Roots of Our Ecologic Crisis’, in the church and in the academy. (2) The increasing awareness of environmental issues in popular Western culture owing to works such as Rachel Carson’s *Silent Spring* and the emergence of environmental journalism, which in the 1970s and 1980s reported the deleterious effects of DDT, CFCs, and greenhouse gases in mainstream media.³⁶

Stewardship scholarship has devoted little attention to the analysis of Gen. 2:4b–3:24. Instead, its efforts have been focussed upon texts that are explicitly problematic for its stewardship thesis such as the ‘dominion’ verses of Gen. 1:26–28 or environmentally destructive eschatological texts such as 2 Pet. 3:10–13.³⁷ For this reason, I cannot offer any examples of dedicated stewardship readings of Gen. 2:4b–3:24 below. Crucially for this study, however, the concept of environmental stewardship is central to the

³⁴ Examples of these include James Barr, *Man and Nature: The Ecological Controversy and the Old Testament* (Manchester: John Rylands Library, 1972), p. 30; Loren Wilkinson (ed.), *Earthkeeping: Christian Stewardship of Natural Resources* (Grand Rapids, MI: Wm. B. Eerdmans, 1980).

³⁵ David G. Horrell, ‘Introduction’, in D. G. Horrell, C. Hunt, C. Southgate and F. Stavropoulou (eds.) *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives* (London/New York: T & T Clark, 2010), pp. 1-12 (4).

³⁶ Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962).

³⁷ Bauckham, ‘Human Authority in Creation’; Ernest Lucas, ‘The New Testament Teaching on the Environment’, *Transformation*, 16.3 (1999), pp. 93-99.

Trees and Text

environmentalist ideology of the *Green Bible* and Gen. 2:15 is frequently employed throughout the supplementary materials of this Bible as a key verse relating to environmental stewardship; I shall discuss this in detail below. It is also important to acknowledge that the stewardship approach endures in contemporary scholarship and recent monographs by Hilary Marlow and Richard Bauckham have offered sophisticated analyses of biblical texts that are informed by the notion of environmental stewardship.³⁸

The second major ecological reading approach originated in 1996, with the establishment of the Earth Bible project by Norman Habel in Adelaide, South Australia. The project features scholars from a range of nationalities and religious backgrounds (although the majority of scholarship thus far has been undertaken from a Christian theological perspective) and contrasts with the stewardship approach in three major ways. (1) The Earth Bible project recognises the failure of the stewardship approach to establish a methodological framework for the ecological interpretation of biblical texts and consequently developed a set of guiding principles to facilitate this enterprise.³⁹ It is not necessary to detail these principles here except to observe that (2) characteristic of the Earth Bible project is a hermeneutic of suspicion that, in contrast to the stewardship approach, perceives the Bible as a predominantly anthropocentric text from which the voice of the natural

³⁸ Hilary Marlow, *Biblical Prophets and Contemporary Environmental Ethics* (Oxford: Oxford University Press, 2009); Richard Bauckham, *Living with Other Creatures: Green Exegesis and Theology* (Waco, TX: Baylor University Press, 2011).

³⁹ The Earth Bible Team, 'Guiding Ecojustice Principles', in N. C. Habel (ed.), *Readings From the Perspective of Earth* (The Earth Bible, vol. 1; Sheffield: Sheffield Academic Press, 2000), pp. 38-53.

2. Literature Review

world is to be retrieved.⁴⁰ (3) The Earth Bible project understands the concept of stewardship as inherently anthropocentric and hierarchical; instead, it proposes 'mutual custodianship'; the concept that the wellbeing of nature and humanity is interconnected.⁴¹

The Earth Bible project produced five edited volumes from 2000-2002, with the first volume offering an anthology of ecological studies of biblical texts, and the subsequent volumes each focussing upon specific biblical texts. Following this in 2011 was the first of the on-going Earth Bible Commentary series, which offered an ecological commentary of selected biblical texts. I shall discuss studies of Gen. 2:4b–3:24 in the Earth Bible below.

A common criticism of the Earth Bible series has been that it has focussed on textual interpretation rather than the application of biblical texts within the context of contemporary environmental ethics.⁴² The final major ecological reading approach, offered by the Uses of the Bible in Environmental Ethics Project lead by David Horrell at the University of Exeter (2006-2009), contributed to redressing this imbalance in ecological hermeneutics. The project focussed upon the ecological interpretation of the Bible from a Christian theological perspective and proposes an analytical approach that occupies a centre ground between the optimistic aim of the stewardship approach to recover the ecological message in the Bible and the

⁴⁰ Norman C. Habel, 'Introducing Ecological Hermeneutics' in N.C Habel and P. Trudinger (eds.), *Exploring Ecological Hermeneutics* (Society of Biblical Literature symposium series, no. 46; Atlanta, GA: Society of Biblical Literature, 2008), pp. 1-8 (3-5).

⁴¹ The Earth Bible Team, 'Guiding Ecojustice Principles', pp. 50-51.

⁴² Hilary Marlow, 'Greening Texts: Ecological Hermeneutics in Inter-disciplinary Perspective', paper presented at the annual conference of the European Association of Biblical Studies, Katholieke Universiteit Leuven, 19 July 2016.

Trees and Text

suspicious hermeneutic characteristic of the Earth Bible project.⁴³ The project achieves this central position through an engagement with the work of Ernst Conradie whose concept of ‘doctrinal keys’ places a methodological focus upon acknowledging the individuality of each reader and the numerous factors contributing to their interpretation of a biblical text.⁴⁴ To date, the project has produced two volumes: *Ecological Hermeneutics*, a collection of ecological readings of biblical texts, and *Greening Paul*, an exploration of the Pauline corpus from an ecological perspective.⁴⁵ Whilst there has been no detailed study of Gen. 2:4b–3:24 from this approach, it has been helpful to discuss it here as it demonstrates that the sub-field of ecological hermeneutics has to date been dominated by Christian theological interpretation. There is therefore great potential for literary approaches informed by critical biblical scholarship, such as the material ecocritical approach employed in this study, to contribute new knowledge to the sub-field of ecological hermeneutics. I shall now proceed to discuss the existing ecological readings of Gen. 2:4b–3:24 in biblical scholarship.

⁴³ Horrell, ‘Introduction’, pp. 8-9.

⁴⁴ Christopher Southgate, ‘Introduction to Part III’, in D. G. Horrell, C. Hunt, C. Southgate and F. Stavrakopoulou (eds.) *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives* (London/New York: T & T Clark, 2010), pp. 243-245 (245).

⁴⁵ David G. Horrell, Cheryl Hunt, Christopher Southgate and Francesca Stavrakopoulou (eds.) *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives* (London/New York: T & T Clark, 2010); David G. Horrell, Cheryl Hunt and Christopher Southgate, *Greening Paul: Rereading the Apostle in a Time of Ecologic Crisis* (Waco, TX: Baylor University Press, 2010).

2. Literature Review

2.3.1 Arthur Walker-Jones, 'Eden for Cyborgs'

Arthur Walker-Jones' 'Eden for Cyborgs' is the first study to identify itself as an ecocritical reading of Gen. 2:4b–3:24.⁴⁶ In this innovative interdisciplinary study, Walker-Jones focusses upon the snake of Gen. 2:4b–3:24, using the feminist critical theory of Donna Haraway as an interpretive lens.⁴⁷ Walker-Jones is specifically concerned with Haraway's cyborg theory; Haraway defines a 'cyborg' as a 'hybrid of machine and organism' and proposes that cyborgs transgress dualist boundaries such as nature/culture and animal-human/machine.⁴⁸ Consequently, Walker-Jones' central thesis is that the serpent of Gen 2:4b–3:24 functions as a 'cyborg', blurring the boundaries between God, humanity, and nature.⁴⁹

Whilst by its subtitle 'Eden for Cyborgs' identifies itself with the field of ecocriticism, there is little engagement with ecocritical scholarship in the study. Indeed, Walker-Jones does not discuss any of the foundational publications in the field and cites just one early ecocritical study throughout the whole article.⁵⁰ Neither does he discuss the present state of the field of ecocriticism or any of the theory or methodology that is specific to the field. In short, 'Eden for Cyborgs' demonstrates only a minimal engagement with the field of ecocriticism and, given its focus upon Haraway's theory, it would

⁴⁶ Arthur Walker-Jones, 'Eden for Cyborgs: Ecocriticism and Genesis 2–3', *Biblical Interpretation*, 16.3 (2008), pp. 263-293.

⁴⁷ Donna Haraway, 'A Manifesto for Cyborgs: Science, Technology and Socialist Feminism in the 1980s', *Socialist Review*, 80.15.2 (1985), pp. 65-107.

⁴⁸ Haraway, 'A Manifesto for Cyborgs', pp. 65-66.

⁴⁹ Walker-Jones, 'Eden for Cyborgs', pp. 280, 287-288.

⁵⁰ Walker-Jones, 'Eden for Cyborgs', p. 264.

Trees and Text

seem more accurate to describe his study as ecofeminist rather than ecocritical.

Walker-Jones' analysis of the snake of Gen. 2:4b–3:24 devotes little attention to discussing the wider depiction of the physical environment of the text and the manner in which the snake interacts with, and is interconnected to, this ecosystem. However, Walker-Jones makes two compelling observations in this respect: he argues that 'the snake, the tree of knowledge and the land become the main, symbolic representatives of nature in the story', and that, owing to the knowledge that they possess, 'the serpent and the trees are actants co-creating humanity'.⁵¹ However, he does not elucidate these further. Consequently, 'Eden for Cyborgs' leaves ample latitude for the material ecocritical analysis of the trees in Gen. 2:4b–3:24 offered in this study.

2.3.2 R. B. Hamon, 'Garden and "Wilderness"'

The second ecocritical reading of Gen. 2:4b–3:24, is my own study, 'Garden and "Wilderness"'. In this article, I examine the depiction of the physical environment in Gen. 2:4b–3:24 using an early ecocritical reading method suggested by Glotfelty in the *Ecocriticism Reader*.⁵² The study challenges traditional dualistic interpretations of the text in Christian theological tradition and wider Western culture by arguing that the land surrounding the garden of Yhwh is not barren, and neither is it corrupted by sin, but it is ultimately as

⁵¹ Walker-Jones, 'Eden for Cyborgs', pp. 280, 288-289.

⁵² Hamon, 'Garden and "Wilderness"', pp. 68-69.

2. Literature Review

capable of sustaining human life as the 'paradisiacal' garden of Yhwh.⁵³ In addition, I make two observations relating to the trees of Gen. 2:4b–3:24 that I shall discuss further in this study. Firstly, I argue that according to the explicit details of Gen. 2:4b–3:24, it seems that trees mark the border between the garden of Yhwh and the land outside it.⁵⁴ Secondly, I propose that specific botanical features of the tree of life may have deterred the humans from eating its produce, and that this is a possible solution to the narrative problem of why Yhwh does not prohibit the humans from eating from this tree.⁵⁵

By way of underscoring the originality of this present study, in the analysis that follows, I return to Gen. 2:4b–3:24 employing material ecocritical theory and methodology that is far more sophisticated than the early ecocritical theory used in 'Garden and "Wilderness"'. Furthermore, my analysis of the trees offered in this present study draws from new materialist theory and builds upon, but ultimately surpasses, the briefer analysis offered in my earlier study.

2.3.3 Carol Newsom, 'Common Ground'

The remaining three ecological readings of Gen. 2:4b–3:24 deserving of attention here are products of the Earth Bible project. Carol Newsom's, 'Common Ground' appears in the second volume of the series and offers an

⁵³ Hamon, 'Garden and "Wilderness"', pp. 71, 73-74, 79-80.

⁵⁴ Hamon, 'Garden and "Wilderness"', p. 75.

⁵⁵ Hamon, 'Garden and "Wilderness"', p. 77.

Trees and Text

ecological analysis of Gen. 2:4b–3:24.⁵⁶ Much of Newsom's analysis focusses upon the relationship between humanity and nature depicted in the pericopé. Here I shall discuss the portion of her interpretation that explores the physical world of the text.

Like Garrard, Newsom perceives a spatial division in the physical world of the text; she distinguishes between the garden of Yhwh as a pre-agricultural 'permaculture', a self-sustaining perennial plantation, and the wild earth outside the garden that requires environmentally deleterious cultivation in order to provide food.⁵⁷ Upon close examination of the text, however, this division of its environment is problematic. 'Permaculture' (a portmanteau of permanent agriculture), is a concept developed by Bill Mollison in the 1970s, defined as 'the conscious design and maintenance of economical, agriculturally productive ecosystems that have the diversity, stability, and resilience of natural ecosystems'.⁵⁸ Permaculture is therefore reliant upon agriculture, so Newsom's understanding of the garden of Yhwh as a pre-agricultural permaculture is oxymoronic. Newsom is correct in acknowledging that the ambiguity of the verb עָבַד (Gen. 2:15) does not necessarily suggest that the first human is commissioned by Yhwh as an agricultural labourer.⁵⁹ However, Yhwh explicitly undertakes agricultural labour in the process of creating the garden (Gen 2:8) so it is unclear how this accords with a pre-agricultural era. Concerning the land outside the

⁵⁶ Carol A. Newsom, 'Common Ground: An Ecological Reading of Genesis 2-3' in N. C. Habel and S. Wurst (eds.) *The Earth Story in Genesis* (The Earth Bible, vol. 2; Sheffield: Sheffield Academic Press, 2000), pp. 60-72.

⁵⁷ Newsom, 'Common Ground', pp. 65, 70.

⁵⁸ Steve Goodhew, *Sustainable Construction Practices: A Resource Text* (Chichester/Hoboken, NJ: John Wiley & Sons, 2016), p. 14.

⁵⁹ Newsom, 'Common Ground', p. 64.

2. Literature Review

garden of Yhwh, Newsom rightly observes that this environment requires agriculture to produce food (Gen. 3:17–18), though nothing in Gen. 2:4b–3:24 portrays agriculture as environmentally deleterious as she suggests.⁶⁰ Whilst Newsom offers an innovative attempt at examining the physical world depicted in Gen. 2:4b–3:24 from an ecological perspective, her polarisation of this world into pre- and post-agricultural places demonstrates weaknesses when scrutinised closely.

2.3.4 Mark G. Brett, 'Earthing the Human in Genesis 1–3'

Following Newsom in the same volume, Mark Brett offers a contrasting ecological reading of Genesis 1–3.⁶¹ Brett begins by considering non-human agency, asking '[c]an we broaden the concept of agency in a way which allows us to imagine forms of community that take us beyond the narrow constructions of human community?'⁶² Brett proposes that a partial answer to this question is to 'identify the agency and the needs of the earth as they are constructed in these classical creation narratives'.⁶³ However, he does not provide a definition of agency as he intends it to be understood in this context or demonstrate an awareness of the numerous competing theories that conceptualise human and non-human agency. Neither does he propose a methodology for how one might interpret a biblical text in light of theories of non-human agency. These omissions underscore the need for this study.

⁶⁰ Newsom, 'Common Ground', p. 70.

⁶¹ Mark G. Brett, 'Earthing the Human in Genesis 1–3', in N. C. Habel and S. Wurst (eds.) *The Earth Story in Genesis* (The Earth Bible, vol. 2; Sheffield: Sheffield Academic Press, 2000), pp. 73-86.

⁶² Brett, 'Earthing the Human', p. 74.

⁶³ Brett, 'Earthing the Human', p. 74.

Trees and Text

Brett proceeds to discuss the physical world depicted in Genesis 1–3, though he focusses upon the hierarchy between humanity and nature, rather than the agency of the non-human. Here I shall focus upon his interpretation of Gen. 2:4b–3:24.

The most distinctive feature of Brett's analysis is his engagement with the historicity of Gen. 2:4b–3:24. Brett makes the innovative proposition that the text was redacted in the Persian period by editors who deliberately sought to undermine colonial authority.⁶⁴ These redactors satirised the human aspiration to royalty and humanity was ultimately portrayed as being incapable of exerting dominion over creatures that 'creep upon the earth'.⁶⁵ Brett therefore rejects the notion that the text presents a hierarchy between humanity and the animal kingdom, observing that both were created from the ground and the first human's 'helper' might have been an animal.⁶⁶ Similarly, Brett perceives the act of the first human naming the animals as a celebration of diversity rather than an establishment of dominion over them.⁶⁷ It is not possible to substantiate Brett's thesis about the redaction of the Gen. 2:4b–3:24 conclusively and whilst he is correct about humans and animals sharing a common origin, the text is not sufficiently clear about the purpose of the first human naming the animals to conclude that Gen. 2:20 celebrates their diversity. Finally, given that Brett's aim is to explore the agency of the non-human in Genesis 1–3, he says nothing of the agentic capacity of the animals other than that they are equivalent to humans in hierarchical status, and nothing of the agency of other non-human things in this narrative; soil,

⁶⁴ Brett, 'Earthing the Human', p. 86.

⁶⁵ Brett, 'Earthing the Human', p. 84.

⁶⁶ Brett, 'Earthing the Human', pp. 81-82.

⁶⁷ Brett, 'Earthing the Human', p. 81.

2. Literature Review

water, sky, and of course trees. Brett's study therefore highlights the great potential for the agency of the trees in Gen. 2:4b–3:24 to be discussed in this study.

2.3.5 Norman C. Habel, *The Birth, the Curse and the Greening of Earth*

Finally is Habel's reading of Gen. 2:4b–3:24 in the first volume of the Earth Bible commentary series, which is dedicated to Genesis 1–11.⁶⁸ Habel's reading approach throughout this volume is first to divide the text into narrative units and sub-units and then to explore 'how the narrative design of the texts reflects the way in which Earth, domains of Earth, or members of the Earth community are represented and given voice in the narrative'.⁶⁹ This structural approach is highly original in ecological hermeneutics, but not without difficulty; the division of a text into narrative units is itself an interpretive act and imposing specific divisions upon a text can influence the manner in which it is understood. Furthermore, Habel is unclear whether he believes that the narrative structure that he proposes reflects the intended 'narrative design' of the text or whether he is imposing a narrative structure upon the text to facilitate his ecocentric reading.⁷⁰ Whilst Habel's reading method aims to explore the depiction of the physical world in Gen. 2:4b–3:24, in practice this aim is compromised by presenting the analysis in commentary format. Overall, Habel devotes most attention to the events in

⁶⁸ Norman C. Habel, *The Birth, the Curse and the Greening of Earth: An Ecological Reading of Genesis 1–11* (The Earth Bible Commentary, vol. 1; Sheffield: Sheffield Phoenix Press, 2011).

⁶⁹ Habel, *The Birth, The Curse and the Greening of Earth*, p. 17.

⁷⁰ Habel, *The Birth, The Curse and the Greening of Earth*, pp. 17, 46–47.

Trees and Text

the narrative and allocates only a small number of sentences to discussing important ecological features of the text such as the barrenness of the primal earth, the 'forest of Eden', and air.⁷¹

2.3.6 Summary

The ecological readings of Gen. 2:4b–3:24 discussed above have each demonstrated originality and innovation in the interpretive approaches that they have employed. Crucially for this study, however, I have shown that none of these ecological analyses have devoted significant attention to the trees of this text and neither have they engaged with theories or methodologies consistent with material ecocriticism.

2.4 Analyses of the trees in Gen. 2:4b–3:24 in biblical scholarship

Whilst I demonstrated above that ecological readings of Gen. 2:4b–3:24 have devoted relatively little attention to the trees of this pericopé, three narrative-critical studies of the text have contributed important knowledge to our understanding of the tree of life and the tree of knowledge, so are deserving of attention here. It should be noted, however, that none of these studies discuss the other trees featuring in Gen. 2:4b–3:24, the fig tree and the remainder of the trees in the garden of Yhwh. Before proceeding to discuss these three narrative-critical studies, it is important to acknowledge

⁷¹ Habel, *The Birth, The Curse and the Greening of Earth*, pp. 50, 53, 56.

2. Literature Review

that the trees of Gen. 2:4b–3:24 have received much attention from biblical scholars applying historical-critical approaches to the text.

This began with Karl Budde's foundational 1883 study *Die Biblische Urgeschichte* in which he proposed that narrative inconsistencies in the text revealed that it had been redacted from two distinct sources; an earlier source featuring only the tree of knowledge and a later source featuring only the tree of life.⁷² Budde's thesis provoked debate about the origins of the text that persisted well into the twentieth century as scholars developed, and proposed alternatives to, his original thesis. It is not necessary to outline this debate here as, whilst the tree of life and the tree of knowledge are ostensibly the object of these analyses, these historical-critical studies are primarily concerned with examining the two trees in attempt to establish the process by which the text was redacted into its existing form, rather than discussing their narrative depiction. This is demonstrated by the comprehensive overview of this scholarship provided by Tryggve Mettinger.⁷³ In this study, I am primarily concerned with the text of Gen. 2:4b–3:24 in its existing form, and I analyse the text as a coherent narrative which clearly features the tree of life and the tree of knowledge as two distinct narrative agents. As such, I shall focus upon narrative-critical analyses below.

⁷² Karl Budde, *Die Biblische Urgeschichte* (Giessen: Ricker, 1883), p. 23

⁷³ Tryggve N. D. Mettinger, *The Eden Narrative: A Literary and Religio-historical Study of Genesis 2–3* (Winona Lake, IN: Eisenbrauns, 2007), pp. 5-11.

Trees and Text

2.4.1 Terje Stordalen, *Echoes of Eden*

This ambitious monograph explores Gen. 2:4b–3:24 from a socio-historical perspective, examining the symbolic significance of its garden from the perspective of its ancient Hebrew audience. Chapter nine offers a narrative-critical analysis of Gen. 2:4b–3:24 that is primarily structural; Stordalen orders the narrative into complex non-linear sections based upon problems or deficiencies that he proposes are resolved within the story.⁷⁴

Here, I shall focus upon Stordalen's analysis of the tree of life and the tree of knowledge as he offers an innovative understanding of these trees which shapes his entire reading of Gen. 2:4b–3:24.⁷⁵ Stordalen's reading hinges upon his interpretation of the Hebrew word פָּן in Gen. 3:22. Contrasting to earlier studies of this verse by Paul Humbert and James Barr, Stordalen argues that in some contexts פָּן, translated as 'lest' (Gen. 3:22 KJV), can be understood as 'lest someone continue to do what they are already doing'.⁷⁶ Consequently, Stordalen believes that Gen. 3:22 could suggest that the humans had already eaten from the tree of life; he argues that no prohibition was placed upon this action previously (Gen. 2:16) and that eating from this tree is only a problem once the humans have eaten from the tree of knowledge.⁷⁷ He calls this predicament 'Life but *not* life and knowledge' (emphasis his) and argues that this is the 'basic plot' of Gen. 2:4b–3:24.⁷⁸

⁷⁴ Stordalen, *Echoes of Eden*, pp. 210-249, 476.

⁷⁵ Stordalen, *Echoes of Eden*, pp. 229-233.

⁷⁶ Stordalen, *Echoes of Eden*, pp. 230-231.

⁷⁷ Stordalen, *Echoes of Eden*, pp. 230-231.

⁷⁸ Stordalen, *Echoes of Eden*, p. 232.

2. Literature Review

This interpretation is founded upon his examination of פן in two other instances in the Hebrew Bible; Exod. 1:7–9; 2 Sam. 12:27–28 (פן appears a total of 131 times in the Hebrew Bible so these examples are exceptional rather than typical).⁷⁹ Stordalen argues that פן is employed grammatically in exactly the same manner in Gen. 3:22; Exod. 1:7–9; 2 Sam. 12:27–28 as each of these verses follows the grammatical structure: [פן joined to an imperfect verb] + [perfect consecutive verbs].⁸⁰ He then argues that because in Exod. 1:7–9 and 2 Sam. 12:27–28 פן is employed to connote the prohibition of things that are already happening, the growth of the Israelite population, and the conquest of the city Rabbah respectively, that this word is employed in Gen. 3:22 for the same purpose; to connote that the humans were eating from the tree of life prior to eating from the tree of knowledge.⁸¹

It is true that these three verses share the same grammatical structure, but I do not agree that this proves that פן has the same meaning in each instance. There is a crucial difference between Gen. 3:22 and Exod. 1:7–9; 2 Sam. 12:27–28 that Stordalen overlooks; both the latter two verses explicitly state the previously occurring actions that are to be prevented in the future and this is not true of Gen. 3:22. Indeed, nowhere in the entire text of Gen. 2:4b–3:24 is it explicitly stated that the humans ate from the tree of life. So, within the context of this pericopé it seems unlikely that פן in Gen. 3:22 conveys the meaning that the humans are not to *continue* eating from the tree of life. Mettinger also disagrees with Stordalen, citing the earlier scholarship of Humbert and Barr who each use the Hebrew word אג

⁷⁹ Stordalen, *Echoes of Eden*, p. 230.

⁸⁰ Stordalen, *Echoes of Eden*, p. 231.

⁸¹ Stordalen, *Echoes of Eden*, p. 231.

Trees and Text

translated as 'also' in Gen. 3:22 to demonstrate that the humans have not previously eaten from the tree of life.⁸² Furthermore, if the humans have already been eating from the tree of life, Stordalen fails to address how their apparent immortality (Gen. 3:22) fits into the wider narrative of Gen. 2:4b–3:24. Does the end of this pericopé see the humans exiled from the garden to a life of eternal agricultural and domestic labour? How might this interpretation be reconciled with the death of the first human in Gen. 5:5?

Finally, Stordalen acknowledges the narrative function of the tree of life and the tree of knowledge, describing them as narrative 'agents' along with Yhwh, the snake, and the two humans.⁸³ He then proceeds to discuss each of these 'narrative figures' in detail, though, crucially, he does not devote any space to discussing these two trees.⁸⁴ It is not clear why Stordalen overlooks the trees here, but this omission leaves sufficient scope for me to discuss them, and the other trees of Gen. 2:4b–3:24, below.

Having examined Stordalen's analysis of the tree of life and the tree of knowledge, I find his work both innovative and rigorous; he provides a highly original solution to the question of why no restriction is placed upon eating from the tree of life in Gen. 2:4b–3:24. Ultimately, though, Stordalen's reading is founded upon an assumption about a particular translation of η that can be called into question alongside the 'equivalent' verses of Exod. 1:7–9 and 2 Sam. 12:27–28. I shall propose an alternative theory of why no prohibition is initially placed upon eating from the tree of life below. Furthermore, whilst Stordalen acknowledges the tree of life and the tree of

⁸² Mettinger, *The Eden Narrative*, p. 20.

⁸³ Stordalen, *Echoes of Eden*, p. 233.

⁸⁴ Stordalen, *Echoes of Eden*, pp. 233-240.

2. Literature Review

knowledge as ‘narrative figures’, he does not elucidate this observation any further.

2.4.2 Tryggve N. D. Mettinger, *The Eden Narrative*

This monograph explores the narrative themes and tradition history of Gen. 2:4b–3:24 and offers a chapter-length narratological analysis of the text that has much to say about the tree of life and the tree of knowledge.⁸⁵ Mettinger’s interest in these two trees is a response to the corpus of historical-critical studies of Gen. 2:4b–3:24 that have discerned apparent narrative inconsistencies in the depiction of these trees and used them to propose theories about the redaction of the text.⁸⁶ Mettinger’s approach is to analyse Gen. 2:4b–3:24 as a coherent narrative unit seeking to explore three apparent narrative inconsistencies relating to its trees identified by historical-critical scholars:

(1) There are two distinct trees but only one prohibition; why is no restriction placed upon the tree of life?

(2) Why does the body of the narrative feature only the tree of knowledge?

(3) What are the implications of the woman’s ‘mistake’ when she refers to the tree of knowledge as being located in the midst of the garden?⁸⁷

⁸⁵ Mettinger, *The Eden Narrative*, pp. 12-41.

⁸⁶ Mettinger, *The Eden Narrative*, p. 10.

⁸⁷ Mettinger, *The Eden Narrative*, p. 10.

Trees and Text

Mettinger finds that the above 'inconsistencies' can be reconciled when the text is read as a coherent whole. He proposes that whilst there are two distinctive trees, only one prohibition is issued by Yhwh as a 'divine test' that is neither explicitly revealed to the humans nor to the reader.⁸⁸ The test is simple: if the humans obey Yhwh and resist eating from the tree of knowledge they will be rewarded by being permitted to eat from the tree of life.⁸⁹ The narrative therefore depicts the consequences of the humans failing this test. Mettinger also proposes that no prohibition is placed on eating from the tree of life because, whilst the narrator informs the reader of this tree, the humans of the narrative are unaware of its presence in the garden.⁹⁰ For Mettinger, then, these observations explain the absence of the tree of life from the body of the text; this tree is introduced to the reader at its start and appears again at its conclusion, but the body of the narrative is centred around the test of eating from the tree of knowledge.⁹¹ Finally, Mettinger argues that when the woman refers to the tree of knowledge by its location rather than its name (Gen. 3:3) this is not evidence of an editorial error, but a conscious literary allusion employed by the author.⁹² Mettinger maintains that both the tree of life and the tree of knowledge are located in the midst of the garden and here the woman ironically alludes to the location of the tree of life, reminding the reader that she is unaware of this tree.⁹³

Mettinger's reading of Gen. 2:4b–3:24 is highly original and raises much to debate. Relevant to this study are the following observations. (1)

⁸⁸ Mettinger, *The Eden Narrative*, pp. 23, 37.

⁸⁹ Mettinger, *The Eden Narrative*, p. 39.

⁹⁰ Mettinger, *The Eden Narrative*, pp. 37, 39.

⁹¹ Mettinger, *The Eden Narrative*, p. 40.

⁹² Mettinger, *The Eden Narrative*, p. 38.

⁹³ Mettinger, *The Eden Narrative*, p. 38.

2. Literature Review

Like Stordalen, Mettinger focusses upon the tree of life and the tree of knowledge but is not at all concerned with the other trees in the text; the fig tree and the wider selection of trees planted in the garden of Yhwh. In contrast, I discuss the range of trees depicted in Gen. 2:4b–3:24 in my analysis below. (2) Mettinger argues that the humans did not eat from the tree of life because they simply were not aware of it.⁹⁴ I find this deduction unsatisfactory, as it does not account for the possibility that whilst the humans did not know about the tree, they may still have eaten from it ignorantly. I propose an alternative reason why the humans did not eat from this tree below.

2.4.3 Ziony Zevit, *What Really Happened in the Garden of Eden?*

This monograph offers a reader response analysis of Gen. 2:4b–3:24 that seeks to explore how the text was interpreted by its ‘original’ readers in the ninth century BCE (contemporary scholarly consensus dates the text to the Persian period).⁹⁵ Whilst the trees of Gen. 2:4b–3:24 are not Zevit’s primary focus, he offers a detailed analysis of the location of the tree of life and the tree of knowledge in the garden of Yhwh, which is an important contribution to our understanding of these trees.⁹⁶ The most common interpretation of Gen. 2:9 in relation to the location of the tree of life and the tree of knowledge is that they are situated in the centre of the garden of Yhwh. This is the view of Stordalen, Kenneth Craig, Dmitri Slivniak, Peter Thacher

⁹⁴ Mettinger, *The Eden Narrative*, pp. 39-40.

⁹⁵ Zevit, *Garden of Eden*, pp. 48-50 cf. Mettinger, *The Eden Narrative*, p. 11.

⁹⁶ Zevit, *Garden of Eden*, pp. 93-95.

Trees and Text

Lanfer, and Paul Scotchmer, who constructs a spatial interpretation of Gen. 2:4b–3:24 based on this assumption.⁹⁷ In contrast, Mettinger places the trees somewhere in the ‘midst’ of the garden, though he does not acknowledge that this contrasts with other interpretations of the text or expand upon any narrative consequences of this view.⁹⁸ Zevit explains why ‘midst’ is the most accurate translation of Gen. 2:9. Firstly, he explains the linguistic technique of forward gapping, which allows the omission of redundant information in a sentence when it causes the repetition of words.⁹⁹ He then states that the locative descriptor בתוך appears *before* the tree of life in the Hebrew text and that because of forward gapping this descriptor also carries forward to the tree of knowledge.¹⁰⁰ This is partially erroneous as in the Hebrew text of Gen. 2:9 בתוך appears *between* the tree of life and the tree of knowledge. Nevertheless, I agree with Zevit’s overall argument about the use of forward gapping in the verse on the strength that he shows that this style of phrasing is consistent with other verses in the Hebrew Bible that function in the same way linguistically (Gen. 1:16; 43:18; Exod. 34:27; Deut. 7:14; Judg. 6:5).¹⁰¹ But what does בתוך mean? Zevit also shows that there are a range of locative descriptors in the Hebrew language that could be used to denote specific

⁹⁷ Stordalen, Craig, Slivniak, Lanfer, and Craig also support a central location of the trees in the garden; Stordalen, *Echoes of Eden*, p. 288; Kenneth M. Craig, Jr., ‘Misspeaking in Eden, or, Fielding Questions in the Garden (Genesis 2:16–3:13)’, *Perspectives in Religious Studies*, 27.3 (2000), pp. 235-247 (241-242); Dmitri M. Slivniak, ‘The Garden of Double Messages: Deconstructing Hierarchical Oppositions in the Garden Story’, *Journal for the Study of the Old Testament*, 27.4 (2003), pp. 439-460 (443); Peter Thacher Lanfer, *Remembering Eden: The Reception History of Genesis 3:22–24* (Oxford/New York: Oxford University Press, 2012), p. 34; Paul F. Scotchmer, ‘Lessons from Paradise on Work, Marriage, and Freedom: A Study of Genesis 2:4–3:24’, *Evangelical Review of Theology*, 28.1 (2004), pp. 80-85 (80, 84).

⁹⁸ Mettinger, *The Eden Narrative*, pp. 37-38.

⁹⁹ Zevit, *Garden of Eden*, p. 93.

¹⁰⁰ Zevit, *Garden of Eden*, p. 93.

¹⁰¹ Zevit, *Garden of Eden*, p. 94.

2. Literature Review

central and perimeter locations in the garden and that בתוך is more ambiguous than these specific words; translated literally it means 'in/at the within (part)'.¹⁰² Zevit's study therefore demonstrates that *both* trees are located somewhere in the midst of the garden, though they are not necessarily in the same place within the garden, and the text does not explicitly state that they are located at its centre.

Based upon the strength of Zevit's arguments, I shall adopt this position about the location of these trees in this study. Whilst Zevit makes an important contribution to understanding the location of these two trees in Gen. 2:4b–3:24, his analysis features no further detailed discussion of these two trees, or indeed any of the other trees in the text.

2.4.4 Summary

By examining these three narrative-critical analyses of Gen. 2:4b–3:24, I have shown that whilst Stordalen, Mettinger, and Zevit have offered original and rigorous analyses that centre around the tree of life and the tree of knowledge there is still potential to analyse the trees of this pericopé in greater detail. Stordalen and Mettinger each propose different reasons why no prohibition is placed on eating from the tree of life, though I have shown that both positions may be questioned and I offer an alternative reason below. Common to all three studies is a failure to discuss the other trees featuring in Gen. 2:4b–3:24; the fig tree and the unnamed trees in the garden of Yhwh; there is therefore plenty of scope to discuss these in the analysis

¹⁰² Zevit, *Garden of Eden*, pp. 93-94.

Trees and Text

that follows also. Finally, none of these studies discuss the environmental impacts of the trees in the physical world of Gen. 2:4b–3:24. This is perhaps understandable given their focus, but this observation highlights the originality of this study in exploring this aspect of the trees of the passage.

2.5 Examining biblical textual materiality in an ecological context

The next group of studies that I shall examine in this chapter explore the materiality of biblical text in an ecological context. There has been little work undertaken in this area to date. Whilst each of the three studies that I discuss precede material ecocriticism, points of consonance with material ecocritical theory are evident in each analysis. Here I shall evaluate the contribution of these analyses to the topic of biblical textual materiality in order to underscore the place of this study in employing material ecocritical theory as a means to contributing original knowledge to this emerging area of enquiry.

2.5.1 Carol Adams, *Neither Man nor Beast*

This landmark feminist monograph is the earliest study deserving of attention here. Whilst Adams' study is not devoted to the topic of biblical textual materiality, in her concluding chapter she recognises the contribution of animal lives in the technological development from papyrus to book, albeit

2. Literature Review

very briefly.¹⁰³ Adams discusses the historical replacement of the papyrus roll with the parchment codex, noting that the Dead Sea Scrolls were produced from leather and that subsequently skins from animals including cows, sheep, and goats have been used to produce leather writing surfaces.¹⁰⁴ She concludes these observations by arguing that ‘our theoretical and theological task is to get animals off the pages on which we inscribe our own anthropocentric ideas about them’.¹⁰⁵ Adams’ brief venture into exploring biblical textual materiality is an aside from the main body of her study; it is not intended to be a detailed exploration of the topic. Nevertheless, her contribution is important as it acknowledges two principles that are consistent with the concept of ‘matter as text’ in material ecocritical discourse; the relationship between a physical text and the materials and processes that have produced it, and the relationship between textual materiality and interpretation. I shall explore both of these areas in great depth in respect to Gen. 2:4b–3:24 in the *Green Bible* below. Furthermore, Adams’ short exploration of textual materiality inspired the next study I shall discuss.

¹⁰³ Carol J. Adams, *Neither Man nor Beast: Feminism and the Defense of Animals* (New York: Continuum, 1994), p. 203.

¹⁰⁴ Adams, *Neither Man nor Beast*, p. 203.

¹⁰⁵ Adams, *Neither Man nor Beast*, p. 203.

2.5.2 Rachel Muers, 'The Animals We Write On'

Muers offers a development of Adams' observations concerning animals and biblical textual materiality.¹⁰⁶ She begins by discussing Adams in the context of a visit to an exhibition of historical sacred texts, and her subsequent analysis stems from her encounter with animals at this exhibition.¹⁰⁷ Her focus is not upon the animals that gave their lives (skins) in the manufacture of some of these texts, but the animals drawn in illuminated manuscripts; animals in marginalia, initial capital letters illuminated by animals, and marginal notes written in micrographia that take the form of real and imaginary creatures.¹⁰⁸ Muers' central thesis is that these 'marginal animals' do not actually contribute to the wider process of aiding the interpretation of the biblical texts that they adorn, but rather that these animals detract from the overall meaning of the text, often making it harder to read.¹⁰⁹ Muers expands upon this, postulating that 'marginal animals' draw attention to the text as a material object, detracting from the text as a body of writing, and that ultimately they 'reinforce a sense of the text's resistance to, and capacity to exceed, any particular use to which it is put by its interpreters'.¹¹⁰

Muers then proceeds to discuss the depiction of animals in the Hebrew Bible.¹¹¹ This analysis culminates in her drawing a comparison between the animals drawn in illuminated manuscripts and the Behemoth of

¹⁰⁶ Rachel Muers, 'The Animals We Write On: Encountering Animals in Texts' in C. Deane-Drummond and D. Clough (eds.), *Creaturely Theology: On Gods, Humans and Other Animals* (London: SCM Press, 2009), pp. 138-150.

¹⁰⁷ Muers, 'The Animals We Write On', pp. 138-139.

¹⁰⁸ Muers, 'The Animals We Write On', pp. 138-139.

¹⁰⁹ Muers, 'The Animals We Write On', p. 139.

¹¹⁰ Muers, 'The Animals We Write On', pp. 139-140.

¹¹¹ Muers, 'The Animals We Write On', pp. 140-145.

2. Literature Review

Job 40:15, arguing that the Behemoth is peripheral to the wider narrative of Job in the same way that 'marginal animals' are peripheral to the wider interpretation of biblical text.¹¹² Muers' analysis is therefore similar to this study in that it draws a connection between the physical world depicted in a biblical narrative and the materiality of the text itself. The crucial difference between our studies is that whilst for Muers this connection is a finding that arises out of the course of her analysis, I acknowledge this connection from the start and develop a methodology to explore it in a sustained and detailed manner using material ecocritical theory.

2.5.3 Anne Elvey, 'A Material Intertextuality'

'A Material Intertextuality' is the second chapter of Elvey's 2011 monograph *The Matter of the Text*. This chapter is devoted to the topic of biblical textual materiality within an ecological context and offers the most sophisticated study on the topic published to date.¹¹³ As discussed above, a version of this chapter that is slightly modified to suit an ecocritical audience appears in the anthology *Ecocritical Theory: New European Approaches*; I shall refer to Elvey's original study here.¹¹⁴

Elvey's study begins by briefly discussing different physical forms of biblical texts, charting the technological progression from papyrus scrolls to papyrus codices to codex manufactured from parchment.¹¹⁵ Elvey identifies the tremendous resources needed to produce a parchment codex, both in

¹¹² Muers, 'The Animals We Write On', p. 145.

¹¹³ Elvey, 'A Material Intertextuality'.

¹¹⁴ Elvey, 'The Matter of Texts'.

¹¹⁵ Elvey, 'A Material Intertextuality', p. 28.

Trees and Text

terms of animal lives (Codex Sinaiticus, for example, would require at least 365 sheep or goat skins to produce its estimated 730 folios) and human labour.¹¹⁶ She proceeds to ask the question:

If we were to read the written text of a Bible in the mode of scholarly criticism or prayer, how would our reading account for, or open itself to, the myriad more-than-human others [animals] whose lives, labours and deaths form an understory for the text?¹¹⁷

Elvey engages with the semiotic theory of Julia Kristeva in her monograph *Revolution in Poetic Language* in order to explore this question.¹¹⁸ Kristeva's theory is highly sophisticated and Elvey first outlines the concepts and terms central to Kristeva's work before applying it in the context of biblical interpretation, looking at the parable of the sower in the Gospel of Luke (Lk. 8:4–15).¹¹⁹ It is not necessary to discuss this analysis here as it is primarily concerned with the relationship between the semiotic and the symbolic. However, the analysis culminates in a discussion about the relationship between biblical textual materiality and interpretation, which is of great relevance to this study and requires further attention.¹²⁰

Elvey begins by acknowledging that biblical scholarship has tended to focus upon the interplay of author, text, and reader, acknowledging the social and cultural contexts of each.¹²¹ Elvey then argues that biblical scholars are more concerned with examining the written text of the Bible in contrast to

¹¹⁶ Elvey, 'A Material Intertextuality', pp. 28-29.

¹¹⁷ Elvey, 'A Material Intertextuality', p. 29.

¹¹⁸ Julia Kristeva, *Revolution in Poetic Language* (New York/Chichester: Columbia University Press, 1984).

¹¹⁹ Elvey, 'A Material Intertextuality', pp. 29-34, 34-39.

¹²⁰ Elvey, 'A Material Intertextuality', pp. 39-43.

¹²¹ Elvey, 'A Material Intertextuality', p. 39.

2. Literature Review

examining the materiality of biblical text.¹²² I agree with Elvey on this point, and the scarcity of studies on biblical textual materiality over against the vast corpus of historical and narrative analyses of biblical text within the field of biblical scholarship is testament to this.

Elvey then proceeds to assert the following hypothesis: that the materiality of a biblical text exerts some degree of influence upon how it is interpreted, connecting biblical textual materiality to wider ecological and cultural contexts.¹²³ She gives three examples:

(1) The interpretation of parchment codices issued at the order of Constantine in the establishment of Christianity as the religion of his empire. These codices could be produced only through the giving of animal life and slave labour; how might this influence the interpretation of animals and slaves in biblical narratives?¹²⁴

(2) The interpretation of Bibles illuminated with plants, animals, and human scribes throughout their pages; how might these inspire differing interpretations of animal and slave characters to those in the first example?¹²⁵

¹²² Elvey, 'A Material Intertextuality', p. 39; Elvey proposes that biblical textual materiality has been effaced in contemporary biblical studies due to the historical transferability of biblical text across a range of material media and reading contexts, though this effacement of the material is not unique to biblical studies and is evident in literary criticism as a whole; I return to this point below.

¹²³ Elvey, 'A Material Intertextuality', p. 39.

¹²⁴ Elvey, 'A Material Intertextuality', p. 39.

¹²⁵ Elvey, 'A Material Intertextuality', p. 39.

Trees and Text

(3) The interpretation of modern mass-produced Bibles with wafer-thin pages; how might this medium, which to the reader may appear detached from the natural world, influence the manner in which the physical environments of biblical narratives are interpreted?¹²⁶

Elvey acknowledges that it is beyond the scope of her study to test this hypothesis and whilst I agree with Elvey's hypothesis wholeheartedly, there are difficulties with demonstrating this relationship empirically.¹²⁷ Whilst we can readily access historical interpretations of biblical texts from a variety of historical, cultural, and theological perspectives, it is less easy to determine the specific physical forms of biblical texts that historical interpreters engaged with in the process of reaching these interpretations. Because there are insufficient data sources, then, (sets of historical biblical texts and corresponding interpretations of these texts) it is difficult to establish that a statistically significant relationship between historical biblical textual materiality and interpretation existed. Nevertheless, Elvey's assertion about the connection between textual materiality and interpretation remains compelling and a small, but increasing, group of scholars also hold this view.¹²⁸

¹²⁶ Elvey, 'A Material Intertextuality', p. 40.

¹²⁷ Elvey, 'A Material Intertextuality', p. 39.

¹²⁸ Most notably in a biblical studies context, Hindy Najman acknowledged this connection in her plenary address at the annual conference of the European Association of Biblical Studies; Hindy Najman, 'The Transformation of the Self and Practices of Reading', paper presented at the annual conference of the European Association of Biblical Studies, Katholieke Universiteit Leuven, 20 July 2016. There is also a small group of scholars in the field of literary criticism who have acknowledged this relationship, see Jonathan Walker, 'Reading Materiality: The Literary Critical Treatment of Physical Texts', *Renaissance Drama*, 41.1 (2013), pp. 199-232 (199-203).

2. Literature Review

Finally, Elvey proposes that a (biblical) text represents a 'complex relationship of dependence on, and embeddedness in, a more-than-human Earth community'; she acknowledges the interconnectedness between a biblical text as a material object and the natural materials used in its construction.¹²⁹ Similarly, on the interpretation of biblical texts, Elvey argues that reading remains an embodied process and bodies, embedded in the wider physical world, are affected by reading. These two observations are therefore consistent with material ecocritical theory and these parallels underscore the potential for this study to explore these ideas through an engagement with material ecocritical theory.¹³⁰

Elvey's study is highly sophisticated from a theoretical perspective and highly innovative, pre-dating material ecocritical theory, but consonant with it. The materiality of biblical text and its influence on the reader and the connection of a biblical text to the natural world and wider cultural systems and processes are both concepts that I shall explore in this study. However, I shall explore these concepts not through an engagement with Kristeva, but with material ecocritical theory and, building upon the work of Elvey, I shall develop a methodology for conducting this analysis.

2.5.4 Summary

Adams, Muers, and Elvey each acknowledge the ecological connection between the materiality of a text and wider physical world, and the

¹²⁹ Elvey, 'A Material Intertextuality', p. 40.

¹³⁰ Elvey, 'A Material Intertextuality', p. 42.

Trees and Text

relationship between textual materiality and textual interpretation. Whilst their observations predate material ecocritical theory they are wholly consistent with it. Building on this work, I shall employ material ecocritical theory and develop material ecocritical methodologies to explore Elvey's theses concerning the materiality of biblical text and its influence on the reader, and the connection of a biblical text to the natural world and wider cultural systems.

2.6 Academic studies and reviews of the *Green Bible*

Finally in this chapter, as this study is concerned with Gen. 2:4b–3:24 in the specific text of the *Green Bible*, it is helpful to outline how this specific volume has been reviewed and studied in an academic context.

2.6.1 Norman Habel, 'When Earth Reads *The Green Bible*'

Habel offered the earliest academic review of the *Green Bible*.¹³¹ His review is written from the perspective of the Earth talking in first person; that is to say the same narrative perspective used in his *Earth Bible* Commentary series.¹³² The primary issue that Habel raises with the *Green Bible* is its use of green text, which he argues does not adequately distinguish between the themes of 'care' and 'cursing'.¹³³ He agrees that some of the green text in

¹³¹ Norman Habel, 'When Earth Reads *The Green Bible*', [review of *The Green Bible*], *Journal for the Study of Religion, Nature, and Culture*, 3.3 (2009), pp. 421-422 (note that Habel's name appears in this publication as 'Norman Habel' cf. 'Norman C. Habel').

¹³² See, for example, Habel, *The Birth, The Curse and the Greening of Earth*.

¹³³ Habel, 'When Earth Reads *The Green Bible*', pp. 421-422.

2. Literature Review

this Bible is indeed consistent with the contemporary notion of environmentalism, but that the green text that highlights the cursing of the natural world in the Eden narrative, the flood narrative, and the Exodus narrative contradicts this message.¹³⁴ Habel's observations are heavily influenced by his work on 'green' and 'grey' texts in the Bible; in this context 'green' texts are those that convey a message that is consistent with contemporary environmentalist thought, whilst 'grey' texts are anthropocentric.¹³⁵ I agree with Habel that the *Green Bible* is inconsistent in its application of green text. However, I shall demonstrate below that this inconsistency extends far beyond a relatively small selection of texts highlighted in green that relate to the cursing of the earth.

2.6.2 David Horrell, '*The Green Bible: A Timely Idea Deeply Flawed*'

Horrell's review of the *Green Bible* also takes issue with the inconsistent use of green text throughout the volume; he gives the examples of Gen. 1:26–28; 2 Pet. 3:7 which depict environmental subjugation and destruction respectively yet are both highlighted in green.¹³⁶ Horrell then proceeds to discuss the notion of green text within the wider enterprise of biblical interpretation. He argues that there is an underlying difficulty with the presentation of the *Green Bible* owing to the overall ambivalence of biblical text as a whole on the subject of the environment. He argues that any

¹³⁴ Habel, 'When Earth Reads *The Green Bible*', p. 421.

¹³⁵ Norman Habel, *An Inconvenient Text* (Adelaide: ATF Press, 2009) (note that Habel's name appears in this publication as 'Norman Habel' cf. 'Norman C. Habel').

¹³⁶ David G. Horrell, '*The Green Bible: A Timely Idea Deeply Flawed*', *The Expository Times*, 121.4 (2010), pp. 180-186 (181-182).

Trees and Text

attempt to reconcile its varied messages about the environment is an act of interpretation rather than an assembly of coherent verses that carry an explicit and uniform message, as is implied by the presentation of the *Green Bible*.¹³⁷ Following on from this point, Horrell adds that the presentation of the bible as a 'green' text is an interpretive act shaped by particular contemporary environmental convictions and priorities, and as such this interpretation should not be accepted without critical analysis.¹³⁸ I agree with these observations and I shall discuss the environmentalist ideology of the *Green Bible* in detail below.

2.6.3 Ruth Rosell, '*The Green Bible: New Revised Standard Version*'

This review devotes more space to discussing the content of the essays included within the *Green Bible*, offering a brief summary of each essay.¹³⁹ In accord with Habel and Horrell, Rosell takes issue with the green text of the Bible arguing that 'many of the passages [printed in green] require significant theological interpretation to elicit their contribution to environmentalism'.¹⁴⁰ She also makes the point that frequent references to the land and to the natural world in the biblical corpus may reflect the agrarian context of the biblical writers.¹⁴¹ This is partially true in that these references may reflect the agrarian *origins* of some of the texts in the Hebrew Bible, but not necessarily

¹³⁷ Horrell, '*The Green Bible: A Timely Idea Deeply Flawed*', pp. 182-184.

¹³⁸ Horrell, '*The Green Bible: A Timely Idea Deeply Flawed*', pp. 184-185.

¹³⁹ Ruth Rosell, '*The Green Bible: New Revised Standard Version*', [review of *The Green Bible*], *Review and Expositor*, 107 (2010), pp. 113-115 (114); note that Rosell must have used the US version of the *Green Bible* for this review as she mentions that the introduction is authored by J. Matthew Sleeth; Dave Bookless authored the introduction for the UK version.

¹⁴⁰ Rosell, '*The Green Bible: New Revised Standard Version*', p. 114.

¹⁴¹ Rosell, '*The Green Bible: New Revised Standard Version*', p. 115.

2. Literature Review

the privileged experience of the literate scribal class responsible for the subsequent redaction of these texts.¹⁴² Finally, she adds that the green text serves to lift verses out of their contexts and to distract readers into considering why they have been highlighted; this is certainly the case with the specific pericopé Gen. 2:4b–3:24 as I shall show below.¹⁴³

2.6.4 Joseph Hong, ‘*The Green Bible: A Model For the Asian Context?*’

This is the first of two articles published in *The Bible Translator* dedicated to the *Green Bible*. Hong begins with a quantitative analysis of green text in the *Green Bible*; he does not state his methodology, but it appears that he has counted the number of verses rendered in both green and black ink throughout the whole of the Bible and he argues that the minor prophets contain the highest percentage of green verses.¹⁴⁴ Given that the number of words in each verse of the Bible varies, this data does not provide an accurate indication of how these percentages relate to actual textual content. Hong then proposes that verses highlighted in green text accord with a number of themes, though he does not state how he identified these themes (presumably some kind of quantitative analysis of textual content) and neither does he acknowledge the criteria for green text that is stated in the

¹⁴² For a brief summary of the concept of the scribal class in Ancient Israel see Jiseong James Kwon, *Scribal Culture and Intertextuality* (Forschungen zum Alten Testament 2, reihe 85; Tübingen: Mohr Siebeck, 2016), pp. 114-123.

¹⁴³ Rosell, ‘*The Green Bible: New Revised Standard Version*’, p. 115.

¹⁴⁴ Joseph Hong, ‘*The Green Bible: A Model For the Asian Context?*’, *The Bible Translator*, 61.4 (2010), pp. 208-216 (210).

Trees and Text

Green Bible or discuss how these criteria relate to the themes that he proposes.¹⁴⁵

Hong questions the relevance of the *Green Bible* to an Asian audience. He argues that the environmentalist thinking evident in the *Green Bible* is primarily relevant to readers in affluent Western contexts and less relevant to the majority of Asian countries where population increase, scarcity of resources, climate change, and natural disaster are the environmental issues of greatest concern.¹⁴⁶ This is an interesting point, though Hong does not state the source of his data relating to the differing priorities of Western and Asian environmental issues. I shall build upon Hong's work below, analysing the use of green text in the *Green Bible* and discussing the environmentalist ideology evident within its pages.

2.6.5 Stephen Pattemore, 'Green Bibles, Justice, and Translation'

Following Hong's study, and in accord with the scholars before him, Pattemore acknowledges an inconsistency in the selection of green text in the *Green Bible*.¹⁴⁷ Distinctively, Pattemore observes that the *Green Bible* fails to define the terms 'nature' and 'creation' and consequently the extent to which humanity should feature in green text is unclear.¹⁴⁸ I agree that the *Green Bible* should do more to define the terms it uses. Indeed, developing

¹⁴⁵ Hong, 'The Green Bible: A Model For the Asian Context?', pp. 211-212.

¹⁴⁶ Hong, 'The Green Bible: A Model For the Asian Context?', pp. 213-214.

¹⁴⁷ Stephen W. Pattemore, 'Green Bibles, Justice, and Translation', *The Bible Translator*, 61.4 (2010), pp. 217-226 (219).

¹⁴⁸ Pattemore, 'Green Bibles, Justice, and Translation', p. 218.

2. Literature Review

this observation, the *Green Bible* also fails to outline the specific principles of its own environmentalist ideology and I shall discuss this further below.

2.6.6 Dennis Frohlich, 'Let There Be Highlights'

Finally, Dennis Frohlich provides the most detailed analysis of the *Green Bible*.¹⁴⁹ Frohlich's study is based upon his observation that the *Green Bible* never outlines the criteria by which its green text was selected.¹⁵⁰ I find this motivation for his study interesting as Frohlich never states which particular version of the *Green Bible* he used for his analysis, and my UK paperback edition clearly states these criteria.¹⁵¹ Frohlich then introduces the concept of framing theory by way of solving this issue; in this context, 'frames' are themes within a text that communicate a consistent message.¹⁵² Frohlich proceeds to argue that for the *Green Bible*, 'the physical book itself, the essays included at the beginning outlining green theology, and miscellaneous resources at the back of the Bible' serve to 'frame' the biblical text within an environmentalist ideology.¹⁵³ His aim is to compare 'frames' (themes), in the supplementary textual material of the *Green Bible* with verses highlighted in green text in order to determine the consistency of the environmentalist ideology presented by the text.¹⁵⁴

¹⁴⁹ Dennis Owen Frohlich, 'Let There Be Highlights: A Framing Analysis of *The Green Bible*', *Journal for the Study of Religion, Nature and Culture*, 7.2 (2013), pp. 208-230.

¹⁵⁰ Frohlich, 'Let There Be Highlights', p. 212.

¹⁵¹ 'Preface', in *The Green Bible* (London: HarperCollins, 2008), pp. I-15-I-16 (I-16).

¹⁵² Frohlich, 'Let There Be Highlights', pp. 212-213.

¹⁵³ Frohlich, 'Let There Be Highlights', p. 214.

¹⁵⁴ Frohlich, 'Let There Be Highlights', p. 214.

Trees and Text

Whilst Frohlich initially states that his analysis is based upon the entirety of supplementary material in the *Green Bible* along with its materiality, in practice his analysis is actually based upon the twelve essays featuring in its introductory section.¹⁵⁵ In other words, then, Frohlich never examines the materiality of the *Green Bible* as a whole, leaving plenty of scope for me to address this in this study. Nevertheless, Frohlich's analysis of the content of the supplementary materials of the *Green Bible* and their relationship to its green text is interesting in the context of this study.

Frohlich identifies six themes common to the twelve essays featuring in the introductory section of the Bible: (1) anti-dominion theology, (2) stewardship, (3) creation care as justice, (4) the importance of the Sabbath, (5) Jesus' redemption of creation, and (6) the Bible's usefulness as a guide to green living.¹⁵⁶ Upon examining his analysis of the anti-dominion theology and stewardship themes, however, it becomes apparent that they are in fact the same thing; they both argue that humans should act as responsible stewards over the non-human world, rather than exercising dominion over it.¹⁵⁷ It should also be noted that whilst the final theme, the Bible as a guide to green living, is undoubtedly prevalent throughout the introductory essays that Frohlich examines, he does not give any examples of this theme occurring in the Bible, but rather he describes this as a 'meta-frame'; a foundational principle of all the other themes he identifies.¹⁵⁸

Overall, Frohlich makes a significant contribution to the study of the *Green Bible* in that he identifies a series of themes prevalent in its

¹⁵⁵ Frohlich, 'Let There Be Highlights', p. 214.

¹⁵⁶ Frohlich, 'Let There Be Highlights', p. 215.

¹⁵⁷ Frohlich, 'Let There Be Highlights', pp. 216-219.

¹⁵⁸ Frohlich, 'Let There Be Highlights', pp. 223-225.

2. Literature Review

introductory essays and argues that there is an inconsistency between these themes and the verses highlighted in green throughout the *Green Bible*.¹⁵⁹

Building upon the work of Frohlich I shall discuss the themes and environmentalist ideology of throughout the *Green Bible* in detail below.

2.6.7 Summary

Having explored academic reviews and studies of the *Green Bible* by Habel, Horrell, Rosell, Hong, Pattermore, and Frohlich I have demonstrated that common to all of these analyses is a dissatisfaction with the Bible's use of green text. However, none of these studies have looked in depth at how the criteria for green text specified in the *Green Bible* correlates with the Bible verses that are actually highlighted in green text within its pages. Furthermore, these studies have said very little about the environmentalist ideology evident within the *Green Bible* and the textual materiality of the volume in respect to its design and the environmental and socio-cultural impacts of its production and interpretation. I shall explore all of these in detail below.

2.7 Literature Review Summary

In this chapter, I have examined a range of studies that contribute to appreciating the gaps in current knowledge that this present analysis addresses. I began by looking at studies of Gen. 2:4b–3:24 within the field of

¹⁵⁹ Frohlich, 'Let There Be Highlights', p. 217.

Trees and Text

ecocriticism. There have been no studies of this text, or indeed any biblical text, that employ material ecocritical theory and methodology. I showed that within the wider field of ecocriticism, Gen. 2:4b–3:24 has tended to be understood in terms of its interpretation in Christian theological tradition and wider Western cultural tradition, rather than through a direct engagement with the text itself or with critical biblical scholarship. This was evinced by the studies of White, Allen, and Garrard that I examined. I argued that Coupe's analysis of Gen. 2:4b–3:24 represents a turning point in the ecocritical study of biblical text; it is informed by biblical scholarship and calls for ecocritics to look beyond traditional interpretations of biblical texts and instead examine the texts themselves. I proposed that this study offers a logical progression from Coupe's invitation, as it offers a material ecocritical analysis of Gen. 2:4b–3:24 that is rooted in biblical scholarship.

I examined ecological readings of Gen. 2:4b–3:24 undertaken in the field of biblical scholarship. I showed that with the exception of my study 'Garden and "Wilderness"', which examines the depiction of the physical world of the text, all other studies were largely concerned with exploring the relationship between humanity and nature depicted in the text. Whilst these studies all offer original and innovative ecological readings of Gen. 2:4b–3:24, none of them devoted significant attention to examining the trees of this passage from an ecological perspective. I therefore demonstrated that there was sufficient latitude for this analysis here.

Within the wider field of biblical scholarship, I examined three narrative-critical studies that discussed the trees of Gen. 2:4b–3:24. I demonstrated that these studies focussed upon the tree of life and the tree of

2. Literature Review

knowledge, devoting no attention to the other trees featuring in the narrative. Stordalen and Mettinger offered explanations for why no restriction is initially placed upon eating from the tree of life. I challenged both of these propositions and I shall offer an alternative in the analysis below. I showed that while Stordalen, Mettinger, and Zevit offered rigorous studies that were centred around of the tree of life and the tree of knowledge, none of these studies discussed the environmental functions of the trees within the physical world depicted in Gen. 2:4b–3:24.

I examined studies by Adams, Muers, and Elvey, which explored biblical textual materiality from an ecological perspective. Collectively, these studies identified connections between the materiality of biblical text and (1) the physical world, (2) wider cultural systems such as politics, economics, and technology, (3) the manner in which the text is interpreted, (4) the physical world depicted within the text itself. However, each of these studies predate material ecocritical theory and each study acknowledged these connections using a different approach, though without a clearly defined methodology. Below I shall draw upon material ecocritical theory to develop a methodology to explore these connections in a sustained and detailed manner in respect to Gen. 2:4b–3:24 in the *Green Bible*.

Finally, I explored a range of academic reviews and studies of the *Green Bible* by Habel, Horrell, Rosell, Hong, Pattemore, and Frohlich. I found that common to all of these analyses is a dissatisfaction with the Bible's use of green text. Below, I shall build upon these studies by exploring the materiality of the *Green Bible* in an unprecedented level of detail, looking at

Trees and Text

its textual materiality and content, and the environmental and socio-cultural impacts of its production and interpretation.

3. Methodology

3.1 Introduction

In this chapter, I develop a material ecocritical methodology to examine (1) the trees depicted within the physical world of Gen. 2:4b–3:24 in the specific text of the *Green Bible* and (2) the textual materiality of Gen. 2:4b–3:24 in the *Green Bible*, and the connection of the *Green Bible* as a whole to the wider material-discursive world. Consistent with material ecocritical theory, this methodology combines the two analytical approaches of material ecocritical discourse proposed by Iovino and Oppermann: (1) ‘matter in text’, the examination of how texts depict the physical world, and (2) ‘matter as text’, the examination of the ‘material-discursive’ world as ‘storied matter’. Through this methodological approach, trees are at the very centre of this study. Trees are the primary focus of my ‘matter in text’ analysis of Gen. 2:4b–3:24. Trees are also the primary natural material from which the text of the *Green Bible* is constructed; trees make up the paper of the *Green Bible* with which readers physically engage, and it is through these same trees that the *Green Bible* is connected to the wider material-discursive world.

To date, material ecocritical scholarship has not yet outlined any specific methodologies for the analysis of these two distinct approaches, and neither in material ecocritical discourse have these two approaches ever been combined together to explore a single object of analysis, as I propose in this study. Similarly, there has been no discussion of how material ecocritical theory might be adapted and employed as a method of analysis

Trees and Text

within the field of biblical scholarship. In this chapter, my methodology offers a solution to these current gaps in material ecocritical and biblical scholarship.

Conscious of these gaps, I have presented the methodologies that I develop below for the analysis of 'matter in text' and 'matter as text' in such a way that they may easily be adapted to analyse other texts, both biblical and non-biblical, from a material ecocritical perspective. These two methodologies therefore serve as methodological templates for the analysis of 'matter in text' and/or 'matter as text'; they may be employed discretely, together, or customised for use in other contexts. This is not to say that I intend these methodologies to be understood as a universal paradigm for material ecocritical analysis; on the contrary, I anticipate that many other methodological approaches could be developed within material ecocritical discourse given its broad theoretical scope. My rationale for presenting my methodology in this adaptable manner is to address the current lack of attention to methodology in material ecocritical discourse and to offer a contribution towards filling this gap in knowledge.

Finally, this chapter makes an additional contribution to material ecocritical theory by devoting space to discussing the concept of non-human agency. This concept is central to material ecocritical theory. However, there has not yet been any investigation within material ecocritical scholarship into which of the many distinct models of non-human agency frequently cited throughout material ecocritical discourse are suitable for application in material ecocritical analysis. Through the examination of a range of these theories, I shall establish the extent to which these models are compatible

3. Methodology

with material ecocritical theory. Ultimately, I demonstrate that Bennett's theory of distributive agency is the most suitable of all these models and distributive agency is therefore the model that I shall use in this analysis.

3.2 'Matter in text': analysing the trees of Gen. 2:4b–3:24

'Matter in text' is the first mode of material ecocritical analysis proposed by Iovino and Oppermann. This analytical approach is concerned with examining the physical world depicted in texts through an engagement with material ecocritical theory. Whilst there is no established methodological process in the corpus of material ecocritical scholarship to outline precisely how a 'matter as text' analysis should be undertaken, Iovino and Oppermann do offer some examples of this kind of analysis in their foundational material ecocritical study 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity'.¹ I shall begin by discussing Iovino and Oppermann's analysis, as, from a theoretical perspective, it offers a foundation upon which I shall construct the methodology that I propose for this study.

When I introduced the concept of 'matter in text' in my introduction, I offered Iovino and Oppermann's reading of Hardy's *Return of the Native* in exemplification. This analysis is one of many brief examples provided by Iovino and Oppermann used to illustrate the depiction of the physical world in a range of different writings. To give an idea of the diversity of texts examined, Iovino and Oppermann also include Henry Roth's *Call It Sleep*,

¹ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', pp. 80-82.

Trees and Text

the Italian writer and engineer Carlo Emilio Gadda's *Acquainted with Grief* (*La cognizione del dolore*), and assorted works from the Turkish author Cevat Şakir Kabaağaçlı. These texts all share vivid descriptions of the agency of the non-human physical world; Roth's words seek to capture the power of electricity, in Gadda's writing, lightning behaves with human consciousness, acting mischievously and meditating, and Kabaağaçlı acknowledges the life-giving capacity of the Mediterranean sea.²

Iovino and Oppermann proceed to explain that they chose this selection of texts for two reasons. Firstly, and perhaps most obviously, each text explicitly depicts the dynamicity and agency of the physical world and therefore exhibits compatibility with material ecocritical theory. That is to say, the texts chosen lend themselves to material ecocritical analysis, which is specifically concerned with materiality and agency.³ Secondly, these texts all depict elements of the non-human world anthropomorphically. Iovino and Oppermann explain, in accordance with Bennett, that whilst the use of anthropomorphisation in a text may initially appear to suggest a hierarchical and anthropocentric worldview, this literary device can actually reveal 'similarities and symmetries [that is to say equivalence in status cf. hierarchy]' between human and non-human.⁴ Hence, Iovino and Oppermann argue that anthropomorphism can facilitate material ecocritical analysis as

² Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', pp. 80-81.

³ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 82.

⁴ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 82; Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke University Press, 2010), pp. 99, 120.

3. Methodology

the humanisation of the non-human contributes to the acknowledgement of the 'agentic power of matter and the horizontality of its elements'.⁵

I agree with Iovino and Oppermann on this point, but I do think that it is important for practitioners of material ecocritical analysis to acknowledge that whilst the figurative literary device of anthropomorphism may facilitate an understanding of the non-human in human terms, this remains fundamentally different to understanding and exploring the non-human from the perspective of new materialist ontology. The parallels between the two only hold true at a relatively basic level of comparison and I shall return to discuss the selection criteria for texts subjected to material ecocritical analysis below.

Crucially, then, whilst Iovino and Oppermann identify a range of texts that are particularly suitable for the exploration of 'matter in text', they do not propose any methodological guidelines to outline *how* such texts should be analysed in accordance with material ecocritical theory. And neither do they explain why they chose not to address the issue of methodology. I think that this is because Iovino and Oppermann recognise that a wide range of theories, thinkers, and disciplines are compatible with material ecocritical theory, and, consequently, the introduction of any methodological guidelines may be restrictive.⁶ Indeed, this is suggested by the conclusion to their discussion of 'matter in text', where they enter into dialogue with both new materialist and biosemiotic theory.⁷ Nevertheless, establishing a methodology by which 'matter in text' may be analysed would be a useful

⁵ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 82.

⁶ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 79.

⁷ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', pp. 82-83.

Trees and Text

contribution to material ecocritical theory, and this need not restrict dialogue with other disciplines or theory.

By way of proposing such a methodology, I shall proceed to outline the analytical method that I shall use in this study. This methodology is presented as a series of sequential steps and written in such a way that it may be adapted to explore other texts, biblical or otherwise. Furthermore, the methodology that follows could be used either alone, or alongside the methodology I propose for the analysis of 'matter as text' below.

3.2.1 (1) Selecting the object of analysis

Iovino and Oppermann do not state this explicitly, but it is important to note that the analysis of 'matter in text' may be concerned with the overall depiction of the physical world in a text, or, alternatively, the depiction of specific entities within a narrated world.⁸ As outlined above, Iovino and Oppermann propose that texts are particularly suitable for 'matter in text' analysis if they explicitly depict the physical world in a dynamic and agentic manner, and if they feature anthropomorphisation.⁹ Whilst these two textual attributes certainly facilitate the analysis of 'matter in text', I do not think that both, or even either, of these textual features *must* to be present in order for the analysis of 'matter in text' to take place. The agency of the non-human world depicted in a text can still be acknowledged even when it is not portrayed in an explicitly dynamic or agentic manner and even when the

⁸ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', pp. 79-83

⁹ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 82.

3. Methodology

literary device of anthropomorphisation is not used. Using a biblical text in exemplification consider Deut. 11:13–15 (NRSV):

¹³ If you will only heed his every commandment that I am commanding you today—loving the Lord your God, and serving him with all your heart and with all your soul— ¹⁴ then he will give the rain for your land in its season, the early rain and the later rain, and you will gather in your grain, your wine, and your oil; ¹⁵ and he will give grass in your fields for your livestock, and you will eat your fill.

In this passage, the natural world is not explicitly depicted as dynamic or agentic, but rather as a passive entity controlled by Yhwh in response to the faithfulness of Israel. Neither is the natural world anthropomorphised. Nevertheless, this passage could be subjected to ‘matter in text’ analysis. Whilst Yhwh controls rainfall, rain still exerts a powerful agency throughout the physical world depicted in this pericopé; without rain, crops will fail and there will be no grain, wine, or oil, there will be no grass to feed livestock, and Israel will ultimately perish; indeed this is depicted in Deut. 11:17. In my opinion, then, selecting a specific text for ‘matter in text’ analysis need not be as prescriptive as Iovino and Oppermann suggest; as long as there is some notion of material-discursive elements in a text, whether explicit or even implicit, it should be possible to subject the text to ‘matter in text’ analysis.

At this initial stage of selecting a text for ‘matter in text’ analysis, it is also helpful to consider whether the analysis will also combine any elements of the ‘matter as text’ analysis that I propose below. If so, the physical format of the text examined will be of relevance and so should be considered here (I provide instructions on selecting a physical text in the ‘matter as text’ methodology that follows).

Trees and Text

In exemplification of this point, I chose to examine trees in this study as I saw a connection between the trees as the centre of the narrative Gen. 2:4b–3:24, and trees as the primary natural material from which the text of the *Green Bible* is constructed. I felt that trees lent a degree of ‘symmetry’ to both the ‘matter in text’ and ‘matter as text’ aspects of this study, helping to illustrate that these two distinct analytical approaches were both related to each other and could be applied together in the same analysis. Whilst it is not essential that there is an explicit connection between the object of study within a text and the physical form of a text, this does contribute some consistency to the analysis as a whole. I discuss further examples of applications of this methodology in the concluding chapter.

It is helpful here to discuss the extent to which Gen. 2:4b–3:24 satisfies the two criteria suggested by Lovino and Oppermann for the analysis of ‘matter in text’. In this pericopé, the physical world is undoubtedly depicted in a dynamic manner; the stream of Gen. 2:6, which erupts from the ground and saturates the surface of the earth, is a particularly vivid example of this. Thinking especially of the trees in the text, Yhwh causes these plants to emerge from the ground and this act dramatically changes the landscape of the primordial earth (Gen. 2:9). With respect to anthropomorphisation, the trees of Gen. 2:4b–3:24 do not explicitly possess any human attributes. However, the tree of knowledge is capable of transferring ‘God-like’ qualities to the humans (Gen. 3:5, 22) and this unusual attribute certainly facilitates the conception of trees functioning with an agency that is compatible with human and divine agencies within the text. In short, then, according to the

3. Methodology

criteria specified by Lovino and Oppermann, it seems that the trees of Gen. 2:4b–3:24 are suitable candidates for the analysis of ‘matter in text’.

3.2.2 (2) Collecting data from the text

In respect to this study, I shall begin by reading Gen. 2:4b–3:24 in the *Green Bible* as a discrete literary unit, examining each word or verse that suggests a depiction of the trees in the text. I shall consider each descriptor by itself, within the context of other descriptors, and within the context of the narrative as a whole in order to construct a coherent picture of the depiction of trees in the text. Included in this approach I shall consider the manner in which trees are depicted as exhibiting agency within the physical world of the text. This stage therefore requires the acknowledgement of non-human agency within the narrated world of Gen. 2:4b–3:24.

I shall expand upon the theory underpinning the concept of non-human agency and how this relates to material ecocritical analysis below. Here it is sufficient to note that at this stage I shall use Bennett’s theory of distributive agency to explore how the trees depicted in Gen. 2:4b–3:24 interact with their environment. This model proposes that agency originates from physical, cultural, and conceptual entities, and that agency is also a product of the interaction between such entities. Furthermore, this model will not only allow me to examine trees as discrete agents, but also to examine agencies across a range of scales. For example, imagining the narrated world of Gen. 2:4b–3:24 on a microscopic scale, I can consider how botanical processes such as electrochemical feedback mechanisms in the

Trees and Text

trees of Eden might cause them to draw water and nutrients from the soil, changing the level of hydration and biological composition of the garden. Alternatively, on a macroscopic scale, in Gen. 2:9 trees emerge from the ground, trees provide food for humans, and possibly animals, and trees are recognised for their beauty. How might these things affect the wider environment of text? This analysis of agency will therefore need to consider how the trees of Gen. 2:4b–3:24 interact with the other physical entities depicted in the text:

Yhwh¹⁰

Soil

Water

Air

Other plants; thorns and thistles, plants of the field

Humans

Animals

The snake

This stage of analysis is therefore easily adapted and applied to examine the depiction of the physical in other texts. For example, one might use this approach to explore the depiction of water in the flood narrative of Gen. 6:1–8:19. Or, using a non-biblical text, the depiction of women as a commodity in Margaret Atwood's *The Handmaid's Tale*; this would be particularly

¹⁰ Whilst Yhwh is depicted as the creator of the physical world (Gen. 2:4b), he takes on a physical form within this domain; as such, it is this physical manifestation of Yhwh that will be assessed alongside the other physical entities within the passage.

3. Methodology

interesting from a material ecocritical perspective as it is set in a world in which pollution, fertility, patriarchy, and misogyny are interconnected.¹¹

With respect to this particular study, four methodological observations arise at this first stage and these may also be relevant to the application of this methodology in other analyses. Firstly, my analysis will feature instances in which my interpretation is based upon textual omission, as distinct from the explicit wording of the text. In order to be clear about this, I will state the instances where I am constructing an interpretation founded upon textual omission.

Secondly, three differing understandings of the physical world are converging at this point of analysis. It is necessary to be aware of these distinct perspectives so that they are not conflated throughout my analysis of 'matter in text'. The three perspectives are as follows:

(1) My own understanding of the physical world as a 21st century Western European, informed by contemporary environmental science.

(2) The physical world depicted by the text of Gen. 2:4b–3:24. This world partially resembles the physical world that I know, comprising elements such as trees, soil, water, thorns, and thistles, alongside what may be described as supernatural elements; the creator God Yhwh, a talking snake, cherubim, the tree of life, and the tree of knowledge.

¹¹ Margaret Atwood, *The Handmaid's Tale* (Toronto: McClelland and Stewart, 1985).

Trees and Text

(3) The ancient Western Asian conception of the physical world belonging to the authors/redactors who composed the text.

In this analysis of 'matter in text', my aim is to examine the second perspective, the physical world depicted in Gen. 2:4b–3:24, specifically its trees. However, it is helpful to acknowledge that this perspective can only be understood through my own understanding of the physical world. That is to say, within Gen. 2:4b–3:24 the physical world is never fully explained; as a reader I am never told what 'soil' is, what 'water' is, what 'trees' are and I can only understand these things in the text because of my own knowledge and experience of them, which is external to the text.

Similarly, whilst the focus of this analysis is primarily narrative-critical rather than historical-critical, it is also necessary to acknowledge that the depiction of the physical world of Gen. 2:4b–3:24 is a product of the worldview of the ancient Western Asian authors/redactors who composed the text. Whilst it is not possible to know the intention of these writers, an engagement with biblical scholarship will elucidate the possible socio-cultural contexts from which the text emerged. This introduces a historical-critical element to my analysis and I shall discuss the implications of this further below.

For now, it will suffice to note that methodologically, I shall attend to the issue of these three perspectives by taking care to distinguish between each of them as I undertake and then present my analysis. My primary focus throughout this analysis will remain upon the trees of the physical world depicted in Gen. 2:4b–3:24, though I shall engage with the other two

3. Methodology

perspectives on the occasions where they facilitate a fuller understanding of the text.

Thirdly, it is important to acknowledge the materiality of the biblical text that I shall engage with at this initial stage. As I discussed above, Elvey proposes that the material form of a (biblical) text holds the potential to influence the manner in which it is interpreted and this recognition of interconnectedness between the literary and the physical is central to material ecocritical theory.¹² However, textual materiality has been overlooked by material ecocritical analyses of 'matter in text' to date. These studies have been chiefly concerned with the literary depiction of the physical, devoting no attention to factors such as the physical form of the text, its connection to the wider physical world, and the relationship between textual materiality and interpretation.¹³ In contrast, I propose here that there is scope for textual materiality to be included in, or alongside, the examination of 'matter in text'.

Methodologically, my engagement with Gen. 2:4b–3:24 in the specific text of the *Green Bible* raises the question of my 'neutrality' as a reader undertaking an analysis of this text. It is important to acknowledge here that when I examine the text of Gen. 2:4b–3:24 I am not reading this text for the first time and nor am I physically interacting with the *Green Bible* as a

¹² Elvey, 'A Material Intertextuality', pp. 39-40; Iovino and Oppermann, 'Introduction: Stories Come to Matter', pp. 9, 11.

¹³ See, for example, Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', pp. 80-82; Dana Phillips, 'Slimy Beastly Life: Thoreau on Food and Farming', *Interdisciplinary Studies in Literature & Environment*, 19.3 (2012), pp. 532-547; Jane Bennett, 'Of Material Sympathies, Paracelsus, and Whitman' in S. Iovino and S. Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014), pp. 239-252; Joni Adamson, 'Source of Life: Avatar, Amazonia and an Ecology of Selves' in S. Iovino and S. Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014), pp. 253-268.

Trees and Text

material artefact for the first time; I am familiar with both this pericopé and the physical format of the *Green Bible*. There is, of course, no way for me to avoid this, since I have encountered the text previously; indeed, throughout the course of my research in this area I have been thinking deeply about this specific text, its materiality, and the manner that its materiality influences both myself as a reader and might influence other readers. It follows, then, that the reading below is not the product of a single encounter with the text, but a synthesis of many encounters with the text in the *Green Bible* and in the other translations consulted (more on the other translations and their materiality below).

Fourthly, and finally, previous ecological reading approaches applied to biblical texts have often attempted to read an environmental ideology into the text. I demonstrated this above, where I observed that the stewardship approach has largely assumed that the Bible is a predominantly environmentally-friendly text and, conversely, the Earth Bible project approached the Bible as a predominantly anthropocentric text. In contrast to situating my approach within this spectrum, I subscribe to neither assumption throughout this study. My aim is to examine *how* trees are presented within the physical world of Gen. 2:4b–3:24, rather than to attempt to demonstrate that the depiction of trees in the text is consistent with any assumption about the environmental ideology of the text.

3. Methodology

3.2.3 (3) Collecting data from alternative versions of the text

This stage is particularly important for the material ecocritical analysis of biblical texts, where there will be a variety of alternative translations of the primary text selected for analysis. The corollary of this observation is that this stage is not applicable in instances where there is only one version of the text being analysed. In this study, I shall read Gen. 2:4b–3:24 as a discrete literary unit in a variety of other English translations and in earlier Hebrew forms. Following the reading strategy that I outlined above, I shall examine each word or verse that suggests a depiction of the trees in the text. I shall consider each descriptor by itself, within the context of other descriptors, and within the context of the narrative as a whole in order to construct a coherent picture of the depiction of trees in the text. I shall also consider the manner in which these texts depict the agency of trees. My aim at this stage is to examine how these alternative versions of the text support or contradict the depiction of trees in Gen. 2:4b–3:24 NRSV. The alternative versions of Gen. 2:4b–3:24 that I consulted at this stage are as follows:

King James Version

New International Version

Jewish Publication Society Translation

The Message

I chose these translations because they represent a range of different translation methods intended for a variety of purposes and audiences. The

Trees and Text

KJV, JPS, and NRSV represent differing degrees of formal equivalence translation, the MSG paraphrases the earlier Hebrew text, and the NIV represents a midway point, incorporating elements of both formal equivalence and dynamic equivalence.

This stage therefore introduces an intertextual element to my analysis, which is significant from a methodological perspective for two reasons. First is the issue of textual materiality. The primary text under examination in this study is Gen. 2:4b–3:24 in the specific physical format of the *Green Bible*. However, this stage of analysis promises to introduce a variety of different translations of Gen. 2:4b–3:24, which will be rendered in physical formats that differ from the *Green Bible*. Considering Elvey's assertion that the material form of a biblical text can influence the manner in which it is interpreted, it is possible that an engagement with Gen. 2:4b–3:24 in such a variety of physical forms could somehow detract from, or interfere with, my aim to focus primarily upon the text of Gen. 2:4b–3:24 in the NRSV *Green Bible*.¹⁴ It is not possible to quantify the effect that differing physical formats of text will exert upon me as an interpreter in the same way as it is not possible to quantify the extent to which variables such as my age, gender, sexual orientation, or political views, influence my interpretation of a text. Nevertheless, from a methodological perspective, it remains prudent to manage the process by which I engage with these alternative versions of Gen. 2:4b–3:24 in order to minimise any influence that their textual materiality may exert on my interpretation of the text. I shall do this by reproducing each alternative version of Gen. 2:4b–3:24 in a uniform manner

¹⁴ Elvey, 'A Material Intertextuality', pp. 39-40.

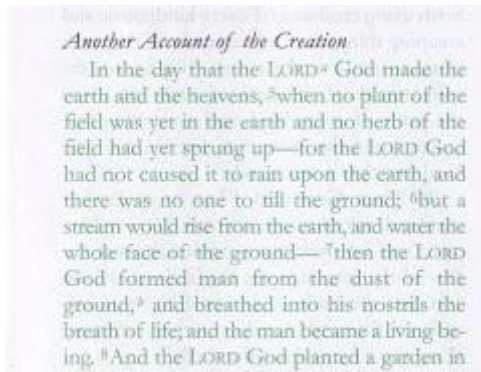
3. Methodology

and in a manner that reduces their material form as much as possible. That is to say that I shall print the alternative versions of Gen. 2:4b–3:24 in the following format:

1. Text printed on plain white A4 paper.
2. Size 12 black Arial font, double-spaced and justified with no text columns.
3. 1 inch margins (this is a standard margin size for A4 format).
4. Text printed on one side only (turning a page and reading the other side draws attention to the materiality of the sheet of paper).
5. Paragraph formatting of the translation to be preserved (whilst the Hebrew text is not rendered in paragraphs, as a native speaker of the English language I am accustomed to reading text in paragraphs so I shall reproduce the paragraph divisions used in each translation).
6. Verse numbers rendered in superscript font (whilst these are later additions to the text and I want to minimise the extent to which they ‘interrupt’ the text, their presence is useful for the purposes of navigation).
7. Chapter headings and any corresponding textual notes preserved (whilst these are later additions to the text they convey something of the underlying (theological) assumptions upon which the translation is based).
8. The word ‘Lord’ rendered in regular font, cf. small capitals (this prevents the word from being emphasised).

Trees and Text

In illustration, Gen. 2:4b–7 is rendered in the following format in the *Green Bible*.¹⁵



Gen. 2:4b–7 in the *Green Bible*. Reprinted by permission of HarperCollins Publishers Ltd © 2008.

In contrast, my formatting style renders the passage as follows:

Another Account of the Creation

In the day that the Lord^a God made the earth and the heavens,⁵when no plant of the field was yet in the earth and no herb of the field had yet sprung up—for the Lord God had not caused it to rain upon the earth, and there was no one to till the ground;⁶but a stream would rise from the earth, and water the whole face of the ground—⁷then the Lord God formed man from the dust of the ground,^b and breathed into his nostrils the breath of life; and the man became a living being.

This formatting style is based upon the assumption that this is the most minimalist material form in which I could encounter these texts, and,

¹⁵ I had initially intended to provide an appendix to this thesis featuring facsimiles of all the reformatted passages that I engaged with throughout this study. However, it occurred to me that the material format of this thesis in itself would detract from the minimised material format of these facsimiles. With this in mind, I offer this illustration of my formatting style.

3. Methodology

consequently, that this format is the least likely to influence me as a reader. It is not possible to prove this assumption empirically, but, at the very least, this approach allows me to engage with the primary text of the study, Gen. 2:4b–3:24 in the *Green Bible*, in its original format, and to engage with the alternative versions of the text in a uniform physical format.

It was an engagement with the wider field of biblical studies that led me to decide that the A4 physical format above would be the most appropriate for this study. In the small body of biblical scholarship that has explored the connection between biblical textual materiality and biblical interpretation, there has not been any discussion of how this connection may be tested or which physical formats might exert the minimal influence upon readers. This is also true within material ecocritical scholarship; whilst the sub-field acknowledges interconnections between reader, physical text, and the wider environment, there has not yet been any discussion about how these relationships may be demonstrated empirically.

In contrast, whilst the field of Contextual Bible Study (CBS) is not primarily concerned with textual materiality, scholars working in this area *do* consider the physical form of the biblical texts that they employ in their research and the extent to which they might influence those who engage with them. CBS originated at The Ujamaa Centre for Community Development and Research (formerly the Institute for the Study of the Bible & Worker Ministry Project), South Africa. The aim of CBS is to facilitate the interpretation of the Bible by groups of people with no formal training in theology or biblical studies and who typically belong to marginalised groups

Trees and Text

in society, with the purpose of using the resulting interpretations to catalyse some kind of positive social transformation.¹⁶

In 'Doing Contextual Bible Study: A Resource Manual', the definitive guide to CBS methodology authored by the Ujamaa Centre, it is surprising to me that there is no mention of the physical format in which biblical texts should be presented to readers especially as it is evident that practitioners of CBS do consider the materiality of the biblical text that they present to their reading groups. In contrast, in his guide to CBS methodology, John Riches recommends printing biblical passages onto a single A4 sheet of paper to avoid readers becoming distracted by other passages.¹⁷ In her study of the interpretation of biblical narratives by children, Melody Briggs read biblical narratives to children from PowerPoint slides so that those unable to read could hear the story.¹⁸ Similarly, Casey Strine, in his work with migrants in the city of Sheffield, and David Ford, who has examined the interpretation of the Bible by non-religious industrial plant workers, both acknowledged the many cultural connotations of the Bible as a material artefact and so presented their readers with biblical texts printed on A4 paper to minimise this effect.¹⁹

In the field of CBS, then, there is an appreciation that the Bible as a material artefact can influence the manner in which its readers interpret it. This is managed by practitioners of CBS by reproducing biblical texts in an

¹⁶ The Ujamaa Centre for Community Development and Research, 'Doing Contextual Bible Study: A Resource Manual', <http://ujamaa.ukzn.ac.za/Libraries/manuals/Ujamaa_CBS_Manual_part_1_3.sflb.ashx> (2014) [accessed 22 July 2017], pp. 9-13.

¹⁷ John Riches, *What is Contextual Bible Study?: A practical guide with group studies for Advent and Lent* (London: Society for Promoting Christian Knowledge, 2010), p. 60.

¹⁸ Melody R. Briggs, *How Children Read Biblical Narrative: An Investigation of Children's Readings of the Gospel of Luke* (Eugene, OR: Pickwick Publications, 2017), pp. 118-119

¹⁹ Casey A. Strine, in personal conversation, 18 April 2016; David G. Ford, in personal conversation, 18 July 2016.

3. Methodology

alternative format that is (1) appropriate for its audience, (2) allows for all biblical texts being examined to be encountered in a uniform physical format, and (3) reduces any connotations that may be associated with encountering the Bible as a material artefact. I therefore decided to reproduce the alternative versions of Gen. 2:4b–3:24 used in this study in the A4 format detailed above as they satisfy these three methodological principles.

The second issue raised by introducing alternative versions of Gen. 2:4b–3:24 at this stage of analysis is the introduction of a historical element to this primarily narrative-critical study. This stage requires reading the text in the ancient language of biblical Hebrew alongside later English translations ranging from the King James Version of 1611 through to the more recent translations of the last century. Again, this raises a question of to what extent this approach detracts from the aim of the study to explore the specific physical text of Gen. 2:4b–3:24 in the NRSV *Green Bible*.

My answer is that this engagement with alternative versions of the text is not intended to detract from my primary focus on Gen. 2:4b–3:24 in the NRSV *Green Bible*, but rather that it contributes to the understanding of this text. Examining the grammatical construction of the text in early Hebrew forms and the etymology of specific Hebrew words in dialogue with contemporary biblical scholarship will give me an insight into how the text may have been understood in its original language and cultural context. This depth of understanding cannot be gained by solely engaging with the NRSV text and will contribute greater rigour to my overall interpretation of the text. Similarly, engaging with alternative English translations will allow me to

Trees and Text

assess the extent to which they compare and contrast to Gen. 2:4b–3:24 NRSV and support my interpretation of the text.

This approach is validated from a methodological perspective by the numerous studies within the wider field of ecocriticism that engage with the historical dimensions of the texts that they examine.²⁰ That is to say that whilst ecocriticism has been classified as a mode of literary criticism it is not, in practice, exclusively concerned with literary analysis, but from its beginnings has engaged with the historical aspects of the texts that it examines.

3.2.4 (4) Collecting data from parallel texts

This stage involves comparing the primary text under examination to texts that are in some way similar. For texts outside the biblical corpus, it may be helpful to examine how the physical is depicted in other works of the same author, or in texts belonging to the same genre of writing. For example, one might explore the depiction of trees in Richard St. Barbe Baker's *My Life, My Trees* and compare this to the manner in which he discusses the depiction of trees in the wider body of his writings.²¹ In respect to this study, I shall compare Gen. 2:4b–3:24 to other texts within the Hebrew Bible that feature trees, particularly those that ascribe agency to trees in some way. This stage shall involve the examination of texts such as Judg. 9:8–15; 1 Chron. 16:33,

²⁰ See, for example, Buell, *The Environmental Imagination*, pp. 31-142; Glotfelty, 'Introduction', pp. xxiii-xxiv; Michael P. Branch, 'Before Nature Writing: Discourses of Colonial American Natural History', in Karla Ambruster and Kathleen R. Wallace (eds.), *Beyond Nature Writing: Expanding the Boundaries of Ecocriticism* (London/Charlottesville: University Press of Virginia, 2001), pp. 91-110 (102-103).

²¹ Richard St. Barbe Baker, *My Life, My Trees* (Cambridge: Lutterworth Press, 1970).

3. Methodology

which feature anthropomorphic trees, and Deut. 24:20; Josh. 19:33, where trees serve specific purposes. Again, I shall reproduce these texts in the same A4 format used above and examine a range of Hebrew versions and alternative translations. My aim here is not to detract from the primary focus of the study on Gen. 2:4b–3:24 in the *Green Bible*, but to examine the extent to which these parallel texts offer comparative or contrasting depictions of trees within the physical environments that they portray.

3.2.5 (5) Consolidating and presenting data

In this stage, the findings from the previous stages are brought together and combined into a coherent analysis. Findings may be presented in a sequential manner that corresponds with each distinct stage of analysis undertaken, presented in an order that follows the events depicted in the narrative, or presented according to specific textual data.

In the case of this study, I shall present my ‘matter in text’ analysis according to specific textual data relating to the trees of Gen. 2:4b–3:24. I shall present this in two chapters. In the first chapter, I shall discuss the material attributes of the trees in Gen. 2:4b–3:24, considering their age, dimensions, appearance and produce, and the three specific trees identified in the text: the tree of life, the tree of knowledge, and the fig tree. In the second chapter, I shall proceed to discuss the depiction of the agency attributed to trees in the Gen. 2:4b–3:24.

Primarily, my analysis is based upon the text as it appears in the *Green Bible*. However, I shall supplement my analysis with an engagement

Trees and Text

with alternative versions of the text and other relevant passages within the Hebrew Bible. In addition, I shall comment upon how contemporary knowledge of our environment might be used to explain ambiguities and omissions in the narrative. I shall take care throughout my analysis to identify what conclusions can be deduced from the text and what conclusions are based on interpretive possibilities.

Finally, I shall situate my analysis amongst contemporary biblical scholarship and scholarship beyond this field, discussing how the work of other scholars support or dispute my findings. Whilst this study is primarily narrative-critical in focus, I engage with a variety of different approaches to Gen. 2:4b–3:24, including historical-critical, socio-historical, theological, and ecotheological studies.

3.3 Applying non-human agency to material ecocritical methodology

Following on from the methodology that I proposed above, it is necessary to outline the theory of non-human agency that I shall apply to the text of Gen. 2:4b–3:24 in this study. This is particularly important as whilst non-human agency is a central premise of material ecocritical theory and material ecocritical theory engages with a variety of theoretical models of non-human agency, there has been no discussion in material ecocritical scholarship concerning the differences between these models and the extent to which these models actually are compatible with material ecocritical theory.

This discussion is also relevant to the field of biblical scholarship; it is my hope that other biblical scholars will adopt material ecocritical theory as a

3. Methodology

method of analysing biblical texts from an ecological perspective and this will only be possible if this issue of non-human agency is resolved. I shall proceed to analyse a range of theories of non-human agency acknowledged in material ecocritical discourse by Lovino and Oppermann. Ultimately, I shall demonstrate that out of all these theories only Bennett's model of distributive agency is fully compatible with the conception of non-human agency proposed by material ecocritical theory. Distributive agency is therefore the model that I shall apply in this study as I explore the agency of the trees depicted in Gen. 2:4b–3:24.

As I outlined above, in the Western tradition, the concept of agency has typically been understood in anthropocentric terms, where agency has been defined as the presence of both consciousness and intentionality, and it has been generally accepted that only humans exhibit these properties. Since the 1980s, however, the notion of non-human agency has been gaining momentum in the academy as scholars have begun to dispute anthropocentric conceptions of agency in favour of models that redefine agency and acknowledge the agentic capacity of both the human and non-human. I introduced non-human agency above as a central concept of new materialist theory, and this remains true.

However, it is crucial here to acknowledge that the notion of non-human agency is not unique to new materialist theory and has been examined across a wide range of disciplines and from a variety of theoretical perspectives; this is illustrated by Carl Knappett and Lambros Malafouris'

Trees and Text

foundational edited volume on the topic, *Material Agency*.²² This range of theoretical perspectives on non-human agency is reflected throughout the corpus of material ecocritical scholarship where Iovino and Oppermann, along with other contributors to the sub-field, engage with the work of scholars including Karen Barad, Andrew Pickering, Bruno Latour, Gilles Deleuze, Félix Guattari, and Jane Bennett.²³ Indeed, in their own words, Iovino and Oppermann declare that:

Basically, material ecocriticism interweaves postmodern and ecological voices in a shared project of constructing a new ecocritical discourse which attempts to theorize a dynamic world of becoming comprised of nontotalizable multiplicities, assemblages, networks, and mangles of material and discursive practices always engaged in vital intra-actions.²⁴

In this statement, Iovino and Oppermann borrow terms from a range of scholars who are each associated with a particular theory of non-human agency; 'assemblage' (Deleuze, Guattari, and Bennett), 'network' (Latour), 'mangle' (Pickering), and 'material-discursive practice' and 'intra-action' (Barad). Crucially for the methodology of this study, I find Iovino and Oppermann's pluralistic approach to exploring non-human agency within a material ecocritical context problematic because it does not seem to demonstrate an appreciation that differing theories of non-human agency conceive non-human agency in fundamentally different, and sometimes

²² Carl Knappett and Lambros Malafouris (eds.), *Material Agency: Towards a Non-Anthropocentric Approach* (New York: Springer, 2008).

²³ Iovino and Oppermann, 'Theorizing Material Ecocriticism', p. 466; Iovino and Oppermann, 'Introduction: Stories Come to Matter', p. 10; Heather I. Sullivan, 'The Ecology of Colors: Goethe's Materialist Optics and Ecological Posthumanism', in S. Iovino and S. Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014), pp. 80-96 (91); Lowell Duckert, 'When It Rains', in S. Iovino and S. Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014), pp. 114-129 (115).

²⁴ Iovino and Oppermann, 'Theorizing Material Ecocriticism', p. 468.

3. Methodology

contradicting, ways. That is to say that Iovino and Oppermann engage with different theories of non-human agency as if they are wholly compatible with each other.²⁵

As I shall illustrate below, differing theories of non-human agency harbour different views about the origin of agency, the definition of an agent, and how different agents and entities are connected to each other. Hence, if one were to employ a range of theories of non-human agency to investigate the same object of material ecocritical analysis, each theory used would produce different results owing to the unique way in which it conceptualises non-human agency. It is for this reason that differing theories of non-human agency cannot necessarily be used alongside each other in material ecocritical analysis as Iovino and Oppermann seemingly suggest.

It is therefore essential to determine which particular theory of non-human agency I shall employ for the analysis of 'matter in text' in this study. I shall do this by examining the range of theories of non-human agency associated with the scholars above and considering their compatibility with both the analysis that I shall undertake in this study and wider material ecocritical theory. This range of theories of non-human agency is by no means exhaustive.²⁶ I have chosen to examine these theories as Iovino and Oppermann consider them to be consistent with material ecocritical theory; as I shall demonstrate below, however, this is only true for Bennett's model.

²⁵ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 83; Iovino and Oppermann, 'Theorizing Material Ecocriticism', p. 466; Oppermann, 'From Ecological Postmodernism to Material Ecocriticism', p. 26.

²⁶ Cf. Tim Ingold's model 'SPIDER', which restricts agency to 'living organisms' or Kate Forbes-Pitt's model 'the assumption of agency theory', that relates to artificial intelligence; Tim Ingold, 'When ANT meets SPIDER: Social theory for Arthropods', in C. Knappett and L. Malafouris (eds.), *Material Agency: Towards a Non-Anthropocentric Approach* (New York: Springer, 2010), pp. 209-215; Kate Forbes-Pitt, *The Assumption of Agency Theory: A realist theory of the production of agency* (Abingdon/New York: Routledge, 2011).

Trees and Text

Finally, as I highlighted above, it is important to recognise that there has not yet been any discussion of the compatibility of these theories with material ecocritical theory and/or methodology. This analysis therefore contributes new knowledge to the sub-field and helps to clarify how the concept of non-human agency might be applied in material ecocritical analysis.

3.3.1 The mangle

To begin, Pickering's model of the mangle can be eliminated as a theory of non-human agency that could be used in this study. Pickering introduces this model in his monograph *The Mangle of Practice*, a foundational examination of scientific, mathematical, and engineering practice. His model is based upon the imagery of a laundry mangle, in particular the process of human and (non-human) machine together producing unpredictable transformations as laundry is fed in and emerges in a changed state.²⁷ However, Pickering's model primarily relates to researchers in the sciences, mathematics and engineering, and the technology that they use in experimentation; it is not designed to be adapted to use in contexts such as this study, which seeks to examine the agency of natural (cf. technological) entities in a narrated world.²⁸ With more readily adaptable models of non-human agency available, it is not necessary to devote any further space to the mangle here.

²⁷ Andrew Pickering, *The Mangle of Practice: Time Agency and Science* (London/Chicago, IL: The University of Chicago Press, 1995), p. 23.

²⁸ Andrew Pickering, *The Mangle of Practice*, p. 21.

3. Methodology

3.3.2 Intra-action

Barad's model of intra-action can also be eliminated as theory of non-human agency in this study. This model is developed in her landmark new materialist monograph *Meeting the Universe Halfway* and it is central to her ambitious and far-reaching theory of agential realism.

The clearest way to explain intra-action is through comparison with the more familiar term 'interaction'. Interaction supposes the coming together of discrete agencies. For example, people in conversation interact with each other as the speech, thought, body language, and physical presence of each individual communicates to the others present, or plants interact with their environment as they respond physiologically to stimuli such as heat, light, humidity.

Conversely, *intra-action* proposes that agency does not belong to specific entities, but that agency is the product of encounter *between* things; people, matter, materials, nature, and, distinctively, even discourse.²⁹ In other words, Barad proposes that agency is an 'enactment'; not a property that someone or something possesses, but a process that arises out of intra-action.³⁰ Barad extrapolates this concept into her wider theory of agential realism that she describes not as an ontological theory but as an 'ethico-onto-epistemology'; a model that perceives connections between valuing, being, and knowing.³¹

²⁹ Barad, *Meeting the Universe Halfway*, p. 33.

³⁰ Barad, *Meeting the Universe Halfway*, pp. 141, 178.

³¹ Barad, *Meeting the Universe Halfway*, p. 409.

Trees and Text

Owing to its recognition of non-human agency and the connections between 'human *and* non-human, material *and* discursive, and natural *and* cultural', Barad's work has exerted a profound influence upon the development of material ecocritical theory.³² However, contrary to the suggestion of Iovino and Oppermann in their article 'Theorizing Material Ecocriticism', I do not think that Barad's model of intra-action is fully compatible with the notion of non-human agency proposed within the corpus of material ecocritical theory.³³

Intra-action proposes that agencies do not exist as individual elements; that is to say that humans and non-humans are not in themselves agents, but rather agency arises from the intra-action of human and non-human things.³⁴ In contrast, in their introduction to their edited volume *Material Ecocriticism*, Iovino and Oppermann propose that '[a]gency, therefore, is not to be necessarily and exclusively associated with human beings and with human intentionality, but is a pervasive and *inbuilt property* of matter' (emphasis mine).³⁵ So whilst Barad, Iovino and Oppermann are all advocating the need for a non-anthropocentric understanding of agency, Barad's model of intra-action conceives agency in a fundamentally different way to the material ecocritical theory proposed by Iovino and Oppermann. For this reason, I shall not employ Barad's model in this study.

³² Barad, *Meeting the Universe Halfway*, p. 26; Iovino and Oppermann, 'Theorizing Material Ecocriticism', p. 466; Iovino and Oppermann, 'Introduction: Stories Come to Matter', p. 4.

³³ Iovino and Oppermann, 'Theorizing Material Ecocriticism', pp. 466-467.

³⁴ Barad, *Meeting the Universe Halfway*, p. 33.

³⁵ Iovino and Oppermann, 'Introduction: Stories Come to Matter', p. 3.

3. Methodology

3.3.3 Actor-Network Theory

Actor-Network Theory (ANT) is a groundbreaking material-semiotic theory developed through the collaboration of Bruno Latour with Michel Callon, John Law, and visitors at the École Nationale Supérieure des Mines de Paris in the early 1980s. ANT is the earliest theory of non-human agency discussed in material ecocritical discourse and the theory that has provoked the greatest debate in the academy. A brief explanation of ANT illustrates why this model is not suitable for use in this study.

ANT is founded upon social scientific theory and proposes an understanding of the world that extends beyond the traditional anthropocentric application of the concept of the 'social'; ANT considers not just the role of humans, but also non-humans and the interactions between humans and non-humans.³⁶ To do this, ANT employs semiotic theory to describe the physical world in terms of 'networks'; systems comprising interdependent human and non-human elements.³⁷ All elements, both human and non-human, are labelled 'actors' or 'actants' (though note that Latour sometimes uses the term 'agent'), and ANT proposes that agency arises as a result of the *interaction* of actors across 'networks'.³⁸ As such,

³⁶ Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005), p. 6; Glenda Shaw-Garlock, 'Loving Machines: Theorizing Human and Sociable-Technology Interaction', in M. H. Lamers and F. J. Verbeek (eds.), *Human-Robot Personal Relationships* (London/Dordrecht/Heidelberg/New York: Springer, 2011), pp. 1-10 (7).

³⁷ John Law, 'After ANT: Complexity, Naming and Topology', in J. Law and J. Hassard (eds.), *Actor Network Theory and After* (Oxford/Malden, MA: Blackwell, 1999), pp. 1-14 (4).

³⁸ Latour, *Reassembling the Social*, p. 71; Christopher M. Watts, 'On Mediation and Material Agency in the Peircean Semeiotic', in C. Knappett and L. Malafouris (eds.), *Material Agency: Towards a Non-Anthropocentric Approach* (New York: Springer, 2010), pp. 187-207 (188). Note that Latour predominantly uses examples of non-human agents that are technological rather than organic; kettles, knives and locks; Latour, *Reassembling the Social*, p. 71.

Trees and Text

ANT is incompatible with material ecocritical theory, which, as discussed above, proposes that agency is *intrinsic* to *all* matter. Consequently, ANT is unsuitable for use as a model of non-human agency in this study.

3.3.4 Distributive agency

The final model of non-human agency I shall discuss here is the model that I shall use in this study; distributive agency. This model was proposed by the political theorist Jane Bennett in her article 'The Agency of Assemblages and the North American Blackout', and developed in her monograph *Vibrant Matter*.³⁹ The model is founded upon the assemblage theory of Deleuze and Guattari introduced in their landmark work *A Thousand Plateaus*, and refined through a dialogue with scholars specialising in new materialism and political sciences.⁴⁰

According to this model, an assemblage is a 'web' comprising interconnected elements of human and non-human actants, where actants can include physical things across all levels of scale such as people, animals, plants, carbon dioxide, household waste, but also less tangible entities such as economic or political systems.⁴¹ Distinctively, Bennett's model acknowledges both the agentic capacity of individual actants

However, it is clear from his criteria for identifying agents that his understanding of non-human agency extends to natural entities and this is confirmed by Callon in his influential study of scallop fishing; Michel Callon, 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Briec Bay', in Mario Biagioli (ed.), *The Science Studies Reader* (London/New York: Routledge, 1999), pp. 67-83 (69).

³⁹ Bennett, 'The Agency of Assemblages'; Bennett, *Vibrant Matter*, pp. 20-38.

⁴⁰ Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis, MN: The University of Minnesota Press, 1986); Bennett, 'The Agency of Assemblages', p. 445.

⁴¹ Bennett, 'The Agency of Assemblages', pp. 445-446.

3. Methodology

themselves, but also the agency that arises from the product of human and non-human elements interacting within an assemblage.⁴² So, for example, distributive agency would recognise both the agentic capacity of a single human, but also the agency resulting from multiple actants and agencies collaborating within the assemblage of a human body; oxygen, blood cells, nutrients, hormones, caffeine, electrical impulses.⁴³

Bennett is clear that this view of agency is not restricted to humans either. Indeed, she describes the entirety of the North American electrical grid as an assemblage comprising a volatile mix of actants including 'coal, sweat, electromagnetic fields, computer programs, electron streams, profit motives, heat, lifestyles, nuclear fuel, plastic, fantasies of master, static, legislation, water, economic theory, wire, and wood'.⁴⁴ Bennett's model of distributive agency is therefore fully compatible with the material ecocritical theory of Iovino and Oppermann, which proposes that agency is intrinsic to all matter and that agency arises from the interconnectedness of all physical things, organic and inorganic, but also the interconnectedness between physical things and wider cultural systems such as politics, economics, technology, and industrialisation.⁴⁵

But is this primarily ontological model actually capable of being adapted to examine the agency depicted within a narrative world such as the one depicted in Gen. 2:4b–3:24? I believe that it is. Bennett does not state this explicitly, but she presents her example of the North American blackout

⁴² Bennett, 'The Agency of Assemblages', p. 447.

⁴³ Bennett, 'The Agency of Assemblages', p. 456.

⁴⁴ Bennett, 'The Agency of Assemblages', p. 448.

⁴⁵ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 84; Iovino and Oppermann, 'Theorizing Material Ecocriticism', pp. 451, 456; Iovino and Oppermann, 'Introduction: Stories Come to Matter', p. 3.

Trees and Text

of 2003, an actual historical event, as a narrative that she analyses in light of her model of distributive agency.⁴⁶ Whilst there is of course no equivalent historical evidence to support the events depicted in Gen. 2:4b–3:24, it is still possible to analyse the physical world of this narrative using Bennett's model of distributive agency.

3.3.5 Summary

To date, material ecocritical theory has engaged with a range of theories of non-human agency: Pickering's mangle, Barad's agential realism, the Actor-Network Theory of Latour, Callon, and Law, and Bennett's distributive agency. Crucially, however, Iovino and Oppermann have taken concepts from these theories and the scholars associated with them and used them as if they are wholly compatible both with each other and with material ecocritical theory. Examining the models of non-human agency offered by these theories, I demonstrated that each model offers a different conceptualisation of what constitutes an 'agent', what 'agency' is, and the mechanism through which things are connected to each other. Bennett's model of distributive agency stands in distinction to the other models of non-human agency featuring in material ecocritical discourse that I have examined here. It is the only model of non-human agency that fully accords with material ecocritical theory, acknowledging the agency of all matter and agential interrelations between the physical world and cultural systems. It is obvious, then, that distributive agency should be the model of non-human

⁴⁶ Bennett, 'The Agency of Assemblages', pp. 448-452.

3. Methodology

agency that I use in this analysis, which seeks to analyse Gen. 2:4b–3:24 in the *Green Bible* in accordance with material ecocritical theory.

3.4 'Matter as text': analysing the *Green Bible* as a material-discursive object

'Matter as text' is the second mode of material ecocritical analysis proposed by Iovino and Oppermann. Whilst the first mode, 'matter in text', is concerned with the depiction of the material world in text, 'matter as text' employs the notion of the agentic nature of matter as a means of interpreting the world around us. 'Matter as text' proposes that, firstly, configurations of meanings and discourses are produced through the interaction of the things around us, and, secondly, that these interactions can be interpreted as stories.⁴⁷

In the introduction to their edited volume *Material Ecocriticism*, Iovino and Oppermann explain the concept of 'matter as text' using Barad's work on diffraction in quantum mechanics.⁴⁸ Diffraction is the process by which light waves behave as a result of passing through apertures. Barad challenges the notion of diffraction as an exclusively physical phenomenon and argues that it is in fact a material-discursive process that undermines the presumed dualism of categories such as subject/object, nature/culture, fact/value, human/non-human, organic/inorganic, epistemology/ontology and materiality/discursivity.⁴⁹ Barad proposes that, at a quantum mechanical level, the process of diffraction demonstrates that these apparently

⁴⁷ Oppermann, 'From Ecological Postmodernism to Material Ecocriticism', p. 29.

⁴⁸ Iovino and Oppermann, 'Introduction: Stories Come to Matter', p. 9.

⁴⁹ Barad, *Meeting the Universe Halfway*, p. 381.

Trees and Text

contrasting categories are in fact interconnected and related, rather than discrete.⁵⁰ Barad's understanding of diffraction therefore accords with her wider concept of ethico-onto-epistemology where value, being, and knowledge are interconnected.⁵¹

Iovino and Oppermann's notion of 'Matter as text' applies Barad's notion of diffraction to its analysis of the 'material-discursive' world in which we live, redefining 'text' so that it encompasses the physical, both human and non-human, but also the cultural; literature, linguistics, politics, economics, for example.⁵² So how might 'matter as text' be explored in practice? What methodology has been established in material ecocritical discourse for the analysis of 'matter as text'? Iovino and Oppermann claim that:

[o]ne of the basic insights of material ecocriticism consists in turning this "diffractive" reading into an interpretive methodology to be applied in the fields of literary and cultural studies and to conceive textual interpretation as a "practice of entanglement."⁵³

Consistent with their approach to establishing the theory behind the concept of 'matter in text', however, Iovino and Oppermann never outline any specific methodology for the analysis of 'matter as text', and neither do they ever explicitly state why they avoid discussing the issue of methodology. As I proposed above, the reason for this seems to be that Iovino and Oppermann have founded material ecocriticism with an intentionally broad 'intellectual

⁵⁰ Barad, *Meeting the Universe Halfway*, p. 381.

⁵¹ Barad, *Meeting the Universe Halfway*, p. 409.

⁵² Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', pp. 83-84.

⁵³ Iovino and Oppermann, 'Introduction: Stories Come to Matter', p. 9.

3. Methodology

horizon' and the introduction of any methodological guidelines might be restrictive to the scope of this emerging sub-field.⁵⁴ Whilst this decision to avoid the issue of methodology is understandable at a theoretical level, it does nothing to address the important methodological question of precisely how 'matter as text' should be analysed.

In order to develop a methodology for examining 'matter as text' in this study I shall begin by commenting upon the methodologies applied in analyses of 'matter as text' in the corpus of material ecocritical scholarship. Whilst Iovino and Oppermann's foundational article 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', devotes some space to offering examples of the analysis of 'matter in text', 'matter as text' is only discussed on a theoretical level with no illustrations of how this kind of analysis may be applied.⁵⁵ Similarly, within the wider body of material ecocritical scholarship, whilst the number of studies identifying with the enterprise of exploring 'matter as text' notably exceeds the number of studies devoted to 'matter in text', the issue of methodology has still not been explicitly addressed within the analysis of 'matter as text'.

By way of qualifying these observations, out of the six articles in the 2012 *ISLE* issue dedicated to material ecocriticism only Dana Phillips' 'Slimy Beastly Life' is exclusively devoted to the examination of 'matter in text' and although the remaining studies explore 'matter as text' from a variety of perspectives there is no explicit discussion of methodology in these

⁵⁴ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p. 79.

⁵⁵ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', pp. 79-83 cf. pp. 83-85.

Trees and Text

analyses.⁵⁶ This trend continues in Iovino and Oppermann's edited volume *Material Ecocriticism*, where Bennett's 'Of Material Sympathies, Paracelsus, and Whitman' and Adamson's, 'Source of Life' are exclusively devoted to 'matter in text', whilst the remaining 17 studies are more closely allied with the exploration of 'matter as text', but again do not explicitly discuss methodology.⁵⁷

Iovino and Oppermann's edited volume *Material Ecocriticism* illustrates the wide scope of 'matter as text' analysis, featuring studies that enter into dialogue with biosemiotics, optics, and global sanitation.⁵⁸ It therefore follows that a range of methodological processes from a variety of disciplines could be employed in the analysis of 'matter as text'. Crucially, however, thus far there have been no analyses aligned with the concept of 'matter as text' that are concerned with textual materiality. In this study, my application of 'matter as text' analysis is founded upon a physical text, the *Green Bible*, for two reasons.

Firstly, because I anticipate that a fruitful starting point for the exploration of 'matter as text' in the context of biblical studies is through the examination of biblical texts as material artefacts. As a material artefact, a

⁵⁶ Iovino and Oppermann, 'Theorizing Material Ecocriticism'; Stacy Alaimo, 'States of Suspension: Trans-corporeality At Sea', *Interdisciplinary Studies in Literature and Environment*, 19.3 (2012), pp. 476-493; Greg Garrard, 'Nature Cures? or How to Police Analogies of Personal and Ecological Health', *Interdisciplinary Studies in Literature and Environment*, 19.3 (2012), pp. 494-514; Heather I. Sullivan, 'Dirt Theory and Material Ecocriticism', *Interdisciplinary Studies in Literature and Environment*, 19.3 (2012), pp. 515-531; Andrew McMurry, 'Framing Emerson's "Farming": Climate Change, Peak Oil, and the Rhetoric of Food Security in the Twenty-First Century', pp. 548-566.

⁵⁷ See Iovino and Oppermann, 'Introduction: Stories Come to Matter', pp. 12-16; it is not necessary to cite all 17 studies within this volume here.

⁵⁸ See, for example, Wendy Wheeler, 'Natural Play, Natural Metaphor, and Natural Stories: Biosemiotic Realism', in S. Iovino and S. Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014), pp. 67-79; Sullivan, 'The Ecology of Colors'; Dana Phillips, 'Excremental Ecocriticism and the Global Sanitation Crisis', in S. Iovino and S. Oppermann (eds.), *Material Ecocriticism* (Bloomington, IN: Indiana University Press, 2014), pp. 172-185.

3. Methodology

biblical text represents 'storied matter'; that is to say a point of convergence and entanglement between elements such as the human, non-human, nature, culture, spirituality, religion, commerce, manufacture, capitalism, marketing, the material, and the discursive, which may be understood as a 'narrative'. 'Narrative' in the sense that as a material object its production, use, and potentially its disposal can be understood as a series of stories of interactions between various elements.⁵⁹ A Bible is therefore a material object that carries meaning through both its materiality and its text. Furthermore, a Bible is connected to the physical world in myriad ways; its production and subsequent interpretation both carry consequences for the wider physical world. This theoretical approach is therefore consonant with both Elvey's work on the materiality of biblical text, and the new materialist thinking of Barad and Bennett, specifically Barad's work on diffraction and Bennett's theory of distributive agency that each acknowledge the interconnection of the physical and the cultural.⁶⁰

Secondly, developing the idea that a Bible can be analysed from both material and textual perspectives, employing a 'matter as text' analysis that is based upon a specific physical text allows the possibility for 'matter in text' and 'matter as text' analyses to be incorporated in the same study. This is particularly important given that this has not been attempted before in material ecocritical discourse. As I have highlighted above, the combination of 'matter in text' and 'matter as text' analysis in this study is particularly well suited to the text of Gen. 2:4b–3:24 in the *Green Bible*. Trees are a central

⁵⁹ Oppermann, 'Ecological Postmodernism to Material Ecocriticism', pp. 30-31.

⁶⁰ Elvey, 'A Material Intertextuality', pp. 28-31, 39-40; Barad, *Meeting The Universe Halfway*, p. 381; Bennett, 'The Agency of Assemblages', p. 446.

Trees and Text

narrative component of this pericopé and the principle material from which the text itself is made.

Practically, then, I need a methodology that is capable of measuring and/or describing the materiality of a text as a physical object and exploring the connection of the text to the wider material-discursive world. Given that there are no existing methodological templates for the analysis of 'matter as text', I have devised this method through my engagement with Adams, Muers, and Elvey, and with material ecocritical theory as a whole. Beyond this scholarship, I also engage with studies across the wider field of the humanities that have discussed textual materiality in the context of textual interpretation and/or literary criticism. This is a small body of scholarship and a summary of the main contributions to this work may be found in Jonathan Walker's 'Reading Materiality'; as such there is no need to repeat this here.⁶¹ There is no established methodology within this body of scholarship; this study therefore contributes to this gap in knowledge by applying material ecocritical theory to facilitate the analysis of textual materiality and providing a methodological template to do so. I have presented the methodology that follows in a series of stages so that each stage might easily be adapted for use in other material ecocritical analyses. This methodology may be applied to a text in a stand-alone 'matter as text' analysis or it may be used alongside the methodology that I proposed above for the analysis of 'matter in text'.

⁶¹ Walker, 'Reading Materiality', pp. 199-203.

3. Methodology

3.4.1 (1) Selecting the object of analysis

The specific kind of ‘matter as text’ analysis that I propose in this study is based upon on exploring the materiality of a text in a printed paperback format. However, the methodology that follows is not restricted to this specific medium and may be applied to texts of any length or rendered in any format. For example, one might explore the materiality of a leather-bound Bible, a fragment of text written on an animal skin parchment, a Bible verse appearing in a music video, or a novel in an e-book format.⁶² For the kind of ‘matter as text’ analysis that I suggest below, I propose that the physical text under examination should fulfil two criteria; it should be both accessible and sufficiently durable to withstand physical examination. That is to say that it should be physically possible to access the text and to examine it without causing it any damage. For example, if the text is displayed in a museum, it would be helpful to be able to read it clearly and encounter it in its actual physical form rather than through a glass case. If the text in question is so fragile that the process of examining it may cause it damage, then it should not be subjected to this kind of analysis, unless the methodology below can be adapted in a manner that ensures the preservation of the text.⁶³ My choice of examining Gen. 2:4b–3:24 in the UK paperback version of the *Green Bible* therefore satisfies both of these criteria.

⁶² For an example of a Bible verse appearing in a music video, see T.I. featuring Justin Timberlake, ‘Dead and Gone’, (Grand Hustle Records/Atlantic Records, 2009), which opens by quoting the text of 1 Cor. 13:11.

⁶³ Indeed, the fragility of a text itself might make an important contribution to its overall materiality and influence the manner in which the reader perceives and interprets it.

Trees and Text

3.4.2 (2) Examining the materiality of the text and its effect on its reader(s)

As material objects, texts may take a variety of formats with an array of physical attributes; clay tablets, engravings on buildings, contemporary printed books, the screen of an ebook. Furthermore, the manner in which specific textual features might influence a reader, or a specific demographic of readers, will be dependent upon a variety of factors that are unique to each reader including age, gender, level of education, historical context. Despite this range of variables, it is still possible to examine the materiality of a text and to determine something about the manner in which it might affect a specific reader or group of readers. This following stage of my methodology is designed to facilitate this kind of analysis. This is an especially important contribution to material ecocritical theory given that no such methodology currently exists. To do this, I have attempted to identify and categorise the many distinct physical attributes that might contribute towards the physicality of a text as a material object. Examining each of these attributes individually leads to a comprehensive understanding of the material features of the text under examination and it is from this analysis that one can proceed to discuss how these specific material attributes might influence the manner in which a reader, or specific demographic of readers, interpret(s) the text.

I have created the categories of different textual attributes that follows through an engagement with the existing scholarship in this area. My aim in producing these categories was to devise a methodological template that is

3. Methodology

comprehensive enough to capture the myriad material features that might be found across a variety of different textual formats, yet not so extensive as to be impractical in application.

To expand on this point, Gérard Genette has arguably undertaken the most comprehensive work on the taxonomy of text. In *Paratexts: Thresholds of Interpretation* Genette offers a wide-ranging list of categories by which different kinds of 'paratext', that is to say content that supplements the main body of a text, such as prefaces or chapter headings, might be classified.⁶⁴ However, to repeat Genette's monograph-length taxonomy for the purposes of this methodology would be unhelpful; Genette identifies just under 100 distinct categories of paratext and clearly this number of variables would be impractical to use as a methodological template. As an alternative, I have created the categories that follow on the basis that they are numerous enough to offer a comprehensive analysis of a text, yet small enough in number to be applied in the context of a practical analysis.

Given that Elvey's work on the relationship between textual materiality and interpretation is consonant with the concept of 'matter as text', it is important that this stage of 'matter as text' analysis should include a discussion around the relationship between the materiality of the text being examined and its potential effect upon a reader, or group of readers. As I discussed above, there is no satisfactory way to demonstrate empirically the connection between textual materiality and interpretation.⁶⁵ Hence, I propose

⁶⁴ Gérard Genette, *Paratexts: Thresholds of Interpretation* (Cambridge/New York/Melbourne: Cambridge University Press, 1997), p. 1.

⁶⁵ I discussed the problems of conducting a survey of historical interpretations, as proposed by Elvey, above. There would also be issues with testing the connection between textual materiality and interpretation through a live reading experiment using contemporary readers.

Trees and Text

that this analysis should be undertaken in a qualitative manner, in the style of a reader response analysis. To do this, it is necessary to choose a specific community of readers or reader who can be imagined as engaging with the text. Alternatively, this stage could be a personal reflection about how the materiality of the text under examination contributes to ones' personal experience of reading the text. This community or individual should be identified, along with any other assumptions that are relevant to the analysis; who is/are the reader(s)? When in history are they engaging with the text? What is their geographical context? What is their socio-cultural context? How are the readers engaging with the text?⁶⁶ These variables can then be used to frame the discussion about how these readers might then possibly be influenced by the materiality of the text. To examine the materiality of a text and its potential influence on a reader, or group of readers, the following features may be considered:

(1) The medium in which the text is rendered. What materials have been used in its production? For a book, what kind of paper has been used, what

Any connection that could be established experimentally between a material medium and its interpretation would only be true for the specific group of readers that participated in the experiment and could not be extrapolated to draw conclusions about wider historical or contemporary reading communities. There are simply too many other variables (age, ethnicity, gender, religion, cultural context, etc.) that could contribute to influencing the manner in which a text is interpreted. In short, textual materiality is undoubtedly a factor that influences the manner in which a text is interpreted, but at present there is no satisfactory methodology that allows us to quantify how any given material text might be interpreted by any given reader or reading community.

⁶⁶ The extent to which a reader engages with the materiality of a text will also determine the extent to which they are influenced by it. For example, being handed a copy of the *Green Bible* opened on pages 2-3 and reading just Gen. 2:4b-3:24 would be a different experience to first seeing and interpreting the cover design of the Bible, reading its extensive supplementary materials, and then reading Gen. 2:4b-3:24. Both experiences would include an engagement with the materiality of the *Green Bible*, physically holding the book, feeling the texture of its paper, and smelling the scent of its ink. The latter experience includes a greater engagement with the materiality and content of the book as a whole and is therefore more likely to exert a greater influence upon the reader.

3. Methodology

does the paper feel like? How old is the text? What condition is the text in? Are any natural elements visibly present in this medium? For example, books manufactured in the seventeenth century may feature visible hairs, feathers, or vegetable fibres in the fabric of their paper. To what extent might the textual medium and any of its features contribute to the interpretation of the text as a whole?⁶⁷

(2) The dimensions and medium of the text being analysed. Describe the dimensions of the medium quantitatively; size, weight, number of pages. The size and weight of a text contribute to its accessibility and contribute towards the manner in which it might be interpreted. Consider a Bible verse printed in a paperback New Testament and the same Bible verse engraved in stone and displayed in a cathedral; whilst the text remains constant, the dimensions (and medium) of the text in each instance are very different and, as such, are likely to have different effects on their readers, leading to different interpretations.

(3) For a book, cover design: the title (and subtitle), and the font used, the use of images on the cover, the use of specific colours, the format and content of any additional text such as endorsements, excerpts from reviews. What influence might cover design have upon someone encountering the book and then reading its contents?

⁶⁷ This first stage is informed by the work of Elvey, 'A Material Intertextuality', pp. 39-40 and Joshua Calhoun, 'The Word Made Flax: Cheap Bibles, Textual Corruption, and the Poetics of Paper', *PMLA*, 126.2 (2011), pp. 327-344 (331-333).

Trees and Text

(4) The design or layout of the text: font, font size, font colour, the presentation of the text in columns or otherwise. How do these features contribute to the appearance of the text on the page? How might these features influence the interpretation of the text?⁶⁸ For a specific pericopé consider the placement of this text within the wider text to which it belongs; does the pericopé fit on one single page? Is it interrupted by column or page breaks, is it interrupted by any other design features such as illustrations, photographs, diagrams? Older manuscripts may contain illustrations in the margins of the text and micrographia. How do these physical interruptions affect the flow of the narrative?⁶⁹ To what extent do these physical interruptions influence the manner in which the text might be understood?

(5) The textual content, formatting, and placement of headings. These variables can influence the interpretation of any text, but they are particularly important for biblical texts as they are dependent upon the specific translation of the text employed. To what extent does the textual content of headings influence the manner in which a reader might understand the text that follows them? How does the design of the headings used throughout a text contribute to its overall materiality? For a translated biblical text, how do headings compare to other translations? How does the placement of headings divide the text and contribute to the manner in which it is understood?

⁶⁸ Walker draws on the earlier work of D. F. McKenzie, and both assert that typography and page layout contribute to the meaning of the text; Walker, 'Reading Materiality', p. 201.

⁶⁹ Muers argues that marginalia and micrographia interrupt the text and detract from its meaning, though it is unlikely that this is the case for all readers; Muers, 'The Animals We Write On', pp. 139-140.

3. Methodology

(6) Sentence and paragraph divisions. The division of any text into sentences and paragraphs bears an influence upon how it is understood by its reader. For biblical texts, these divisions are often a product of the specific translation employed. How do textual divisions in the text examined compare to other translations? How might these specific divisions contribute to the overall meaning of the text?

(7) Peripheral formatting. How might features such as headers, footers, page numbers, and footnotes contribute anything to the manner in which a reader might interpret a text? Again, for biblical translations footnotes and cross-references with other Bible verses are a product of the specific translation employed, so it is helpful to compare any relevant features with other translations.

(8) Additional written content. How might textual content related to the main body of text such as front matter, prefaces, forewords, contents pages, introductions, etc. affect the manner in which a reader might interpret the text being examined?

(9) Graphical features. The use of photographs, drawings, maps, tables and graphs. These features contribute an additional visual dimension to written text on a page. How do these features, both alone and in combination with

Trees and Text

each other, contribute to the experience of reading the text and potentially influence the manner in which it is interpreted?⁷⁰

(10) Unique features related to the manufacture of the text. Does the text exhibit any unique features as a result of the manufacturing process? Thomas Pattie gives the example of holes in an animal skin parchment created as a result of the manufacturing process; these holes would have to be negotiated by scribes and can cause interruptions to the written text.⁷¹ Similarly, Calhoun observes that in seventeenth century England, due to scarcity of supply, printed Bibles were sometimes bound using different colours and qualities of paper.⁷² A modern printed book might feature a printing or binding fault, or a price label partially obscuring its cover. How might features such as these, which interrupt or obscure text influence the manner in which it is interpreted?

(11) Post-manufacture changes to the text. Textual materiality is not a static property; it changes with time. What condition is the text in? If the text has been damaged, to what extent does this damage change its materiality?⁷³ Have previous readers supplemented the text with handwritten notes, highlighting, or drawing? If so, what effect do these have upon the materiality

⁷⁰ An example of this kind of analysis is offered by Collier, who discusses the interplay of text and drawing in the *Illustrated London News*; Patrick Collier, *Modern Print Artefacts: Textual Materiality and Literary Value in British Print Culture, 1890-1930s* (Edinburgh: Edinburgh University Press, 2016), pp. 59-64.

⁷¹ Thomas Pattie, 'The Creation of the Great Codices', pp. 64-65, cited in Elvey, 'A Material Intertextuality', pp. 28-29.

⁷² Calhoun, 'The Word Made Flax', p. 330.

⁷³ Walker argues that physical damage can affect the manner in which a text is interpreted; Walker, 'Reading Materiality', pp. 201, 207-208.

3. Methodology

of the text? In the context of this study, I am using my personal copy of the *Green Bible*, which happens to be in pristine condition.

(12) Textual content. Having examined the paratext, read through the main body of the text. The aim is to gain an understanding of this textual content so that it may be discussed in relation to the paratextual features listed above. This methodology therefore incorporates textual content with material features and, as such, is consistent with the material ecocritical concept of the material-discursive, where text, meaning, interpretation, and the physical are interconnected.⁷⁴

In the case of this present study, I shall examine the material features of the specific pericopé, Gen. 2:4b–3:24 as it is rendered in the *Green Bible*, before examining the material features of the *Green Bible* as a whole. I shall also discuss the possible ways in which these material features (both the specific material features of Gen. 2:4b–3:24 as it is rendered in the *Green Bible* and the material features of the *Green Bible* as a whole) might influence the manner in which ‘Western readers’ interpret the specific pericopé Gen. 2:4b–3:24. I have decided to model my analysis on this rather general group of readers in a response to Hong’s review of the *Green Bible*. Hong argues that the *Green Bible* is primarily relevant to Western readers.⁷⁵ Whilst there is no such thing as a singular ‘Western reader’, I want to explore how Western readers, most specifically readers who are familiar with the Eden narrative,

⁷⁴ Iovino and Oppermann, ‘Introduction: Stories Come to Matter’, p. 2.

⁷⁵ Hong, ‘*The Green Bible: A Model For the Asian Context?*’, pp. 13-14.

Trees and Text

printed mass-produced Bibles, speciality Bibles, and green design/marketing aesthetic might be influenced by the materiality of the *Green Bible*.

In accordance with the methodological template proposed above, I shall present my analysis in the following order:

(1) I shall explore the formatting, design, and placement of the specific pericopé Gen. 2:4b–3:24 as it appears in the *Green Bible* and comment upon how these features might function in an agential capacity and influence the interpretation of this text.

(2) I shall explore the textual materiality of the *Green Bible* as a whole, again commenting upon how its features might influence the interpretation of Gen. 2:4b–3:24. I will achieve this by categorising the features of the text and analysing them as follows:

- (i) Dimensions and bibliographic information
- (ii) Title and cover design
- (iii) The introductory section of the *Green Bible*
- (iv) The use of green text

The three sections at the end of the volume:

- (v) 'The *Green Bible* Trail Guide'
- (vi) 'Where Do You Go from Here?'
- (vii) 'Green Subject Index' and Concordance

3. Methodology

3.4.3 (3) Examining the environmental and socio-cultural impacts of the text

Consistent with material ecocritical theory, a text as a material object should not be understood solely as a discrete artefact, but as 'storied matter'; a point of convergence and entanglement between myriad elements that may be interpreted as narrative. Above, I used the concept of 'matter as text' to produce a methodology for examining texts as material objects. This next stage of analysis applies the concept of 'matter as text' further; this time to explore the interrelationships between a text and the wider material-discursive world. The methodology that follows therefore proposes ways in which the environmental and socio-cultural impacts related to the production and interpretation of a text might be explored. This methodology places an emphasis on interpreting measurable data; for example, determining the materials used in the production of a text and tracing the distribution of a text from raw materials to final product. However, I am aware that it is not always possible to access or collect these kinds of data and so some speculation may be involved in this process; indeed, this is the case in the application of this methodology below. As I did above, I have devised this methodology so that it can be used not just in the context of this present study, but so that it can be applied to analyse other texts. The methodology is as follows.

(1) Identify the materials from which the text is made. Whether the text is rendered on an animal skin parchment, displayed on the screen of a mobile telephone, or, in the case of the *Green Bible*, printed on paper, identifying

Trees and Text

the materials used is the first stage in exploring its connection to the wider material-discursive world.

(2) Trace the origins of the materials from which the text is made. It is not always possible to trace the constituent materials of a text with accuracy, though it may be possible to find some information relating to this. Owing to processes such as FSC (Forest Stewardship Council) Certification, the constituent materials of contemporary printed books can be traced with some degree of accuracy.⁷⁶ Conversely, whilst the constituent materials of older texts cannot be traced in the same way, it may be possible to determine something about their origins. For example, Hannah Ryley has explored the practice of reusing medieval manuscripts and Joshua Calhoun illustrates that in the seventeenth century the paper used for printed books sometimes contained fragments of hair, feathers, vegetable matter, or rags.⁷⁷ The *Green Bible* is printed on FSC certified paper, and as such its constituent materials can be traced partially; hence it is possible to establish some information relating to these materials.

(3) Explore the environmental impacts of producing and distributing the text. What processes have been used to manufacture the text? What materials and energies have been employed in this manufacturing process? Texts from the pre-mechanised era of textual production may have a *relatively* small environmental impact. For example, a Sumerian clay tablet is likely to

⁷⁶ The traceability of a product made from FSC certified materials is dependent upon the types of constituent materials used. I shall discuss this in relation to the *Green Bible* below.

⁷⁷ Hannah Ryley, 'Waste Not, Want Not: the Sustainability of Medieval Manuscripts', *Green Letters*, 19.1, (2015), pp. 63-74; Calhoun, 'The Word Made Flax', pp. 332-333.

3. Methodology

have been made from locally harvested clay from the flood plain of the Tigris-Euphrates and either sun-dried or fired in a kiln using locally gathered fuel.⁷⁸ In contrast, the environmental impacts of contemporary printed books are potentially realised over much larger scales. Contemporary printed books may be made from a variety of trees from sources around the world (indeed, some of which may be protected species harvested illegally), and these harvested trees may be transported thousands of kilometres before they are processed into paper either chemically, mechanically, or through a combination of both methods.⁷⁹ This newly made paper might be transported again in order to be cut to size, printed, and bound and this will require inks and adhesives made from a variety of natural and synthetic materials that will themselves have environmental impacts. And the distribution of the finished product will require further transportation, possibly over international scales of distance.

It may be possible to trace the journey of the text from where it was manufactured to its place of analysis. This will give some geographical context to the distribution of the text. What transport networks have been used to distribute the text? What are the environmental impacts associated with these networks? Consider factors such as the use of fossil fuels, and the emission of pollutants. Texts from antiquity may have been transported using animals, which have different environmental impacts. For a contemporary printed book, information about the place of manufacture and distribution will

⁷⁸ Frederick G. Kilgour, *The Evolution of the Book* (Oxford/New York: Oxford University Press, 1998), p. 16.

⁷⁹ For a detailed description of the different methods of industrial paper production, see Pratima Bajpai, 'Introduction' in P. Bajpai, *Pulp and Paper Industry: Chemical Recovery* (Amsterdam: Elsevier, 2017), pp. 1-24.

Trees and Text

likely be available through the publisher's website; this is the case for the *Green Bible*.

(4) Identify the socio-cultural impacts of producing the text. Having examined the environmental impacts associated with producing a text, the corresponding socio-cultural impacts associated with the text should start to become apparent. This stage of analysis should consider the different kinds of human labour associated with producing the text, and comment upon factors such as equitable pay, working conditions, slave labour, scribal classes, the impact of producing the text on local communities (particularly in respect to the contemporary forestry industry), the treatment of indigenous communities.

(5) How has the text been marketed? For modern printed books, the cover of the book itself is a helpful starting place. Cover design, text, endorsements, all contribute towards an understanding of the intended readership of the volume, as does the textual content of the volume itself; as I shall demonstrate below the *Green Bible* is no exception in this respect. If the book is still on sale, the publisher's website can be a useful source of supplementary marketing information. For high-profile releases currently on sale, visiting book stores can be another method of research as related promotional materials and events can contribute towards understanding the marketing strategy of the publisher.

3. Methodology

(6) The reception of the text. Whilst the interpretation of any given text is unique to its reader, it is still possible to explore wider interpretive trends in the reception of a text. For contemporary texts, examining reviews from a variety of sources can shed some light on how the text is being received in particular cultural spheres; academic reviews, press reviews (both specialist and national), online organisations, vlogs, and blogs (indeed, even microblogging sites such as Twitter) can all contribute information towards the reception of a text. Beyond reviews, the text may stimulate further responses: academic study, artistic expression, film/television adaptations. In addition, sales figures of the text from the publisher, especially if broken down into particular regions/territories can illustrate (approximately) where in the world people are buying and reading the text. In the context of this study, I shall explore the reception of the *Green Bible*.

In respect to this study, I shall use the methodology described above and present my analysis of the *Green Bible* in the following order:

- (1) Marketing the *Green Bible*
- (2) The environmental impacts of producing the *Green Bible*
- (3) The socio-cultural impacts associated with the production and interpretation of the *Green Bible*

Finally, in the conclusion of this study, by way of drawing together the various strands of 'matter as text' analysis I shall examine the extent to which the varied 'narratives' relating to the *Green Bible* as a material-discursive

Trees and Text

object might be reconciled with each other. I shall discuss the extent to which the environmental and socio-cultural impacts of producing the *Green Bible* are consistent with the environmentalist ideology advocated by this volume. I shall discuss the extent to which the interpretation of the *Green Bible* might influence its readers to change their thoughts and behaviour in respect to environmentally-friendly living and how any such changes compare to the environmental impacts of producing the volume.

3.5 Summary

In this chapter, I designed a methodology for the material ecocritical analysis of Gen. 2:4b–3:24 as it is rendered in the *Green Bible*. The methodology that I developed offers an important contribution to material ecocritical scholarship which, to date, has not yet provided any methodological guidelines for the analysis of ‘matter in text’ or ‘matter as text’, and neither has it employed both of these distinct modes of analysis together in the examination of a single object of study. Similarly, as material ecocritical theory and methodology have been overlooked in the field of biblical scholarship, this methodology illustrates one possible way in which material ecocriticism may be applied in a biblical studies context. This methodology might also contribute to the wider study of textual materiality in the humanities, which has yet to establish any general methodological principles. With these gaps in current scholarship in mind, I presented my methodologies for ‘matter in text’ and ‘matter as text’ so that they may easily

3. Methodology

be adapted to examine other texts, both biblical and non-biblical, from a material ecocritical perspective either discretely or together.

The 'matter in text' element of this methodology examines the depiction of trees in Gen. 2:4b–3:24, primarily in the text as it is rendered in *Green Bible*, but also in consultation with other biblical texts, whose material form I control by rendering in a standard format. The 'matter as text' element examines the physical text of the *Green Bible* and its wider connection to the material-discursive world. In this stage of analysis I examine (1) the materiality of the *Green Bible*, (2) the connection between the materiality of this volume and the manner in which it might be interpreted by contemporary Western readers, and (3) the wider environmental and socio-cultural impacts associated with the production and interpretation of the *Green Bible*. Trees are therefore central to this study; they are the focus of my 'matter in text' analysis of Gen. 2:4b–3:24, and, as the principle natural material from which the *Green Bible* is constructed, trees are physically at the centre of my 'matter as text' analysis.

Finally, this chapter acknowledged that whilst material ecocritical discourse engages with a range of theories of non-human agency, there has been a failure in this scholarship to acknowledge the conceptual differences between these models and a tendency to assume that they are wholly compatible with each other. I demonstrated that because material ecocritical theory proposes that all matter is inherently agentic, the only model of non-human agency compatible with this position is Bennett's theory of distributive agency. Distributive agency is therefore the model that I shall use in the analysis that follows.

4. Matter in Text:

Exploring the material attributes of the trees depicted in Gen. 2:4b–3:24 using the *Green Bible*

4.1 Introduction

In this chapter, I employ the material ecocritical concept of ‘matter in text’ to explore the material attributes of the trees depicted in Gen. 2:4b–3:24. I shall engage primarily with this passage in the specific material format of the *Green Bible*, though I also consult other versions of this text. This analysis is based upon the textual data within Gen. 2:4b–3:24 that relates to the material features of the trees in this text and their relationship to the wider environment depicted in the pericopé. In respect to the materiality of the trees in this analysis, I use the term ‘material-botanical’, rather than ‘material’, to underscore that the materiality of the trees in this text is inseparable from and interconnected to their intrinsic, and sometimes unique, botanical (cf. divine, human, animal, and elemental) properties and agencies.

As I shall demonstrate below, the overall economical narrative style of Gen. 2:4b–3:24 exhibits instances in which the text is ambiguous, and there are omissions in narrative detail. I therefore take great care to distinguish between that which can be concluded from explicit textual data, and that which can be suggested as an interpretive possibility due to textual ambiguity or omission.

4. Matter in Text

In addition to using the text of Gen. 2:4b–3:24 in the *Green Bible*, I also draw upon four additional sources of information to contribute to my analysis. Firstly, I engage with the Hebrew text of Gen. 2:4b–3:24 alongside relevant passages from the wider text of the Hebrew Bible. Secondly, I engage with parallel translations of Gen. 2:4b–3:24. Thirdly, I discuss the depiction of trees in the physical world of Gen. 2:4b–3:24 through an engagement with real-world environmental and botanical sciences. Fourthly, throughout my analysis I discuss how my reading compares and contrasts to analyses of the text undertaken within the corpus of contemporary critical biblical scholarship. Again, I am careful to distinguish between the explicit words of Gen. 2:4b–3:24 and the interpretive possibilities that I discuss in light of my engagement with these other sources.

My analysis begins with a semantic exploration of the language that is used in the Hebrew text of Gen. 2:4b–3:24 to portray trees. I then discuss the material-botanical features of the trees depicted in the text; their age, dimensions, appearance and produce, and the three trees explicitly named within the narrative; the tree of life, the tree of knowledge, and the fig tree. I have structured my analysis in this way so that it follows the events depicted in the narrative of Gen. 2:4b–3:24 in an approximately sequential manner and I provide summaries at the close of each sub-section. Having explored the material-botanical features of the trees in Gen. 2:4b–3:24, my ‘matter in text’ analysis continues as I proceed to examine the agency of these trees in the chapter that follows.

Trees and Text

4.2 Semantic considerations

Before looking at the physical attributes of the trees depicted in Gen. 2:4b–3:24 it is helpful to examine the language that is used to refer to the trees in this pericopé. Gen. 2:4b–3:24 refers to trees with relative frequency; indeed 13 of the 45 verses in this passage feature trees explicitly (cited from the NRSV):

- Gen. 2:9: 'every tree' (all known trees), 'tree of life', 'tree of knowledge'
- Gen. 2:16: 'every tree of the garden'
- Gen. 2:17: 'tree of knowledge'
- Gen. 3:1: 'any tree in the garden'
- Gen. 3:2: 'the trees in the garden'
- Gen. 3:3: 'tree that is in the middle of the garden' (the tree of knowledge)
- Gen. 3:5: 'it' (the tree of knowledge)
- Gen. 3:6: 'the tree' (the tree of knowledge)
- Gen. 3:8: 'the trees' (the garden of Yhwh as a whole)
- Gen. 3:11: 'the tree of which I commanded you not to eat' (the tree of knowledge)
- Gen. 3:12: 'the tree' (the tree of knowledge)
- Gen. 3:17: 'the tree about which I commanded you' (the tree of knowledge)
- Gen. 3:22: 'the tree of life'
- Gen. 3:24: 'the tree of life'

4. Matter in Text

Given that trees are the only plants explicitly identified in the garden of Yhwh, six further verses implicitly refer to trees:

Gen. 2:8: depicts the process of planting trees

Gen. 2:10: explains how the trees are irrigated

Gen. 2:15: Yhwh appoints the first human to 'till' and 'keep' the trees

Gen. 3:7: features the leaves of the fig tree, intimating its presence

Gen. 3:8, 10: refer to the sound of Yhwh in the garden; this suggests sounds associated with the encounter of trees such as the brushing away of branches and the snapping of twigs

Gen. 3:23: depicts the exile of the humans from life amongst the trees

This data as a whole suggests that trees play a significant role in the narrative of Gen. 2:4b–3:24. However, considering the frequency with which trees are mentioned in the text and their overall importance in the narrative, it is striking that this pericopé explicitly refers to only three specific trees by name on six occasions; the tree of life (Gen. 2:9; 3:22, 24), the tree of knowledge (Gen. 2:9, 17), and the leaves of the fig tree (Gen. 3:7).

The tree of life features in Gen. 2:9 where it is introduced alongside the tree of knowledge. This tree is then omitted from Gen. 2:16–17, which seemingly repeats some of the details of Gen. 2:8–9, and only reappears at the very end of the narrative (Gen. 2:22, 24). The tree of knowledge is referred to by name only in Gen. 2:9, 17, and then is referred to implicitly, despite its major role in the narrative (Gen. 3:3, 5, 6, 11, 12, 17). Finally, the presence of the fig tree in the garden of Yhwh is not explicitly confirmed in

Trees and Text

Gen. 2:4b–3:24 at all; its presence is only implied by the fig leaves sewn by the humans in Gen. 3:7.

This is a notable contrast to the wider text of the Hebrew Bible, which features a diverse range of tree species, as catalogued by Lytton John Musselman's comprehensive *A Dictionary of Bible Plants*.¹ In illustration of this range, Ferdinand Deist identifies the most frequently mentioned trees as the acacia, almond, broom, cedar, cypress, fig, fir, holm, myrtle, oak, olive, palm, pine, plane, pomegranate, poplar, sycamore, tamarisk, and willow.² In Gen. 2:4b–3:24, when Yhwh first plants his garden there is no inventory of the presumably diverse number of individual tree species planted. Only the selection criteria for trees is expressed (visually beautiful trees and trees good for food), and out of the whole plantation only two specific types of tree are named, the tree of life and the tree of knowledge (Gen. 2:9), with the presence of the fig tree being intimated in Gen. 3:7.

It is possible that the failure of Gen. 2:4b–3:24 to elucidate the range of tree species present in the garden of Yhwh is characteristic of its overarching economic narrative style rather than an intentional effort on the part of the redactors of the text to diminish the presence of trees within the narrative.³ Nevertheless, only three trees are identified within the physical world of Gen. 2:4b–3:24 and the tendency of the text to refer to these trees

¹ Lytton John Musselman, *A Dictionary of Bible Plants* (New York: Cambridge University Press, 2011).

² Ferdinand E. Deist, *The Material Culture of the Bible* (London/New York: Sheffield Academic Press, 2000), p. 137. Despite the relative diversity of tree species featuring in the Hebrew Bible, Matthew Hall observes that as a whole this corpus identifies only 110 plant species in total in contrast to the 2700 species native to Israel-Palestine; Matthew Hall, 'Passive Plants in Christian Traditions', in M. Hall, *Plants as Persons: A Philosophical Botany* (New York: SUNY Press, 2011), pp. 55-72 (64).

³ On the economic narrative style of Gen. 2:4b–3:24, see Mettinger, *The Eden Narrative*, pp. 13, 29.

4. Matter in Text

descriptively rather than by name serves to efface the individuality and diversity of tree species from the narrative of Gen. 2:4b–3:24.⁴

This effacement is also evident in the language that is employed throughout the Hebrew text of Gen. 2:4b–3:24 to refer to trees collectively. Gen. 2:9 suggests that only trees are planted by Yhwh, and nothing in the wider text of Gen. 2:4b–3:24 intimates the presence of any other plant species within this plantation.⁵ However, throughout Gen. 2:4b–3:24 this apparently exclusive plantation of trees is referred to using the Hebrew word גן, commonly translated as ‘garden’; Gen. 2:8–10, 15–16; 3:1–3, 8–10, 23–24.

The issue with the use of the word גן in this context is that it is ambiguous. גן has a wide semantic range and does not exclusively refer to plantations of trees; it can refer to tree plantations, but also to plantations of other species of flora. As Stordalen observes, גן and its feminine form גנה typically denote fields in which trees or vegetables are planted for the purpose of food.⁶ Zevit refines this translation adding that גן can refer to plantations of trees that are fruit-bearing, aromatic, decorative, plantations that combine these types of trees, or, alternatively, vegetable gardens.⁷ So whilst to some extent the word גן reflects the plantation of fruit bearing and decorative trees described in Gen. 2:9, this word does not unequivocally

⁴ I use the term ‘name’ rather than ‘species’ to describe the designations applied to the trees in Gen. 2:4b–3:24. ‘Species’ suggests a compatibility with real-world botanical taxonomy, and whilst the fig of Gen. 3:7 represents a real-world species, this is not true of the tree of life and the tree of knowledge.

⁵ Whilst Gen. 2:5 speaks of ‘plants’ and ‘herbs’ of the field (NRSV), it is not clear that these feature in the garden of Yhwh; indeed, in this verse the emptiness of the primordial earth at this stage of the narrative is underscored through the acknowledgment of the absence of plants and herbs.

⁶ Stordalen, *Echoes of Eden*, p. 36.

⁷ Zevit, *Garden of Eden*, p. 89.

Trees and Text

connote the exclusive presence of trees that is suggested by Gen. 2:4b–3:24 as a whole.

I do not wish to argue that it was the intention of the redactors of this pericopé to employ the word גַּן specifically for the purpose of diminishing the presence of trees within the physical world of the text. My point is rather that in the final form of Gen. 2:4b–3:24 the word גַּן serves to obscure the fact that the ‘garden’ of Yhwh as it is explicitly portrayed in this pericopé consists exclusively of trees.

4.2.1 Summary

The frequency with which trees feature throughout Gen. 2:4b–3:24 demonstrates that they undoubtedly play an important narrative role in this passage. Considering the overall importance of trees in this narrative, it is striking that in both Hebrew and English translations this pericopé tends to refer to trees not by their individual names, but by their botanical properties (Gen. 2:9), through description (Gen. 3:3, 11, 17), using a pronoun (Gen. 3:5), using the generic word עֵץ /‘tree’ (Gen. 3:6, 12), and by implying (rather than explicitly stating) their presence (Gen. 2:8, 10, 15; 3:7, 10, 23). This effacement is also evident in the Hebrew text of Gen. 2:4b–3:24, where the plantation of trees created by Yhwh is referred to using the word גַּן (Gen. 2:8–10, 15–16; 3:1–3, 8–10, 23–24), which can represent a range of planted spaces and does not exclusively connote tree plantations. As such, Gen. 2:4b–3:24 stands in contrast to the wider text of the Hebrew Bible, which features a diverse range of tree species.

4. Matter in Text

Trees play a major role both in the narrative of Gen. 2:4b–3:24 and within the physical world depicted in this text. However the language used throughout this passage tends to diminish the presence and importance of trees; the cumulative effect is that the number and diversity of tree species present in the physical world depicted in the text is not explicitly acknowledged. Finally, it should be noted that the analysis below is based upon the assumption that the trees are the only plants in the garden of Yhwh. This assumption is supported throughout Gen. 2:4b–3:24, which neither states nor intimates that any other kinds of plant are to be found in this space.

4.3 The age of the trees in the garden of Yhwh

The age of the trees within the garden of Yhwh is never stated in Gen. 2:4b–3:24. This is representative of the ambiguous timescale of the narrative as a whole, rather than a conspicuous oversight; nothing else in the narrative is given an age and the timeframe in which the narrated events unfold is not disclosed. Whilst it is not possible to determine the specific chronological age of the trees from the information provided in this text, details relating to the botanical maturity and size of the trees can be determined.

A starting point for this approach is Gen. 2:8, when Yhwh plants the trees into the empty soil of the primordial world. In this verse, the origin of the trees is not made clear and there are three interpretative possibilities. (1) Yhwh is planting seeds that he will nurture into fully mature trees. (2) Yhwh is planting saplings, which again he will nurture to maturity. (3) Yhwh is

Trees and Text

introducing fully formed trees to the ground (note that this would be consistent with the creation of the first humans who are both introduced into this world in a fully developed state; Gen. 2:7, 22).

According to Stordalen, the Hebrew verb נטע employed in Gen. 2:8 should be understood as 'planted' in the sense of introducing seeds to the soil, given that the verb שתל occupies a wider semantic range and can connote both the planting of seeds but also the transplantation of established plants from one place to another.⁸ In contrast, Zevit asserts that נטע has a wide semantic range that captures a variety of activities related to the process of planting. This conclusion is based upon his assumption that Isa. 5:2–6, which also features נטע, illustrates some of the other activities connoted by this word, which include breaking ground, clearing away stones, digging holes, and hoeing. Upon examining Isa. 5:2–6, however, it becomes apparent that the numerous verbs featuring in this verse are related to נטע only through the *concept* of planting, and not linguistically through the root of this verb.⁹

I accord with Stordalen's understanding of נטע, given that it is consistent with the wider usage of the verb throughout the Hebrew Bible; I can find no explicit textual indicators in any instance of the usage of this verb to suggest that it ever represents the transplantation of plants.¹⁰ It therefore seems most probable that Gen. 2:8 represents the planting of seeds rather than the re-planting of saplings or mature trees.

⁸ Stordalen, *Echoes of Eden*, p. 42.

⁹ Zevit, *Garden of Eden*, pp. 85-86.

¹⁰ In contrast, נטע is employed to represent the metaphorical 'transplantation' of people from one place to another with relative frequency (see, for example, Exod. 15:17; 1 Chron. 17:9; Amos 9:15).

4. Matter in Text

So does this mean that there is a passage of time between the planting of seeds in Gen. 2:8 and the growth of the trees in Gen. 2:9? In Gen. 2:9 the verb צמח is employed to describe the ‘sprouting’ of the trees. In some instances in the Hebrew Bible, צמח connotes natural growth; trees grow naturally in Exod. 10:5; Eccl. 10:6, as do beards in 2 Sam. 10:5; 1 Chron. 19:5. But there are other instances in the Hebrew Bible that are comparable to Gen. 2:9 grammatically where צמח connotes the *causing* of growth by Yhwh; Job 38:27; Ps. 104:14; 147:8; Jer. 33:15. The exact process by which Yhwh causes things to grow is not detailed in these passages, but they each intimate some kind of divine intervention that accelerates natural growth and/or stimulates growth where it would not occur naturally. Similarly, the timescale of this growth is never specified, though the fact that it is caused by Yhwh rather than a result of natural processes suggests that this growth happens at a faster rate than ‘normal’.

Crucially, however, it is not clear to what extent real-world botanical conditions apply to the trees planted by Yhwh in Gen. 2:8–9. The process of Yhwh accelerating the growth of the trees makes sense if one assumes that trees usually require several years of growth before yielding edible produce and that the first human presumably could not wait this long without food, but it is not clear from the text that these conditions apply to the primordial world.

4.3.1 Summary

The age of the trees in the garden of Yhwh is never stated in Gen. 2:4b–3:24. My examination of the verb נטע in Gen. 2:8 helped to clarify the age of

Trees and Text

the trees. I found that throughout the Hebrew Bible as a whole the verb נָטַע seems to represent the planting of seeds rather than the re-planting of established plants. It is therefore likely that Gen. 2:8 follows this usage and depicts the planting of seeds by Yhwh. This would suggest that there is a passage of time between the planting of seeds in Gen. 2:8 and the growth of trees in Gen. 2:9, though the use of the verb צָמַח in Gen. 2:9 intimates that the process of growth is accelerated by Yhwh.

4.4 The scale of the tree plantation and the size of its trees

Numerous textual indicators in Gen. 2:4b–3:24 intimate the scale of the tree plantation created by Yhwh, though the specific size of this plantation and the dimensions of the many trees in the garden of Yhwh is not explicitly stated. This lack of information serves to diminish the presence of trees within the narrated world of the text somewhat. Textual descriptors relating to the scale of this plantation and the size of its trees are as follows.

(1) The first man is placed amongst the trees by Yhwh, who instructs that he may eat from any tree, with the exception of the tree of knowledge (Gen. 2:8–9, 16–17). Similarly, the first woman is created amongst the trees and is sustained by their food (Gen. 2:25; 3:2–3). These textual indicators suggest that the trees are both individually mature enough and collectively numerous enough to provide a perennial (more on seasonal availability below) and sustainable crop of edible produce from which the two humans can survive indefinitely. That is to say that this plantation covers a vast area, and is full of

4. Matter in Text

productive trees. To calculate the minimum size of this plantation would require making assumptions about the calorific and nutritional needs of the two humans alongside the precise types of tree species planted (which collectively would have to yield edible food all year round), and the productivity of the trees. In short, there are simply too many variables for this calculation to be done in a way that would produce a meaningful estimation of the minimum size of the garden.¹¹ Further textual indicators point to the enormity of the garden, and the size of its trees, however.

(2) The trees are watered by a river, which splits into four distributaries within the plantation (Gen. 2:10). The identification of two rivers emerging from the garden as the Tigris and Euphrates suggests a large scale of the garden; as Zevit acknowledges, these two rivers were well known in ancient Western Asia for their size and their connection to arable fecundity.¹² As I argued in 'Garden and "Wilderness"', however, these rivers are employed here symbolically rather than as an indicator of precise geographical location; alongside the motif of a river splitting into four distributaries they serve to connote arable fecundity figuratively rather than literally.¹³

(3) Every 'animal of the field and every bird of the air' is brought to the first human within his dwelling place in the trees (Gen. 2:19 NRSV). The accommodation of all these animals within the garden at this narrative juncture again points to its vast scale. Related to this point, with the

¹¹ Cf. the assumptions and calculations of Zevit; Zevit, *Garden of Eden*, p. 289.

¹² Zevit, *Garden of Eden*, pp. 98-101.

¹³ Hamon, 'Garden and "Wilderness"', p. 72.

Trees and Text

exception of the snake in Genesis 3, the text does not state whether the animals remain in the garden or whether they move outside this space after they are deemed unsuitable counterparts. If the animals do remain in the garden, at least some of them will have herbivorous diets (perhaps like the humans, all of them will), and so they will also rely upon the trees for food; this also testifies to the scale of the garden.

(4) The trees are mature enough and numerous enough to provide a hiding place for the two humans (Gen. 3:8). Indeed, the hiding place is so successful that Yhwh cannot find the humans, and their whereabouts is revealed by their speech (Gen. 3:9).

(5) Amidst the trees, running from the exterior of the plantation to somewhere within it is the 'way to the tree of life' (Gen. 3:24). It is unclear how wide this passage is, but the very suggestion that a passage runs through the plantation of trees and that this tree is hidden from those external to the garden intimates something of the density of trees and their height and spread.

4.4.1 Summary

The scale of the tree plantation created by Yhwh and the size of its trees are not explicitly detailed in Gen. 2:4b–3:24, but are intimated by the following textual indicators. (1) The trees act as an exclusive food source for the two human inhabitants of the garden, suggesting that this plantation of trees is

4. Matter in Text

both collectively mature and collectively numerous enough to provide a sustainable crop of perennially available food for the humans. (2) The scale of the garden is intimated by the presence of the river, which splits into four large distributaries. (3) The accommodation of all wild animals and all birds in the garden (Gen. 2:19) attests to its scale, especially if these animals remain in the garden and are sustained by its trees. (4) The trees are mature enough and numerous enough to provide a hiding place for the two humans. (5) The guarding of the 'way to the tree of life' (Gen. 3:24) suggests that that this tree is hidden from those external to the garden, intimating the density of trees and their height and spread. The lack of explicit detail relating to the scale of the garden and the size of its trees serves to diminish the presence of trees within the narrated world of the text.

4.5 Appearance and produce

It is helpful to discuss the appearance of the trees in the garden of Yhwh and the edible produce that they yield together because these two attributes are mentioned together in Gen. 2:9. This verse reveals that trees are made to grow in the garden by Yhwh on the basis of their aesthetic value and edibility: 'Out of the ground the Lord God made to grow every tree that is pleasant to the sight and good for food' (Gen. 2:9 NRSV). Hall describes the plants in the garden of Yhwh as inherently 'useful' to humanity, and this is true.¹⁴ However, in Hebrew this phrase is somewhat ambiguous:

¹⁴ Hall, 'Passive Plants in Christian Traditions', p. 64.

Trees and Text

ויצמח יהוה אלהים מן האדמה כל־עץ נחמד למראה וטוב למאכל

Interpreted literally the phrase has two meanings: (1) out of the ground, Yhwh causes the growth of every tree; all trees are both aesthetically pleasing and good for food. (2) Out of the ground Yhwh causes the growth of every aesthetically pleasing tree, every tree good for food, and the possibility that some trees exhibit both properties is intimated. Mettinger and Zevit are silent on the interpretation of this specific phrase. Stordalen suggests that the tree of life and the tree of knowledge are distinct from all other trees in the garden of Yhwh which exhibit beauty and edibility, though he does not expand on this further.¹⁵ Whilst Stordalen and Mettinger devote their attentions primarily towards the tree of life and the tree of knowledge, Zevit's analysis of the linguistic structure of Gen. 2:9 offers a solution to understanding this phrase.

As I discussed above, Zevit argues that Gen. 2:9 employs forward gapping as a means of resolving the apparently unusual linguistic structure that relates to the location of the tree of knowledge at the end of the verse.¹⁶ Further to this, Zevit identifies another use of forward gapping in this verse where its opening verb ויצמח carries forward to each of the trees named in the verse, connoting that Yhwh causes all trees, the tree of life, and the tree of knowledge to grow from the ground.¹⁷ Applying forward gapping again in this verse to the phrase concerning the botanical attributes of trees in the garden it is apparent that כל־עץ is the object of the two descriptors that follow למאכל וטוב. That is to say that owing to the use of forward gapping

¹⁵ Stordalen, *Echoes of Eden*, p. 389.

¹⁶ Zevit, *Garden of Eden*, p. 93.

¹⁷ Zevit, *Garden of Eden*, p. 93.

4. Matter in Text

throughout Gen. 2:9 as a whole, it should be understood that all trees in the garden are both aesthetically pleasing and good for food. Indeed, the tree of knowledge exhibits both of these properties (Gen. 3:6).

It is not clear why the trees in this pericopé are described only in terms of their beauty and edibility over against other material-botanical descriptors such as height, age, species, or the type of produce that they yield. Given the overall economic narrative style of Gen. 2:4b–3:24, then, it is significant that these are the only two material-botanical features of the trees that are detailed explicitly. Indeed, these two attributes lend a degree of narrative symmetry to the pericopé. In Gen. 2:9, Yhwh purposefully cultivates beautiful and edible trees, and then in Gen. 3:6 the tree of knowledge attracts the first woman by virtue of these two attributes. Nowhere in Gen. 2:4b–3:24 is it explained what constitutes a tree that is ‘pleasant to the sight’ or a tree that is ‘good for food’ and neither do these phrases appear anywhere else in the Hebrew Bible. However, there are clues relating to these descriptors in this wider corpus of the Hebrew Bible. I shall discuss beautiful trees first.

4.5.1 ‘Pleasant to the sight’

I shall begin with verses that are in some way related to Gen. 2:9 and the wider pericopé Gen. 2:4b–3:24. Firstly, it is notable that המא, the descriptor that features in Gen. 2:9 connoting aesthetic pleasure, is used to describe the beauty of trees in two other instances in the Hebrew Bible; in Song 2:3, it refers to the shade of the apple tree figuratively, and in Isa. 1:29 it refers to

Trees and Text

the beauty of the oak. Throughout the Hebrew Bible as a whole, this descriptor is more usually employed to connote the coveting of highly valuable material possessions, or, alternatively, sexual desire; see, for example, Exod. 20:17; 34:24; Deut. 5:21; Prov. 6:25. It therefore seems that the trees in the garden of Yhwh are capable of instilling great pleasure in those who view them.¹⁸

Next, are the few verses in the Hebrew Bible that refer to the garden of Yhwh; Isa. 51:3; Ezek. 28:13; 31:8–9; 36:35; Joel 2:3. Ezek. 31:8–9 is distinctive amongst these verses as it mentions specific tree species in the garden of Yhwh in terms of their beauty. In Ezek. 31:8–9, Assyria is described figuratively as a cedar tree and the beauty of this specific tree is compared to, and declared to exceed, the beauty of specific tree species in the garden of Yhwh; other cedar trees, fir trees, and plane trees. Notably, none of these species yield produce that is edible to humans, therefore Ezek. 31:8–9 contradicts the selection criteria for trees in the garden of Yhwh specified in Gen. 2:9, which states that all trees are ‘pleasant to the sight *and* good for food’ (NRSV). Nevertheless, the very fact that these species are explicitly identified as beautiful is useful to this debate.

In addition to the verses associated with the depiction of beautiful trees in Gen. 2:4b–3:24, there are further verses relating to beautiful trees generally within the Hebrew Bible. To explore these, I used Musselman’s comprehensive *A Dictionary of Bible Plants*, which catalogues every plant species featuring in the Hebrew Bible.¹⁹ I looked up each occurrence of each

¹⁸ This point is corroborated by Robert Alter in his translation of Genesis; Robert Alter, *Genesis* (London/New York: W. W. Norton & Company, 1996), p. 12.

¹⁹ Musselman, *A Dictionary of Bible Plants*.

4. Matter in Text

tree identified by Musselman in my *Green Bible* and cross-referenced these with the NRSV concordance to ensure that no relevant verses were missed. This exercise revealed that the following trees are depicted as beautiful in the Hebrew Bible (in the list that follows, I use the plant names given in the NRSV, providing Musselman's alternative translation in parentheses where applicable):

Aloe: Num. 24:5–6

Apple: Song 2:3

Cedar: Num. 24:5–6; Song 5:15; Ezek. 31:3, 8

Fig: Gen. 3:7 (its beauty implied by its presence in the garden of Yhwh)

Fir ('cypress'): Isa. 60:13; Ezek. 31:8

Oak: Isa. 1:29

Olive: Hos. 14:6

Palm ('date palm'): Num. 24:5–6; Song 7:7

Pine ('juniper'): Isa. 60:13

Plane: Isa. 60:13 ('pine'); Ezek. 31:8

In addition to these species are three trees unrecognisable to contemporary botanical taxonomy are described as beautiful: the tree of the tree of life and the tree of knowledge (Gen. 2:9) and the unnamed tree of Dan. 4:12, 21 whose foliage is described using the Aramaic word for beautiful, שפיר.

Excepting these three unrecognisable trees of Gen. 2:9; Dan. 4:12, 21 as we have no further information about their appearance, the selection of trees above represents a diverse range of species, and this group does not

Trees and Text

share any obvious aesthetic qualities. Indeed, each of these trees has distinctive features including different colour and appearance of bark, different colour and shapes of leaf, different flowers.

Similarly, according to Deist, this selection of tree species were put to a variety of usages in ancient Israelite culture; the apple, palm, olive, and fig were used for food, the oak for its shade, and the wood of the cedar, plane, and fir were used in construction.²⁰ It therefore seems that there are no clearly discernible botanical features or cultural applications common to this range of tree species that indicate why the redactors of the Hebrew Bible may have considered this particular selection of tree species to be beautiful over against other known tree species. Indeed, given the diversity of tree species explicitly described as beautiful in the Hebrew Bible, it is also likely that many more species were considered beautiful across the broad geographical range and temporal period that this corpus was composed. I shall return to conclude this exploration of beautiful trees below, discussing beautiful trees alongside trees good for food.

4.5.2 'Good for food'

All trees in the garden of Yhwh are described as טוב למאכל, '[and] good for food' (Gen. 2:9). This phrase is ambiguous in that it states neither the kind of food produced by the trees nor the criteria by which this produce may be considered 'good', so requires further investigation. The Hebrew word מאכל has a wide semantic range including carrion (Deut. 28:26), the food served

²⁰ Deist, *The Material Culture of the Bible*, p. 138.

4. Matter in Text

at a royal banquet (1 Kgs. 10:5), and agricultural harvest (Prov. 6:8). In the context of describing edible produce from trees, מאכל is employed in Deut. 20:20 to connote food from trees in a generic sense rather than relating to a specific category of produce such as fruit, nuts, berries, or seeds, and this usage appears to be consistent throughout the Hebrew Bible. Notably, however, this consistency is not reflected in the translation of this word. In Neh. 9:25, מאכל is translated as 'fruit' (NIV NKJV NRSV), though there is nothing to suggest that the trees in this verse are actually fruit trees. Conversely, מאכל is translated as 'food' in Ezek. 47:12 NIV NKJV NRSV, despite the wider context of this verse explicitly speaking of פרי, which in this context is best understood as 'fruit'.

The Hebrew word פרי deserves further attention here as it is the only other word relating to the edible produce of trees in the garden of Yhwh in Gen. 2:4b–3:24; it is employed in Gen. 3:2–3, 6 to represent the produce of the tree of knowledge and is translated as 'fruit' (NIV NKJV NRSV). However, פרי occupies a wide semantic range beyond that of the English word 'fruit'; it can represent produce from the ground or from a vineyard (Gen. 4:3; 2 Kgs. 19:29), the boughs of a tree (Lev. 23:40), or the produce of a tree (Lev. 26:4). Furthermore, Gen. 1:11–12, 29 features a specific type of 'fruit' tree; that which produces fruit with seed in it, implying the need to distinguish this specific type of tree from trees that yield 'fruit' that does not contain seed.

Given the ambiguity of the Hebrew words מאכל and פרי, then, it is possible that the trees in the garden of Yhwh yield a range of types of edible produce that are not limited to the contemporary Western botanical and

Trees and Text

culinary categories of 'fruit'. Indeed, to underscore this apparent variety of food in the garden of Yhwh, I describe food from the trees in the garden as 'produce' rather than 'fruit' throughout this study.

The phrase טוב למאכל [ו] (Gen. 2:9), therefore has a range of meanings; it may be referring to produce from trees that tastes 'good', that is 'good' to eat in the sense that it requires little agricultural labour and domestic processing, or it may allude to trees that produce high yields of edible food. Any one of these three possibilities is compatible with literary themes in Gen. 2:4b–3:24, which include sensory pleasure, idyllic lifestyle, and the abundance of food.²¹ But Gen. 3:6 resolves this ambiguity; in this verse, the first woman sees that the produce of the tree of knowledge looks good to eat, intimating that the phrase describes trees that yield edible produce that is visually appetising.

Given that the leaves of the fig tree intimate its presence in the garden of Yhwh (Gen. 3:7), it seems that this is one species of tree whose produce is visually appetising, consistent with (Gen. 2:9). Engaging with Musselman's *A Dictionary of Bible Plants* using the same method as above, I found that the following types of produce from trees are depicted as visually appetising in the wider text of the Hebrew Bible:

Apple: Song 2:3–5 (the beauty and edibility of the apple are employed as a metaphor for the beauty of the narrator's lover)

Fig: Isa. 28:4

²¹ These themes are identified in the following analyses: A. R. Millard, 'The Etymology of Eden', *Vetus Testamentum*, 34.1 (1984), pp. 103-106 (104); Newsom, 'Common Ground', pp. 65, 70; David T. Tsumura, *Creation and Destruction: A Reappraisal of the Chaoskampf Theory in the Old Testament* (Winona Lake, IN: Eisenbrauns, 2005), p. 124.

4. Matter in Text

In addition to these verses, Deut. 8:7–10 intimates the desirability of the fig and the olive as edible produce; the desirability of the olive is also intimated in Neh 9:25. Similarly, the descriptor זמרת translated as ‘choice fruits’ (Gen. 43:11 NRSV) suggests the desirability of the almond and pistachio as edible foods.

4.5.3 ‘Pleasant to the sight and good for food’

Having examined the depiction of both beautiful trees and the edible produce of trees throughout the Hebrew Bible I can now discuss how this contributes to elucidating the phrase נחמד למראה וטוב למאכל in Gen. 2:9 in respect to specific tree species in the garden of Yhwh. I argued above that Gen. 2:9 should be understood as all trees in the garden of Yhwh are both pleasing to the sight and good for food. My analysis demonstrates that whilst a diverse range of tree species are depicted as either beautiful *or* edible within the Hebrew Bible, only the fig tree (Gen. 2:9; 3:7; Isa. 28:4) and the apple tree (Song 2:3–5) are explicitly depicted as both beautiful *and* yielding produce that is aesthetically pleasing and edible.

The wider corpus of the Hebrew Bible therefore provides very little information that can be used to contribute to the understanding of the specific tree species that may be present in the garden of Yhwh. As an aside, an engagement with extra-biblical historical data suggests that a wide range of tree species would have been considered to be both beautiful and edible within the culture common to the original authors and recipients of Gen. 2:4b–3:24. Paleo-botanical and archaeological studies into the diet of

Trees and Text

Iron Age peoples in the region of modern day Israel-Palestine reveals that olives, dates, figs, pomegranates, pears, peaches, almonds, pistachios, walnuts, and acorns were commonly eaten.²² Whilst this data does not prove that these species were considered 'pleasant to the sight and good for food' (Gen. 2:9), it is likely that this phrase would have evoked some of these readily eaten species to the original recipients of Gen. 2:4b–3:24.

Finally, this range of species raises an important question about the seasonal availability of food in the garden of Yhwh. Each of the tree species associated with the foods listed above is deciduous, losing its leaves and, as a consequence, ceasing to yield edible produce for a portion of the year. These foods were therefore only eaten seasonally in ancient Western Asia, and they were supplemented with grains, legumes, pulses, cheese, and meat as availability dictated.²³ Zevit argues that the humans of Gen. 2:4b–3:24 ate this way and were sustained by both the trees in the garden of Yhwh and from agricultural crops outside it, though he concedes that this is an interpretive solution that cannot be deduced from any explicit textual indicators.²⁴

Alternatively, I propose that real-world seasons and climate do not apply in the garden of Yhwh for the following reasons. (1) The humans are explicitly instructed by Yhwh to eat exclusively from the trees in the garden (Gen. 2:16; 3:2), and they are never depicted eating food from other sources. (2) The humans are never depicted engaging in any agricultural or domestic

²² Zevit, *Garden of Eden*, pp. 91-92.

²³ Zevit, *Garden of Eden*, pp. 90-92.

²⁴ Zevit, *Garden of Eden*, p. 91.

4. Matter in Text

labour whilst they live in the garden of Yhwh.²⁵ (3) The humans have no need for clothing (Gen. 2:25), suggesting that the diurnal and seasonal changes in temperature associated with a real-world setting do not apply in the garden. (4) Whilst some elements of the garden of Yhwh reflect the known world; soil, the Tigris and Euphrates rivers, and the fig tree (Gen. 2:9, 14; 3:7), the physical presence of Yhwh the creator-God, two trees that represent divine prerogatives, a talking snake, the cherubim, and the flaming sword (Gen. 2:15–17; 3:1, 24) intimate that not all real-world conditions apply here. In the garden of Yhwh, then, the humans are seemingly sustained by a perennially available supply of produce from trees that constantly yield a rich variety of beautiful and edible produce.

4.5.4 Summary

I examined the Hebrew grammar of Gen. 2:9 and found that all trees in the garden are both aesthetically pleasing and good for food. Nowhere in Gen. 2:4b–3:24 is it explained what constitutes a beautiful tree or a tree that is good for food, though Gen. 3:6 suggests that the phrase ‘good for food’ is linked to visually appetising food.

I explored the depiction of trees ‘pleasant to the sight’ and ‘good for food’ throughout the wider text of the Hebrew Bible and collating this textual data, I found that only the fig tree and the apple tree are described as *both* beautiful *and* edible in the entirety of this corpus. I added that paleo-botanical

²⁵ Cf. Gen. 3:17–19; agricultural and domestic labour are necessary *outside* the garden of Yhwh.

Trees and Text

and archaeological studies suggest that a wide range of tree produce was consumed by Iron Age peoples in Israel-Palestine; olives, dates, figs, pomegranates, pears, peaches, almonds, pistachios, walnuts, and acorns. It is therefore likely that the phrase ‘pleasant to the sight and good for food’ (Gen. 2:9 NRSV) evoked some of these species to the original recipients of Gen. 2:4b–3:24. Finally, I argued that real-world seasonal variations do not seem to apply to the garden of Yhwh on the basis of its apparently perennially available tree produce in Gen. 2:4b–3:24.

4.6 ‘Tilling’ and ‘keeping’ the trees

Gen. 2:15–17 repeats some of the details of Gen. 2:8–9 adding the appointment of the first human to ‘till’ and ‘keep’ the garden of Yhwh and the prohibition of eating from the tree of knowledge. Before proceeding to discuss the material-botanical properties of the tree of life, the tree of knowledge, and the fig tree, it is helpful to discuss the appointment of the first human as this has some bearing upon how we understand these trees.

The Hebrew verbs עָבַד and שָׁמַר translated as ‘till’ and ‘keep’ respectively (Gen. 2:15 NRSV) both feature with relative frequency throughout the Hebrew Bible. The root עָבַד connotes working, serving, and slavery and in this context is best understood as cultivating the ground, consistent with its usage elsewhere in the Hebrew Bible; Gen. 4:2; Deut. 21:4; Ezek. 36:9. The root שָׁמַר also occupies a wide semantic range and connotes keeping, watching, and preserving, so in this context it is best

4. Matter in Text

understood as maintaining the state of the garden.²⁶ Combining the meaning of these two words, then, in Gen. 2:15 the first human is appointed by Yhwh to both cultivate the garden and to maintain its present condition.

However, this interpretation requires some refinement. At no point in the entirety of Gen. 2:4b–3:24 does the first human engage in either of these activities. Furthermore, given the apparent scale of the garden of Yhwh, if real-world botanical conditions applied to this space, it would be impossible for the first human alone to ‘cultivate’ and ‘maintain’ this vast plantation of trees. In addition, this understanding of the role of the first human in the garden is in conflict with Gen. 3:17–19, which implies that his working life in the garden is relatively easy compared to his arduous agricultural lifestyle outside the garden. In order to resolve this apparent narrative inconsistency, and consistent with my analysis above, I propose that whilst, to some extent, the trees in the garden of Yhwh represent real-world trees, real-world botanical conditions do not apply in the garden of Yhwh in that these trees do not require anywhere near as much maintenance as real-world tree species. This solution, albeit based upon textual ambiguity and narrative omission, would allow the first human to fulfil his appointment to ‘till’ and ‘keep’ the garden of Yhwh with the relative ease that is intimated by Gen. 3:17–19.

Furthermore, Gen. 2:15–17 functions as a narrative sub-section within Gen. 2:4b–3:24 and, as such, the appointment to ‘till’ and ‘keep’ in Gen. 2:15 seems to be related to the prohibition of Gen. 2:16–17. That is to say that

²⁶ In contrast, Stordalen believes that שמר should be understood as ‘guard’ so that this verb is consistent in meaning with its usage in Gen. 3:24; Stordalen, *Echoes of Eden*, p. 43. I disagree with this interpretation as no textual indicators in Gen. 2:4b–15 suggest that the garden needs guarding at this narrative juncture.

Trees and Text

maintaining the state of the garden requires abstaining from eating the produce of the tree of knowledge. Eating from the tree of knowledge is therefore not just a contravention of the instruction of Yhwh, but also a failure of the first human to fulfil his appointment. Perhaps this is why the punishment of the first human is connected to the radical change in his working conditions outlined in Gen. 3:17–19.

4.7 The material-botanical properties of the tree of life

The tree of life is crucial to the narrative of Gen. 2:4b–3:24 as a whole, despite it only featuring briefly at the beginning and the conclusion of this pericopé. This tree is introduced in Gen. 2:9, alongside the other tree in the narrative that is unrecognisable to contemporary botany, the tree of knowledge, and the other trees planted by Yhwh.²⁷ I demonstrated above that all these trees in the garden of Yhwh are visually beautiful and yield edible produce; the tree of life is no exception. The meaning of the name of the species עץ החיים is not explained in Gen. 2:4b–3:24, though the Hebrew word חי connotes age, life and living. It is later revealed that eating from the

²⁷ Outside the Hebrew Bible, the themes of immortality and wisdom (embodied by the tree of life and tree of knowledge in Gen. 2:4b–3:24) and the motif of a pair of sacred trees are evident within a wider corpus of Mesopotamian literature. In addition, pairs of sacred trees may be found in Mesopotamian iconography. Mettinger offers a comparative study of the Mesopotamian writings *Adapa* and *Gilgamesh* with Gen. 2:4b–3:24 in respect to the themes of immortality and wisdom (Mettinger, *The Eden Narrative*, pp. 99-122). There is also a body of scholarship that engages with Mesopotamian writings and artistry in order to speculate about the physical appearance of the tree of life and the tree of knowledge; for an introduction to this see Arthur George and Elena George, 'The Sacred Trees, the Cherubim, and the Flaming Sword', in A. George and E. George, *The Mythology of Eden* (Lanham, MD: Hamilton Books, 2014), pp. 139-176. Consistent with the methodology outlined above I have chosen not to engage with extra-biblical materials or the scholarship that discusses them in this present study order to retain focus on the explicit depiction of the tree of life and the tree of knowledge in Gen. 2:4b–3:24 in the *Green Bible*.

4. Matter in Text

tree leads to eternal life, but it is the intention of Yhwh to prevent the humans from doing this, or at least Yhwh seeks to prevent the humans eating from this tree once they have eaten from the tree of knowledge (Gen. 3:22–23). The humans never eat from the tree of life, so the actual consequences of this action are never documented in Gen. 2:4b–3:24. Indeed, given that Yhwh's instruction regarding the consequences of eating from the tree of knowledge do not appear to be wholly accurate, it is possible that there may be other consequences of eating from the tree of life. Nevertheless, the text as it is suggests that the humans are mortal beings and they will acquire eternal life by eating from the tree of life.

A specific path running from the outside of the garden leads to this tree. The purpose of this path is unclear, given that in the first instance there are no humans depicted outside the garden. Perhaps the path was created for the exclusive use of Yhwh as he moves between the garden and the land outside? Whilst this is uncertain, the path becomes guarded following the exile of the humans from the garden (Gen. 3:24); that is to say that it is of utmost importance to Yhwh that the tree of life remains inaccessible to the humans at the final stage of the pericopé. Much more is revealed about the tree of life when considering it alongside the other tree explicitly mentioned in the pericopé, the tree of knowledge.

Whilst the garden of Yhwh comprises a range of trees, the only tree introduced to the humans is the tree of knowledge. This introduction happens through the instruction of Yhwh who informs the humans that they may eat from any tree in the garden except the tree of knowledge (Gen. 2:16–17). In contrast, there is no equivalent prohibition issued by Yhwh

Trees and Text

regarding eating from the tree of life and the humans are never explicitly informed about this tree by any other means. These details suggest that eating from the tree of life is actually permissible, or at least permissible in the first instance. In the entirety of Gen. 2:4b–3:24, the only tree that we can be sure that the humans eat from is the tree of knowledge; there is no mention of the humans eating from any other tree in the whole of the garden. Based solely upon explicit textual information, then, it could be argued that the tree of knowledge is the first and only tree in the garden that the humans eat from; the humans disobediently eat from this tree before they eat from any of the other trees.

Alternatively, given the ambiguous timeframe of the narrative, it is also possible that the humans dwell in the garden and eat from a range of its trees, excepting the tree of life, before later eating from the tree of knowledge. As no passage of time is specified in the text this could take place over a timescale of minutes or even years. In either scenario, according to Gen. 2:4b–3:24, there is a narrative problem. The humans are never prohibited from eating from the tree of life (only the tree of knowledge), there is no evidence of the humans even being aware of this tree, or eating from it ignorantly, and yet in Gen. 3:22–24 it is clear that Yhwh does not want the humans to eat from the tree.

4.7.1 Why is eating from the tree of life not prohibited by Yhwh?

As I discussed above, Stordalen and Mettinger both offer solutions to this narrative inconsistency of no prohibition being issued on eating from the tree

4. Matter in Text

of life. I shall recapitulate these solutions here before offering my own solution. For Stordalen, the tree of life is central to the plot of Gen. 2:4b–3:24; he uses an analysis of the word ־ןַ in Gen. 3:22 to argue that the humans initially ate from this tree whilst living in the garden of Yhwh and that eating from this tree only became a problem once they had eaten from the tree of knowledge.²⁸ I disputed this above on the basis that the two equivalent uses of ־ןַ that he uses to demonstrate his argument explicitly state that previous actions are to be discontinued and nowhere in Gen. 2:4b–3:24 are the humans explicitly depicted as eating from the tree of life. Furthermore, Stordalen does not address the issue of the humans gaining immortality as a result of eating from the tree of life ignorantly.

Alternatively, Mettinger argues that the humans have no awareness of the tree of life and so did not eat from it before eating from the tree of knowledge.²⁹ As I argued above, I agree with Mettinger that the humans are never told about the tree of life, but this does not address the problem that the humans could still have eaten from the tree of life ignorantly, not knowing what the tree was.

My solution to this narrative problem is based upon my analysis in 'Garden and "Wilderness"'. In this study, I proposed that considering the tree of life from a botanical perspective introduces the possibility that specific botanical features of the tree of life may have prevented or dissuaded the humans from eating its produce and so there would be no need for Yhwh to prohibit this action.³⁰ Here, I shall add and expand upon the initial set of

²⁸ Stordalen, *Echoes of Eden*, pp. 229-233.

²⁹ Mettinger, *The Eden Narrative*, pp.39-40.

³⁰ Hamon, 'Garden and "Wilderness"', p. 77.

Trees and Text

botanical attributes that I identified. If any one of the following botanical attributes applied to the tree of life, it would not be necessary for Yhwh to prohibit the humans from eating from this tree in Gen. 2:16–17, but it would be subsequently necessary for Yhwh to expel the humans from the garden in Gen. 3:22–24. Botanical attributes of the tree of life that could resolve the narrative problem related to this tree are as follows:

(1) The tree of life has not yet yielded any produce. Consider that the tree of life may have been a sapling that had not yet reached the level of maturity necessary to yield any edible produce. This is a possibility considering that the timeframe of planting the garden is not outlined in Gen. 2:8–9. In Gen. 2:8–9, Yhwh plants the trees and causes them to sprout. It is possible that this selection of trees grow at varying rates and that sufficient trees attain the level of maturity necessary to sustain the inhabitants of the garden, but that the tree of life, and perhaps some of the other species in the garden, may not yet have reached this stage of maturity. If this is the case, then there would be no need for Yhwh to prohibit eating from the tree of life in Gen. 2:16–17. Whilst there is a specific word in the Hebrew Bible for a young plant, יונק, this word appears only in Isa. 53:2, and elsewhere newly planted saplings are referred to using words for mature plants; אשל translated as ‘tamarisk tree’ (Gen. 21:33 NRSV), שרק translated as ‘vine’ (Isa. 5:2 NRSV). Linguistically, then, it is possible that the tree of life is a sapling.

Similarly is the possibility that the tree of life had reached maturity, but had not yet yielded any edible produce. Again, there would be no need for

4. Matter in Text

Yhwh to prohibit eating from the tree of life if it had not yet produced anything edible. In either scenario, no initial prohibition would be necessary, though Yhwh might have intended to issue a prohibition once the tree had yielded edible produce. According to Gen. 3:6, the humans eat from the tree of knowledge first. Once the humans gain knowledge of 'good and evil' they are aware of the consequences of eating from the tree of life and would simply have to wait for it to yield produce to attain immortality (Gen. 3:22). This is undesirable to Yhwh, so he expels the humans from the garden and restricts access to the tree (Gen. 3:23–24). The humans have proven themselves not to be trusted with the prohibition relating to the tree of knowledge, so they could not be trusted to remain in the garden and resist eating from the tree of life.

(2) The produce of the tree of life is difficult, but not impossible, to access. When reading Gen. 2:4b–3:24, we assume that the produce of the trees in the garden of Yhwh is easily accessed by the humans at ground level. Nothing in Gen. 2:4b–3:24 suggests that the humans have to cut trees down, climb them, or use tools to extend their reach in order to eat, and I am not aware of any interpretation of the text in Jewish or Christian theological tradition, or in contemporary biblical scholarship that argues that this is the case. Consider that a sufficient number of trees (but not necessarily all trees) in the garden provide the humans with food that is within their reach, but that the produce of the tree of life is high off the ground, out of human reach. In this scenario, there would be no real incentive for the humans to attempt to eat from the tree of life as they could be sustained by the great range of

Trees and Text

more easily accessible foods. Alternatively, assuming again that there is an abundance of readily accessible food provided by the trees in garden of Yhwh, there is the possibility that dense or spiky foliage on the tree of life would dissuade the humans from gaining access to its produce. In either case, there would be no need for Yhwh to prohibit eating from the tree of life as the height of its produce or its foliage would be inherently prohibitive in itself.

Furthermore, as Yhwh caused all trees in the garden to grow through some kind of divine means (Gen. 2:9), it could be argued that he intended the produce of the tree of life to grow in a manner that rendered it inaccessible to humans. Note, however, that access to the produce of the tree would have to be difficult rather than impossible, or there would be no reason for Yhwh to expel the humans from the garden. Once the humans gain revelation of 'good and evil' they may devise a way of accessing and eating the produce of the tree and gaining eternal life (Gen. 3:22). Gen. 3:23–24 shows that this would be undesirable to Yhwh, presumably because it was never the intention of Yhwh for the humans to eat from this tree; hence, he expels the humans from the garden and restricts access to the tree of life.

(3) The produce of the tree itself dissuades the humans from eating it. Whilst Gen. 2:9 states that all trees in the garden of Yhwh are 'pleasant to the sight and good for food', this does not rule out the possibility that the botanical attributes of the produce of the tree of life itself may deter the humans from eating it. For example, the produce of the tree may be encased by a hard, or

4. Matter in Text

spiky outer shell, or it may emit an unpleasant aroma strong enough to dissuade the humans from eating it; the real-world durian exhibits these botanical attributes. Whilst the produce of this tree may ultimately be 'good for food', any one of these botanical features would render the produce of the tree of life unappealing to the humans in comparison to the more easily accessible or more pleasantly aromatic foods provided by the many other trees around them.

With the produce of the tree of life itself acting as a deterrent to the humans, it would not be necessary for Yhwh to issue a prohibition on eating from this tree. Again, given that Yhwh caused this tree to grow through some kind of divine means it may be argued that he intended the produce of this tree to be relatively inaccessible. However, once the humans gain revelation of 'good and evil' it is highly likely that any initially prohibitive attributes of the produce of the tree of life will not remain sufficiently prohibitive to deter the humans from eating it and gaining eternal life. Once again, this would be undesirable to Yhwh, so he banishes the humans from the garden (Gen. 3:23–24).

Each one of the above possibilities offers a logical solution to the narrative problem of Gen. 2:4b–3:24 in which Yhwh does not initially prohibit the humans from eating from the tree of life, despite this later being revealed as undesirable to him. Each possibility has been deduced from the few narrative details provided about the tree of life within Gen. 2:4b–3:24. Owing to the economic narrative of the text, none of the possibilities can be demonstrated as definitive solutions to this problem, but equally there is nothing in the text

Trees and Text

to undermine any of the possibilities that I offer. These botanical solutions offer a credible alternative to the readings of Stordalen and Mettinger; as I demonstrated above, Stordalen's reading is based upon his problematic interpretation of the word פֶּנֶךָ, whilst Mettinger does not address the issue of the humans eating from the tree of life ignorantly. If the tree of life is in some way unavailable or inaccessible to the humans, one final question needs to be addressed; why is this tree in the garden of Yhwh at all?

4.7.2 Why is the tree of life in the garden of Yhwh?

For Stordalen, the tree of life is unremarkable within the garden; the humans eat from it all along and eating from this tree only becomes a problem once they have eaten from the tree of knowledge.³¹ In contrast, Mettinger argues that eating from the tree of life is the reward for obeying Yhwh and resisting the temptation to eat from the forbidden tree of knowledge.³² These reasons are both predominantly anthropocentric; they consider the purpose of the tree in terms of its use to the humans.

As an ecocentric alternative, I propose that Yhwh planted the tree of life in order that the first human could maintain it. Gen. 3:22–24 reveals that the tree of life holds within its physical form the capacity to impart the divine prerogative of eternal life, and that the human consumption of the tree of life is undesirable to Yhwh. The wider text of Gen. 2:4b–3:24 reveals no other explicit information about the provenance of this tree, or its continuing role in

³¹ Stordalen, *Echoes of Eden*, pp. 229-233.

³² Mettinger, *The Eden Narrative*, p. 40.

4. Matter in Text

the divine prerogative of eternal life; for example, did Yhwh originally eat from this tree to gain eternal life? Did Yhwh create this tree? Is eternal life attainable through any other means? We cannot know the answers to these questions from the text of Gen. 2:4b–3:24. However, in Gen. 2:15 the first human is appointed to ‘till’ and ‘keep’ the garden, and included in this plantation is the tree of life. As I noted above, the tree of life is not explicitly identified to the humans in the garden, but this does not matter; it must be cared for like any other tree. The reason for the presence of this tree in this garden is therefore to contribute aesthetic beauty, produce food that is good to eat (though not intended for human consumption), and to be maintained by the first human.

4.7.3 Summary

The meaning of the species עץ החיים is not explained in Gen. 2:4b–3:24, though Gen. 3:22 reveals that eating from this tree brings eternal life. I explored the problem of why no prohibition is issued by Yhwh relating to eating from this tree, despite this later being revealed as undesirable to him. I proposed a number of solutions to this narrative problem based upon gaps in the narrative of Gen. 2:4b–3:24 and possible botanical features of the tree of life: (1) the tree of life has not yet yielded any produce. (2) The produce of the tree of life is difficult, but not impossible, to access. (3) The produce of the tree itself dissuades the humans from eating it. I conceded that none of the possibilities could be demonstrated as definitive solutions to this problem, but equally there is nothing in the text to undermine any of the

Trees and Text

possibilities that I offer. Finally, I considered the reason for the presence of this tree in the garden from an ecocentric perspective; alongside adding beauty to the garden and yielding edible produce (though not produce intended for human consumption), it is placed in the garden to be maintained by the human.

4.8 'The knowledge of good and evil'

Like the tree of life, the tree of knowledge has a central role in the narrative of Gen. 2:4b–3:24, though it is unrecognisable to contemporary botany.³³ Indeed, the whole of this story pivots around the consumption of produce from this tree. The tree of knowledge is introduced in Gen. 2:9 alongside the tree of life and the other trees in the garden of Yhwh. In this verse it is revealed that this tree shares the botanical attributes common to all trees in this plantation; it is both visually beautiful and yields edible produce. Biblical scholars have devoted much attention to examining the meaning of the phrase *הדעת טוב ורע*, 'the knowledge of good and evil', and have proposed numerous solutions. Barr, Stordalen, and Mettinger each offer summaries of this scholarship in their monographs on Gen. 2:4b–3:24.³⁴ Rather than repeat these summaries, I shall discuss the three most common

³³ Rabbi Shimon proposes that the tree of knowledge is a fig tree, given that *תאנה*, the Hebrew word for fig, sounds like *ענה*, the Hebrew word for 'grief' or 'trouble', and the fig leaves of Gen. 3:8 signify impending trouble for the humans; Michael Katz and Gershon Schwartz, *Searching For Meaning In Midrash* (Lessons for Everyday Living; Philadelphia, PA: Jewish Publication Society, 2002), pp. 28-29. I am not convinced by this interpretation given that these two words do not share the same root letters so this connection is not explicitly obvious.

³⁴ James Barr, *The Garden of Eden and the Hope of Immortality* (London: SCM Press, 1992), pp. 61-62; Stordalen, *Echoes of Eden*, pp. 294-295; Mettinger, *The Eden Narrative*, pp. 62-63.

4. Matter in Text

interpretations of this phrase, which is central to understanding the material-botanical properties of the tree of knowledge.

4.8.1 Moral discernment

Stordalen attests that biblical scholars in the late nineteenth and early twentieth centuries tended to understand the phrase *הדעת טוב ורע* as the ability to exercise moral discernment within the context of Gen. 2:4b–3:24.³⁵ This is a surprising position given that nothing in this passage explicitly supports this meaning. Kyle Greenwood explains that this thesis is founded upon a comparison of the phrase *טוב ורע* in Gen. 3:22 with its usage in 2 Sam. 14:17; 1 Kgs. 3:5–9.³⁶ Crucially, however, Gen. 3:22 differs from 2 Sam. 14:17; 1 Kgs. 3:5–9 both linguistically and in terms of overall meaning. In Gen. 3:22 the humans become *לדעת*; *knowing* of good and evil, as opposed to *לשמע* (2 Sam. 14:17), and *להבין* (1 Kgs. 3:5–9), which connote the ability to *discern* between good and evil. It is therefore not clear that 2 Sam. 14:17; 1 Kgs. 3:5–9 are referring to the same kind of cognitive function as that depicted throughout Gen. 2:4b–3:24. Malcolm Clark and Barr both revisited this position in the latter half of the last century. However, both of these studies rely upon the problematic assumption that 2 Sam. 14:17 (Clark also uses 1

³⁵ Stordalen, *Echoes of Eden*, p. 294.

³⁶ Kyle Greenwood, 'Tree of Knowledge of Good and Evil', *Bible Odyssey* <<http://bibleodyssey.org/en/passages/related-articles/tree-of-knowledge>> (2017) [accessed 7 November 2017].

Trees and Text

Kgs. 3:5–9) is equivalent in meaning to Gen. 3:22, hence this theory remains flawed.³⁷

4.8.2 Sexual desire

Stordalen observes that in the late 1940s and early 1950s, a small group of scholars subscribed to the notion that knowledge of good and evil related to sexual desire.³⁸ Stordalen attributes the origins of this theory to ancient Christian theological tradition, though he does not offer any specific examples of early Christian theologians associated with this position and, as Greenwood acknowledges, this notion was also present in Jewish theology and evident in the writings of Ibn Ezra.³⁹ More recently, Barr explains that scholars have argued that the juxtaposition of טוב and רע in 2 Sam. 19:35 to connote sensory pleasure suggests that the use of the phrase הדעת טוב ורע in Gen. 2:4b–3:24 refers to sexual desire.⁴⁰ However, this proposal is flawed as 2 Sam. 19:35 does not feature the precise phrase employed in Gen. 2:4b–3:24 (הדעת טוב ורע) and this phrase is employed in relation to the senses of taste and hearing rather than to describe sexual pleasure.

Offering an alternative argument for this theory, Greenwood adds that Deut. 1:39; Isa. 7:15–16 offer examples of instances in which gaining knowledge of ‘good and evil’ indicates puberty, though this is not stated explicitly in either case and it is certainly not clear from these verses that the

³⁷ W. Malcolm Clark, ‘A Legal Background to the Yahwist’s Use of “Good and Evil” in Genesis 2–3’, *Journal of Biblical Literature*, 88.3 (1969), pp. 266–278 (268, 277); Barr, *The Garden of Eden and the Hope of Immortality*, p.62.

³⁸ Stordalen, *Echoes of Eden*, p. 294.

³⁹ Stordalen, *Echoes of Eden*, p. 294; Greenwood, ‘Tree of Knowledge of Good and Evil’.

⁴⁰ Barr, *The Garden of Eden and the Hope of Immortality*, p. 61.

4. Matter in Text

kind of knowledge gained is equivalent to sexual desire.⁴¹ Upon eating from the tree of knowledge, the humans do gain awareness of their nudity and partially cover their bodies, more specifically their genitals, with loincloths (Gen. 3:7). Crucially though, nothing in Gen. 2:4b–3:24 states that this action is related to sexual desire; indeed, Gen. 3:10 suggests that the purpose of the humans covering themselves with loincloths is to hide their bodies from Yhwh rather than from each other.⁴²

4.8.3 Wide-ranging knowledge

Stordalen and Mettinger both observe that the prevailing theory amongst biblical scholars is that the meaning of the phrase ‘knowledge of good and evil’ connotes some kind of general, or wide-ranging, knowledge; Wellhausen, Humbert, Gerhard von Rad, Westermann, and Mettinger all take this position.⁴³ In contrast to these scholars, Stordalen avoids committing to any particular position himself, though he acknowledges that eating from the tree imparts a ‘relevant’ knowledge as Gen. 3:21 demonstrates that it is appropriate for humans to be clothed.⁴⁴ Zevit does not engage with the translation of the phrase, but suggests that eating from the

⁴¹ Greenwood, ‘Tree of Knowledge of Good and Evil’.

⁴² Barr expands on the role of ‘clothing’, that is to say loincloths, in Gen. 2:4b–3:24, arguing that clothing serves to distinguish humans from animals in the narrative and that being fully clothed was connected to propriety in Hebrew culture; Barr, *The Garden of Eden and the Hope of Immortality*, pp. 62-64.

⁴³ See Stordalen, *Echoes of Eden*, p. 294; Mettinger, *The Eden Narrative*, p. 63.

⁴⁴ Stordalen, *Echoes of Eden*, pp. 229, 294-295.

Trees and Text

tree of knowledge imparts 'wisdom' in the sense of 'abstract cognitive thinking' without elucidating this thesis further.⁴⁵

The theory of wide-ranging knowledge is based upon the notion of merism, a literary device in which two opposite things are juxtaposed in order to connote the sense of a whole. Mettinger offers a range of examples of merisms in the Hebrew Bible that are by no means exhaustive; 'sea' and 'dry land' refer to the earth in its entirety in Ps. 95:5, 'young' and 'aged' refer to all people in Job 29:8, and the 'sole of the foot' and the 'crown of the head' refer to the whole body in Isa. 1:6.⁴⁶ This theory proposes that the phrase טוב ורע featuring in Gen. 2:4b–3:24 is also a merism which functions by connoting a knowledge of all things good, all things bad, and intimating a knowledge of all things in between.⁴⁷ But what precisely is meant by this kind of knowledge?

The only other occurrence of the precise phrase טוב ורע in the Hebrew Bible is in Deut. 1:39 '[a]nd as for your little ones, who you thought would become booty, your children, who today do not yet know right from wrong, they shall enter there; to them I will give it, and they shall take possession of it' (NRSV). Morton Narrowe argues that in this verse טוב ורע functions as a merism connoting the failure of the young to know 'good from bad' in the sense of lacking worldly knowledge or maturity.⁴⁸ So could טוב ורע connote the same kind of worldly knowledge in Gen. 2:4b–3:24?

⁴⁵ Zevit, *Garden of Eden*, pp. 170-171

⁴⁶ Mettinger, *The Eden Narrative*, p. 63.

⁴⁷ Mettinger, *The Eden Narrative*, p. 63.

⁴⁸ Morton H. Narrowe, 'Another Look at the Tree of Good and Evil', *Jewish Bible Quarterly*, 26.3 (1998), pp. 184-188 (184-185).

4. Matter in Text

Ellen van Wolde uses Deut. 1:39 to argue this very point, and she proposes that human maturation is a central theme of Gen. 2:4b–3:24, splitting the narrative into four developmental stages: before birth (Gen. 2:4b–6), childhood (2:7–25), adolescence (Gen. 3:1–7), and maturity (Gen. 3:8–24).⁴⁹ Given that the first two humans live in a purpose-made garden with no other human interaction it is reasonable to assume that they are not mature or worldly wise in the sense that they have never had to engage in arduous agricultural and domestic labour or develop interpersonal skills other than in their relationship with each other. However, at no point in Gen. 2:4b–3:24 are the first two humans referred to as children or adolescents; on the contrary they are described using words for mature adults throughout אדם (human, man), איש (man), and אשת (woman).

In Gen. 3:6, the first woman observes of the tree of knowledge that ונהמד העץ להשכיל, 'the tree was to be desired to make one wise' (NRSV). Understanding the kind of 'wisdom' conveyed in this verse is therefore key to understanding the meaning of the phrase 'knowledge of good and evil'. The word שכל, which connotes the desirable attribute that is available from the tree of knowledge, has a wide semantic range including understanding (Isa. 41:20), prudence (Amos 5:13), success (Josh. 1:7–8), prosperity (Jer. 10:21), and wisdom (Job 22:2), but, crucially for this debate, never maturity, or indeed, moral discernment or sexual desire. It is therefore evident that the phrase טוב ורע in Gen. 2:9, 17 cannot relate to maturity as it does in Deut. 1:39 as this would not be consistent in meaning with the use of שכל in Gen.

⁴⁹ Ellen van Wolde, *A Semiotic Analysis of Genesis 2–3* (Studia Semitica Neerlandica 25; Assen: Van Gorcum, 1989), pp. 218, 223.

Trees and Text

3:6. Alternatively, the thesis that טוב ורע functions as a merism connoting wide-ranging knowledge is wholly compatible with the use of שכל, which seems to represent wisdom in this context. This reflected in the translations of Gen. 3:6 JPS NIV NKJV NRSV.

The actions of the humans after eating from the tree of knowledge contribute towards understanding the kind of knowledge that they attain. Gen. 3:7 states that after eating from the tree of knowledge, the eyes of the humans were opened and that they knew that they were naked. Elsewhere in the Hebrew Bible, the opening of eyes is a synecdoche for the gaining of knowledge or revelation; Num. 24:4,16; Isa. 44:18. Whilst Gen. 3:7 does not explain the precise kind of knowledge attained by the humans, the language of the humans' eyes opening reinforces that the kind of knowledge gained is not consistent with moral discernment or sexual desire.

Gen. 3:22 reveals that through eating from the tree of knowledge and gaining the ability to know good and evil, the humans have gained a likeness to Yhwh. כְּאֵלֹהִים, the word connoting likeness in Gen. 3:22 is ambiguous in meaning and can serve to represent both a precise equivalence (Ezek. 48:8), or a figurative similarity (2 Sam. 2:18) between things. Given that Yhwh exerts authority over the humans, judging their actions and expelling them from the garden, it seems that the humans have not fully attained God-like status and are still subject to his control. It therefore seems that the kind of knowledge that the humans attain should not be understood as omniscience, but rather as a wide-ranging knowledge of the physical world of the text. Indeed, the fact that the humans might now 'reach out' and eat from the tree of life (Gen. 3:22) implies that they now know more about this unique

4. Matter in Text

tree and the consequences of eating from it. Furthermore, it seems that the knowledge gained by the humans includes agricultural and domestic skills as Yhwh exiles the humans out of the garden without instruction in these.

Finally, the botanical-physiological process by which this impartation of knowledge happens is not explained in the text. Does the produce of the tree of knowledge act as a repository of knowledge that is then consumed and gained, or does the consumption of the produce bring about some physiological change that results in the gaining of this knowledge? The latter seems to be more compatible with the ontologies evident in the wider text of the Hebrew Bible, where the consumption of the produce of certain plant species elicits physiological consequences in humans such as drunkenness (Gen. 9:20–22), pregnancy (Gen. 30:14–17), and sustenance (1 Sam. 30:11–12). In accord with this observation, Yael Avrahami argues that the repetition of taste, sight, and knowledge throughout Gen. 3:5–7 demonstrates a connection between the senses and the gaining of knowledge.⁵⁰

4.8.4 Summary

Considering the range of theories that propose an interpretation of the phrase טוב ורע, it is evident from the discussion above that there are serious weaknesses with the moral discernment and sexual desire theories. In contrast, I have shown that there is a strong case to argue that the phrase

⁵⁰ Yael Avrahami, *The Senses of Scripture: Sensory Perception in the Hebrew Bible* (London/New York: T & T Clarke, 2012), pp. 98-99.

Trees and Text

טוב ורע functions as a merism in Gen. 2:9, 17, and connotes a wide-ranging knowledge of the physical world depicted in the text. The tree of knowledge therefore yields produce whose consumption results in the impartation of a wide-ranging knowledge.

4.9 The material-botanical properties of the tree of knowledge

Following its introduction in Gen. 2:9, the tree of knowledge reappears in Gen. 2:16–17 where it is distinguished from all other trees in the garden as the only tree from which the humans are forbidden to eat. This prohibition is crucial to the development of the narrative of Gen. 2:4b–3:24. Whilst the humans are made aware of the tree of knowledge through the prohibition issued by Yhwh, the text does not explain how the humans are to identify this tree within the garden in order to prevent them from eating its produce accidentally. Perhaps the prohibition is issued to the humans within the vicinity of the tree so that Yhwh can make the tree known to them? Gen. 2:17 is also significant in that it is the last occasion on which the tree of knowledge is mentioned explicitly by name in Gen. 2:4b–3:24. As I identified above, whilst the tree of knowledge plays a major role in this narrative, it is most commonly referred to descriptively, rather than by name; Gen. 3:3, 6, 11, 12, 17 (cf. Gen. 2:9, 17). Whilst these verses serve to efface the name of the tree of knowledge from the text, they still intimate the presence of the tree as a physical entity within the material world of Gen. 2:4b–3:24. These verses reiterate the physical location of the tree within the garden of Yhwh (Gen. 3:3), the sensory and physiological impacts of the tree upon the

4. Matter in Text

humans (Gen. 3:6–7, 12), and the prohibition on eating from the tree (Gen. 3:11, 17).

Despite the warning of Yhwh in Gen. 2:17 that states that eating from the tree of knowledge will cause death, the latter portion of Gen. 2:4b–3:24 reveals that this is not the case, or at least eating from this tree does not cause *immediate* death as suggested by Gen. 2:17. Within Gen. 2:4b–3:24 there is no explanation of how the humans learn what death actually is. Whether the humans gain this knowledge or whether the prohibition of Yhwh acts as a deterrent without the humans fully comprehending what ‘death’ means is unclear; either way the words of Yhwh draw the attention of the humans to the unique agency of this tree.⁵¹ The only explicit change that the humans undergo as a result of eating produce from this tree is the revelation of their own nudity (Gen. 3:7), though there are, of course, a range of secondary consequences that are precipitated by Yhwh once he discovers that the humans have disobeyed him (Gen. 3:14–24).

The consequences of eating from the tree of knowledge are therefore somewhat ambiguous. The subject of whether Yhwh lies in Gen. 2:17 has been the subject of heated debate.⁵² It is not necessary to repeat this discussion here as it has no bearing on how the tree of knowledge is understood in material-botanical terms. It suffices to observe that, on the

⁵¹ In contrast, Kierkegaard argues that the first human could not have understood the prohibition of Yhwh before eating from the tree of knowledge and gaining this knowledge and, furthermore, that this prohibition induces anxiety within him as it introduces the possibility of freedom or of being able; David James and Douglas Moggach, ‘Bruno Bauer: Biblical Narrative, Freedom and Anxiety’, in J. Stewart (ed.), *Kierkegaard and His German Contemporaries, Tome II: Theology* (Kierkegaard Research: Sources, Reception and Resources, vol. 6; Aldershot/Burlington, VT, Ashgate, 2007), pp. 1-22 (8).

⁵² See Walter Moberly, [review of *The Garden of Eden and the Hope of Immortality*, by James Barr], *Journal of Theological Studies*, 45.1 (1994), pp. 172-175; James Barr, ‘Is God a Liar? (Genesis 2–3) – And Related Matters’, *Journal of Theological Studies*, 57.1 (2006), pp. 1-22.

Trees and Text

basis of the narrative events depicted in Gen. 2:4b–3:24 as a whole, the warning of Yhwh in Gen. 2:17 seems to be more of a hyperbolic statement intended to serve as a deterrent, rather than an outright lie.⁵³

When I examined the tree of life above, I observed a narrative inconsistency between Gen. 2:16–7; 3:22–24, where no prohibition is issued on eating from the tree of life, despite this being undesirable to Yhwh. By way of resolving this discrepancy, I proposed that the prohibition upon eating from this tree might not have been necessary due to a range of material-botanical factors. Applying the same kind of reasoning to the tree of knowledge, it is a possibility that Yhwh explicitly prohibited the humans from eating the produce of this tree for two reasons. Firstly, like eating from the tree of life, eating from the tree of knowledge was undesirable to Yhwh; this is demonstrated by Gen. 2:16–17; 3:22. Secondly, whilst the botanical features of the tree of life may have rendered a prohibition on eating its produce unnecessary, in contradistinction, the botanical features of the tree of knowledge may have rendered its produce *especially* attractive to the humans in comparison to the other trees in the garden of Yhwh, hence the need for this specific prohibition.

This possibility requires some elucidation. As I acknowledged above, nothing in Gen. 2:4b–3:24 explains what constitutes a beautiful tree or produce that is good to eat. Nevertheless, given the range of tree species in the garden of Yhwh that is implied by Gen. 2:9, it is likely that these trees exhibit varying degrees of beauty, and similarly that collectively their produce

⁵³ Barr argues that the exact warning phrase in Gen. 2:17 is spoken to Jonathan in 1 Sam. 14:43–45, where Jonathan also survives, though the narrative and historical contexts of these two verses are vastly different; Barr, 'Is God a Liar?', p. 8.

4. Matter in Text

represents a diverse range of colours, shapes, tastes, textures, aromas. Based on this variety, then, it remains a possibility that over against the other trees in the garden of Yhwh, the tree of knowledge is especially beautiful and that its produce could look particularly inviting to eat. In addition to these attributes, the first woman also observes that ‘the tree was to be desired to make one wise’ (Gen. 3:6 NRSV). I discussed the Hebrew word representing desire in this verse, תַּמְדָּה, above in respect to the aesthetic value of the trees in the garden of Yhwh and found that this word is usually employed to connote the desire of highly valuable material possessions or sexual attraction. In addition to the beauty of the tree of knowledge itself, the produce of this tree is highly visually alluring, both in terms of its edibility and by some other visual indicator not outlined in the text that suggests to the woman that it is desirable to ‘make one wise’. These textual indicators underscore the allure of this tree and consequently the need for the explicit prohibition upon eating from it.

Consistent with my analysis of the tree of life, the final matter to attend to is the purpose of the tree of knowledge in the garden of Yhwh. Stordalen is silent on this issue, whilst for Mettinger, the tree of knowledge presents a divine test; if the humans are obedient and refrain from eating the produce of this tree, they will be rewarded by being permitted to eat from the tree of life.⁵⁴ Gen. 2:4b–3:24 does not explain the function of the tree of knowledge explicitly, though I demonstrated above that the consumption of its produce imparts wide-ranging knowledge. This specific kind of knowledge is a divine

⁵⁴ Mettinger, *The Eden Narrative*, p. 40.

Trees and Text

prerogative, and Yhwh does not intend for it to be attained by the humans.⁵⁵ So why is this tree planted in the garden? At the very least, Gen. 2:9 and 3:6 show that the tree of knowledge contributes aesthetic beauty to the garden. In addition to this, and using the same ecocentric approach as that applied to examining the tree of life, the textual information in Gen. 2:4b–3:24 suggests that the purpose of Yhwh placing the tree of knowledge in his garden is so that it can be maintained by the first human in his role as ‘tiller’ and ‘keeper’ (Gen. 2:15). As I noted above, the tree of knowledge must somehow be made known to the humans by Yhwh in order that they do not eat from it accidentally. And whilst the temptation to eat from this tree is great, this must not affect the role of the first human, whose primary concern must be his appointment to maintain this tree. The tree of knowledge is therefore distinct amongst the trees of the garden of Yhwh. It is the only tree from which the humans are prohibited to eat and whose unique material-botanical properties are highly alluring to the humans.

4.9.1 Summary

I proposed that an explicit prohibition upon eating from the tree of knowledge was necessary firstly because this was undesirable to Yhwh, but secondly perhaps because of the unique material-botanical attributes of this tree. Gen 3:6 implies that the tree of knowledge may have appeared especially beautiful and its produce looked particularly inviting to eat over against the other trees in the garden; indeed, the woman sees some undisclosed visual

⁵⁵ Mettinger, *The Eden Narrative*, p. 60.

4. Matter in Text

indicator related to the tree that suggests to her that it is capable of imparting wisdom. Finally, mirroring the tree of life, this tree seems to have been placed in the garden to contribute beauty, edible produce (though again not produce intended for human consumption), and to be maintained by the human.

4.10 The material-botanical properties of the fig tree

Gen. 3:7 is a key verse in Gen. 2:4b–3:24 as it depicts the only physiological consequence of the humans disobeying Yhwh and eating from the tree of knowledge; they gain revelation of their nudity. However, this verse is also important from a non-anthropocentric perspective as it intimates the presence of the fig tree; the only species of tree recognisable to contemporary botany depicted in Gen. 2:4b–3:24. As I identified above, Gen. 3:7 does not explicitly state that a fig tree is planted in the garden of Yhwh, though the presence of this species is suggested on the basis that the humans sew the leaves of this tree together in order to cover themselves. This verse therefore stands in stark contrast to Gen. 2:25 where prior to eating from the tree of knowledge the first humans are naked and have no desire to cover themselves. The Hebrew word תאנים featuring in Gen. 3:7 is widely understood to represent the common fig, *Ficus carica*.⁵⁶ In real-world botanical terms, the common fig is a deciduous tree that sheds its leaves

⁵⁶ Helmer Ringgren, 'תאנים', in G. J. Botterweck, H. Ringgren, and H.-J. Fabry (eds.), *Theological Dictionary of the Old Testament* (vol. 15; Cambridge/Grand Rapids, MI, Wm. B. Eerdmans, 2006), pp. 546-547 (546).

Trees and Text

during the winter. Could it be argued, then, that the events of Gen. 3:7 unfold at the time of year when this tree bears leaves?

I do not want to make this claim here. As I discussed above, the garden of Yhwh depicted in Gen. 2:4b–3:24 apparently yields a perennially available supply of tree produce; the text does not state this explicitly, but it is implied given the lack of any other plant species in the garden of Yhwh and the direct instruction to eat from the trees in the garden (Gen. 2:16). These textual details are inconsistent with our real-world knowledge of both seasonal environmental changes and of the common fig, which yields produce intermittently throughout the year. Real-world botanical data on the *Ficus carica* cannot be applied to the fig of Gen. 3:7 without assuming that seasons apply to the garden of Yhwh and humans have some other source of food in the winter months when trees are not productive.

As I acknowledged above, Zevit explores this possibility, arguing that the humans ate from trees and from fields planted with agricultural crops outside the garden of Yhwh, but, as Zevit himself recognises, this is pure conjecture with no textual basis.⁵⁷ Based on textual data alone, it is more accurate to conclude that whilst the leaves of the fig, a real-world species, are present in the garden of Yhwh, seasonal and botanical rules do not apply to this space.

Based upon the little textual data available in Gen. 3:7, the fact that the humans are able to construct two loincloths from the leaves of the fig tree suggests something of its size and maturity; a sapling probably could not yield sufficient leaves to make these garments. The extent to which the

⁵⁷ Zevit, *Garden of Eden*, p. 91.

4. Matter in Text

removal of leaves from the fig causes it any damage is not detailed in Gen. 3:7. At the very worst, removing a large proportion of the leaves from a very young sapling could kill the tree, and removing any leaves at all would seemingly constitute a destructive act that would contravene the appointment of the first human to ('till' and) 'keep' the garden (Gen. 2:15 NRSV).⁵⁸

Deist observes that the fig is amongst the most commonly occurring species of tree in the Hebrew Bible.⁵⁹ This suggests something of the cultural importance of this species in ancient Israelite society and examining the fig within the Hebrew Bible as a whole contributes to understanding its appearance and function in Gen. 2:4b–3:24. Most strikingly, biblical Hebrew delineates different categories of edible fig, intimating the prominent place of this fruit in the diet of ancient Israel. In the Mediterranean climate, the fig tree crops biannually and figs may be eaten at different stages of this cycle.⁶⁰ Consequently, Biblical Hebrew distinguishes between the early unripe fig which is still edible, פגי, (Song 2:13), the first ripe figs of the season, בכורה, (Hos. 9:10; Mic. 7:1), and the mature fig, תאנים, (Num. 13:23; Neh. 13:15; note that this is the same word for the fig tree itself).⁶¹ Perhaps the depiction of edible figs throughout the Hebrew Bible underscores their place as a fruit commonly recognised as being 'good to eat' in Israelite culture? If so, this

⁵⁸ Notably, this scenario has not yet been addressed in stewardship scholarship.

⁵⁹ Deist, *The Material Culture of the Bible*, p. 137.

⁶⁰ Ringgren, 'תאנה', p. 546.

⁶¹ Ringgren, 'תאנה', p. 546.

Trees and Text

would be consistent with the wider trend of cultivating figs for food throughout ancient Western Asia.⁶²

Examining the numerous occurrences of figs throughout the Hebrew Bible as a whole, it is apparent that on some occasions the fig serves as a metaphor for the favour of Yhwh. In Deut. 8:8, the fig is mentioned as one of the attractive features of the fertile land promised to the Israelites by Yhwh, and in contrast, there are no figs in the hostile wilderness of Zin (Num. 20:5). In Ps. 105:32–33, Yhwh punishes Egypt by striking its fig trees with hail and lightning. In Jer. 8:13 the withering of the fig tree is a product of divine judgment. Similarly in Hag. 2:19 the fig tree is unproductive because the temple of Jerusalem has not yet been completed. These verses stand in contrast to Joel 2:22 where Yhwh rewards Israel by making its fig trees as abundant as possible.

The intimated presence of the fig tree in the garden of Yhwh, a purpose-made home in which the first humans live an idyllic existence, is therefore consistent with the connection of the fig with the favour of Yhwh in the wider text of the Hebrew Bible. Furthermore, the act of the humans taking the leaves of the fig (Gen. 3:7), a violation of the appointment of the first human to ‘till’ and ‘keep’ the garden (Gen. 2:15), might subtly suggest that at this narrative juncture the humans are falling out of favour with Yhwh.

⁶² Margareta Tengberg, ‘Fruit-Growing’ in D. T. Potts (ed.) *A Companion to the Archaeology of the Ancient Near East* (Blackwell Companions to the Ancient World, vol. 1; Chichester: Blackwell Publishing Company, 2012), pp. 191-192 (191).

4. Matter in Text

4.10.1 Summary

Gen. 3:7 intimates the presence of the fig in the garden of Yhwh. From the wider text of the Hebrew Bible, this can be identified as the real-world species *Ficus carica*. Whilst in real-world botanical terms this species is deciduous, this property does not seem to apply to the fig tree in Gen. 2:4b–3:24. The size and maturity of this tree is intimated given that the humans can construct loincloths from the leaves of this tree; this might not be possible with a sapling. I proposed that the place of the fig as a fruit commonly acknowledged as ‘good to eat’ in Israelite culture is perhaps underscored throughout the Hebrew Bible as a whole, which uses three distinct words to refer to specific types of edible figs produced throughout the agricultural year. I showed that the fig is apparently connected to the favour of Yhwh in the wider text of the Hebrew Bible; the presence of the fig in the garden of Yhwh, a purpose-made home in which the humans live an idyllic existence is therefore consistent with this. Furthermore, the act of the humans taking the leaves of the fig might subtly suggest that at this narrative juncture the humans are falling out of favour with Yhwh and contravening the appointment of the first human to ‘till’ and ‘keep’ the garden.

5. Matter in Text:

Exploring the agency of the trees in Gen. 2:4b–3:24 using the *Green Bible*

5.1 Introduction

This chapter continues my ‘matter in text’ analysis of the trees in Gen. 2:4b–3:24, focussing upon the manner in which trees exhibit agency within the narrated world of this text. In this analysis, I shall use Bennett’s model of distributive agency to explore the agency of the trees depicted in Gen. 2:4b–3:24 as I demonstrated that this model is the most consistent with the notion of non-human agency described in material ecocritical theory.

Consistent with the ‘matter in text’ methodology applied in the previous chapter, my analysis is founded primarily upon explicit textual data relating to the agentic effects of trees within the physical world of Gen. 2:4b–3:24. I therefore take care to distinguish between that which can be concluded from explicit textual data and the interpretive possibilities arising from the economical narrative style of the text. The analysis that follows differs from my previous chapter as I move away from examining relevant passages from the wider text of the Hebrew Bible and comparing and contrasting my reading with analyses of the text undertaken within the corpus of contemporary critical biblical scholarship in order to concentrate on the primary aim of discussing the agency of the trees in the Gen. 2:4b–3:24 according to the model of distributive agency. Consistent with the approach

5. Matter in Text

employed in the previous chapter, I continue to engage with real-world environmental and botanical sciences to illustrate; this time to show how they contribute to understanding the agency of trees in the physical world of Gen. 2:4b–3:24. Once again, I am careful to distinguish between the explicit words of Gen. 2:4b–3:24 and the interpretive possibilities that I discuss in light of my engagement with these external sources.

In the analysis that follows, I examine the agency of trees in respect to (1) their impact upon the primordial environment of Gen. 2:4b–3:24, (2) their sensory and physiological impacts upon the humans, and (3) the unique agencies of the tree of life and the tree of knowledge. Following the format of the previous chapter, each sub-section concludes with a summary.

5.2 Changing the environment of the primordial earth

Owain Jones and Paul Cloke's monograph *Tree Cultures* predates material ecocriticism, though in this study they propose four different categories of agency exhibited by trees in real-world scenarios that are compatible with the notion of distributive agency applied to Gen. 2:4b–3:24 in this study.¹ These kinds of agency are therefore a helpful starting point to this discussion and may be summarised as follows.

¹ Owain Jones and Paul Cloke, *Tree Cultures: The Place of Trees and Trees in their Place* (Oxford/New York: Berg, 2002), pp. 54-66.

Trees and Text

(1) 'Agency as routine action': ongoing processes of existence such as photosynthesis, growth, reproduction, colonisation, represent agentic processes that impact the environment.²

(2) 'Agency as transformative action': trees transform environments and specific places by their presence, through their growth, their ability to spread, and their seasonal cycles.³

(3) 'Agency as purposive action': the agency of trees may be described as intentional in that their DNA details a 'plan'; 'an implicit blueprint with instructions for its construction and physiological functioning'.⁴

(4) 'Agency as non-reflexive action': trees participate in creative actions and exhibit creative potentials. Trees also have a capacity to engender affective and emotional responses from the humans who dwell amongst them.⁵

It is evident that the trees of Gen. 2:4b–3:24 explicitly demonstrate 'agency as routine action' as they yield edible produce (Gen. 2:9), 'agency as transformative action' as they transform the physical world of the text (Gen.

² Jones and Cloke, *Tree Cultures*, pp. 54-57; Owain Jones and Paul Cloke, 'Non-human Agencies: Trees in Time and Place', in C. Knappett and L. Malafouris (eds.), *Material Agency: Towards a Non-Anthropocentric Approach* (New York: Springer, 2008), pp. 79-96 (80-81).

³ Jones and Cloke, *Tree Cultures*, pp. 57-59; Jones and Cloke, 'Non-human Agencies', p. 81.

⁴ Jones and Cloke, 'Non-human Agencies', p. 81; Jones and Cloke, *Tree Cultures*, pp. 59-63.

⁵ Jones and Cloke, *Tree Cultures*, pp. 63-66; Jones and Cloke, 'Non-human Agencies', p. 81. Note that agency and non-reflexive action is also linked to the notion of 'haunting', but as there are no explicit examples of this in Gen. 2:4b–3:24 it is not necessary to expand upon this concept here.

5. Matter in Text

2:4b–9), and ‘agency as non-reflexive action’ as they engender affective and emotional responses from the humans (Gen. 3:6). Real-world botanical science suggests that the trees of the text would also exhibit ‘agency as purposive action’ in their seeds and DNA, but this cannot be concluded from explicit textual data, so I shall not devote space to speculating about this here.

Rather than proceeding to explore the agency of trees in Gen. 2:4b–3:24 using the specific categories of agency proposed by Jones and Cloke, I have structured my analysis so that it follows the events depicted in the narrative in an approximately sequential manner. This method of presentation maintains consistency with the ‘matter in text’ analysis of the previous chapter. Furthermore, this structure allows me to remain focussed upon the wider model of distributive agency; this is especially important as I identify additional kinds of agency exhibited by the trees in Gen. 2:4b–3:24 to those acknowledged by Jones and Cloke.

Following the narrative of Gen. 2:4b–3:24 I shall begin by exploring the manner in which the trees of Gen. 2:4b–3:24 change the physical environment of the text; in the words of Jones and Cloke, the manner in which the trees exhibit ‘transformative action’.⁶ In the earliest stage of existence depicted within the pericopé, the physical world of Gen. 2:4b–3:24 is seemingly a vast plain of soil over which the sky extends (Gen. 2:4b–5). Whilst ‘plants’ and ‘herbs’ feature in Gen. 2:5 (NRSV) they are mentioned in order to underscore the initial emptiness of this primordial realm and they are not physically present. Yhwh creates the first human from the soil of the

⁶ Jones and Cloke, *Tree Cultures*, pp. 57-59.

Trees and Text

ground, and then begins to plant a garden (Gen. 2:7–9). As I argued above, at this narrative juncture it seems that Yhwh plants seeds into the ground and *causes* them to sprout, implying that they are made to grow at a faster rate than that of their natural growth. This accelerated rate of growth is presumably required to meet the nutritional needs of the first human, who would not be able to survive without food for the length of time that it would take for the trees to start yielding edible produce naturally.

Jones and Cloke identify that the agency of trees is apparent over timescales that can exceed timescales compatible with the kinds of agencies associated with human actions.⁷ Jeffrey Cohen develops this idea in his monograph *Stone* in which he argues that, over geological timescales, rocks are dynamic; they erode, they are formed, they have the power to move continents and change landscapes.⁸ It seems that in Gen. 2:7–9, the agency of trees as producers of food ('routine action' according to Jones and Cloke) is acknowledged by Yhwh and accelerated so that it is realised in the immediate timescale needed to sustain the life of the first human.⁹ This observation is interesting within the context of Gen. 2:4b–3:24, where the narrative as a whole unfolds over a timescale more compatible with human lifespans than tree lifespans, telling the story in terms of human actions rather than in terms of the growth of trees as they mature, spread seeds, and new trees take root throughout the garden changing its layout and border. It is true that early humans had extraordinarily long lifespans in the book of Genesis (see, for example, Gen. 5:3–32), though the narrated action still

⁷ Jones and Cloke, 'Non-human Agencies', p. 82.

⁸ Jeffrey Jerome Cohen, *Stone: An Ecology of the Inhuman* (Minnesota, MN: University of Minnesota Press, 2015), p. 16.

⁹ Jones and Cloke, 'Tree Cultures', pp. 54-56.

5. Matter in Text

takes place over relatively short spaces of time that are consistent with that of human actions and agencies, rather than that of tree actions and agencies.

Describing Gen. 2:4b–9 in terms of the theory of distributive agency, then, these verses represent the combination of discrete agencies, Yhwh, soil, water, seeds (the presence of seeds is implied by the process of planting), and the first human (more precisely the urgency of his nutritional needs), that result in the emergence of trees. There is therefore some consistency in these verses with contemporary botany, which acknowledges that plant life is sustained by soil, water, light, and carbon dioxide. Crucially in Gen. 2:4b–3:24, there is no mention of the sun, daylight or night time; soil, water, and the intervention of Yhwh are therefore the primary catalysts of life in this pericopé. I am not suggesting that the narrative of Gen. 2:4b–3:24 takes place in a world without light, but rather that this text *implies* the presence of light (the aesthetic value of trees in Gen. 2:9 suggests the presence of light) whilst placing emphasis on the agencies of soil, water, and Yhwh.

The introduction of trees to the vast primordial soil plain of Gen. 2:4b–6 radically changes this landscape. The agency of trees at this early narrative juncture is conveyed by the image of trees being caused to grow from the ground by Yhwh and interrupting the otherwise constant soil plain that covers the face of the earth (Gen. 2:8–9). From the perspective of contemporary environmental science, the introduction of trees to the local ecosystem of the Eden region would precipitate numerous changes attesting to the agency of these trees. Trees would draw water and nutrients from the

Trees and Text

soil, changing its chemical composition and level of hydration. Transpiration from the leaves of the trees would introduce water vapour directly into the air and, given the apparent scale of this plantation, this would increase local humidity and potentially cloud coverage as an increased amount of water vapour is released into the air. By day, the tree canopy of the garden would shade the garden from the sun, limiting its ambient temperature and protecting its human inhabitants from over-exposure to harmful ultraviolet light. By night, the tree canopy would insulate the ground beneath it, raising its mean temperature in relation to the ground temperature of the surrounding landscape.

Of course, it would be anachronistic to expect that these kinds of environmental changes relating to the agency of trees should be depicted in Gen. 2:4b–3:24, and one cannot assume that these changes do occur within the physical world of the text as nothing explicitly states that this is the case. Indeed, considering only the explicit textual data of Gen. 2:4b–6 the primary agentic function of the trees in these verses is to transform the appearance of the physical environment. As Ingold says of Pieter Bruegel's painting *The Harvesters*, 'the place was not there before the tree, but came into being with it'.¹⁰ In other words, the landscape of Eden is forever changed by the presence of its tree plantation; trees have a significant spatial agency within the physical world of Gen. 2:4b–3:24, defining and delineating the garden of Yhwh in contrast to the remainder of the vast expanse of soil that lies outside it.

¹⁰ Tim Ingold, 'The Temporality of the Landscape', *World Archaeology*, 25 (1993), pp. 152-174 (167).

5. Matter in Text

5.2.1 A porous vegetal border

According to the explicit textual details of Gen. 2:4b–3:24, the primordial world depicted in this passage begins as a vast empty plain of soil. Yhwh plants numerous and diverse tree species to form a garden and the presence of these trees delineates the garden of Yhwh from the expanse of soil that surrounds it. Trees are the only plant species depicted in the garden of Yhwh throughout Gen. 2:4b–3:24. Whilst real-world ecology/botany would suggest that other plant species would populate this space no textual indicators in the entirety of this pericopé suggest the presence of any plant species other than trees in the garden of Yhwh.

Gen. 2:5 refers to the absence of ‘plants’ and ‘herbs’ in the ground, though Gen. 2:4b–3:24 never states at what point the land outside the garden is populated with plant species. This population may be concurrent with the planting of the garden of Yhwh; this would provide vegetal food and shelter for any of the animals of Gen. 2:19, should they venture outside the garden. Alternatively, the emergence of plant species outside the garden might coincide with the expulsion of the humans from the garden, given that arduous agricultural work and domestic processing are central to their new lifestyle (Gen. 3:18). The types of plant species outside the garden are partially detailed in Gen. 2:4b–3:24; ‘thorns and thistles’, ‘plants of the field’ (Gen. 3:18 NRSV), and cereal(s) from which bread can be made (Gen. 3:19). Crucially, trees are not depicted outside the garden of Yhwh. Regardless of when plant life emerges outside the garden of Yhwh, then, there is an ecological (and spatial) distinction in Gen. 2:4b–3:24 between the garden of

Trees and Text

Yhwh, which comprises exclusively of trees, and the surrounding land, which at some point during the narrative becomes populated with a variety of other plant species. It is therefore necessary to consider the agential role of trees at the border between these two spaces. Indeed, whilst the text does not state this explicitly, as I argued in 'Garden and "Wilderness"', it seems that this is a tree-lined border as opposed to a wall.¹¹

As I discussed above, the Hebrew word גן used to refer to the plantation of trees in Gen. 2:4b–3:24 represents a range of different types of planted spaces throughout the wider text of the Hebrew Bible. In some instances, it seems that גן can represent walled gardens; the royal gardens of 2 Kgs 25:4; Neh. 3:15; Jer. 39:4; 52:7 are probably walled given the depiction of adjacent walls in these verses.¹² In contrast, there are no explicit textual indicators to suggest that the gardens of Deut. 11:10; 1 Kgs 21:1; Isa. 58:11 are enclosed by a wall.¹³ The same is true of the גן featuring in Gen. 2:4b–3:24. Only the 'way' to the tree of life (Gen. 3:24) which presumably runs from the outside of the garden to somewhere in its midst intimates any kind of structure to the plantation, but this is a path and not a wall. Given that there is no mention of Yhwh constructing a wall around the garden in Gen. 2:4b–3:24, but Yhwh exclusively plants trees, it therefore seems that trees mark the boundary between the garden and the surrounding land. If this is the case, trees would lend the boundary of the garden a certain degree of 'porosity' in that they would permit the passage of leaves, seeds, and other

¹¹ Hamon, 'Garden and "Wilderness"', p. 75.

¹² Hamon, 'Garden and "Wilderness"', p. 75.

¹³ Hamon, 'Garden and "Wilderness"', p. 75.

5. Matter in Text

vegetal matter from the garden into the surrounding land.¹⁴ This degree of ‘porosity’ may even cause the garden to spread as the seeds of trees settle in the land outside the garden, germinate into saplings, and eventually mature trees; a process that Jones and Cloke refer to as ‘colonization’.¹⁵ Conversely, the garden of Yhwh might also be ‘colonized’ by plant species from the surrounding land outside.

This suggests that the appointment of the first human to ‘till’ and ‘keep’ the garden (Gen. 2:15), includes managing the reproductive agency of the trees in the sense of preventing the spread of trees into the surrounding land and so maintaining the original border of the garden. The role may also include preventing plant species from outside the garden becoming established within this space. As I argued above, however, it seems that real-world botanical conditions do not apply within the garden of Yhwh, so it is unclear to what extent this kind of garden maintenance might be undertaken by the first human.

Given that there is only one route to the tree of life from the outside of the garden (Gen. 3:24), it seems that the border of the garden is otherwise planted so densely that it is impermeable to humans. If this is the case, then the trees at the border of the garden serve as a filter, limiting the flow of humans and perhaps some larger fauna between the garden and the land outside of it. In this instance, trees would possess a unique agency as ‘gatekeepers’ to the garden.

¹⁴ Mary Mills employs the term ‘porosity’ in her exploration of the boundaries that feature in the urban spaces depicted in the prophetic writings of the Hebrew Bible; Mary E. Mills, *Urban Imagination in Biblical Prophecy* (London/New York: T & T Clark, 2012), p. 20. The fluid boundary between the garden of Yhwh and the surrounding land can also be described using this term, hence I employ it throughout this study.

¹⁵ Jones and Cloke, *Tree Cultures*, p. 95.

Trees and Text

Trees also exert spatial agency within the garden itself. Trees 'bend space' insofar as the presence of each tree 'interrupts' the floor of the garden, contributing to the shape of its floor and affecting the path of its human inhabitants as they walk through the garden.¹⁶ The layout of the trees in the garden of Yhwh is never explicitly detailed in Gen. 2:4b–3:24. The only information in this respect relates to the path to the tree of life (Gen. 3:24), so precisely how the trees impact the floorplan of the garden is unclear. The position of each tree also contributes to the overall aesthetic impact of the trees in the garden. Particular colours and textures of bark, leaf, or flower, may complement or clash with each other, some trees may inhibit the view of others, and the presence of direct sunlight and shade in the garden would be dependent upon the position of particular trees.

5.2.2 Summary

I began by acknowledging the work of Jones and Cloke in identifying numerous kinds of agency associated with trees. Whilst the categories of agency they identify are helpful, I found that their work was not as comprehensive as the model of distributive agency, which I shall employ below. The agency of the trees is first apparent when considering their radical transformation of the vast and empty soil plain of Gen. 2:4b–9, which is forever changed by the presence of its tree plantation. It seems that Yhwh acknowledges the important role of trees as a source of food for the first human and accelerates their growth so that he is able to eat (Gen. 2:7–9).

¹⁶ Jones and Cloke, *Tree Cultures*, p. 8.

5. Matter in Text

This observation highlights that the events of Gen. 2:4b–3:24 occur over a time period that is more consistent with human actions and agencies, rather than the actions and agencies of trees.

Trees have a significant spatial agency within the physical world of Gen. 2:4b–3:24, defining and delineating the garden of Yhwh in contrast to the wild space outside it. The border of the garden of Yhwh consists of densely planted trees, which lends this boundary a certain degree of porosity, allowing the passage of leaves, seeds, and other vegetal matter from the garden into the surrounding land. It is possible that vegetal matter might pass in the opposite direction too, though it is unclear at what point in the narrative that plant life emerges outside the garden of Yhwh. The garden of Yhwh and the land outside are ecologically and spatially distinct, given that they contain different plant species; the garden of Yhwh contains only trees, whilst the land outside it is populated with ‘thorns’ and ‘thistles’, ‘plants of the field’ and cereal(s) Gen. 3:18–19 NRSV. The trees at the border of the garden possess a unique agency, serving as ‘gatekeepers’ that limit the flow of vegetal matter, humans, and some larger fauna between the garden and the land outside of it.

Trees must also exhibit a spatial agency within the garden of Yhwh, shaping the layout of its floor, affecting the path of the humans as they walk through the garden. The position of trees in the garden also contributes to the aesthetic beauty of the space as a whole.

Trees and Text

5.3 The physiological impacts of the trees

The text of Gen. 2:4b–3:24 as a whole suggests that the trees in the garden of Yhwh function in an agentic capacity through the range of physiological impacts that they exert upon the humans who dwell amongst them. The most obvious of these impacts are the sensory stimuli provided by the trees.¹⁷ Jones and Cloke describe sensory impacts as ‘agency as non-reflexive action’, though they do not acknowledge the various levels of scale over which these kinds of agency operate and I shall expand upon this below in relation to the trees and humans in Gen. 2:4b–3:24.¹⁸ Assuming real-world physiology applies to the humans of this text, any sensory impacts would of course be subjective and unique to each human in that their personal preferences and physiological capabilities will differ. For example, whilst all trees in the garden of Yhwh are both beautiful and good to eat (Gen. 2:9), it is possible that both humans perceive colours differently, and so appreciate the beauty of the trees in different ways. Similarly, the humans may prefer particular flavours and textures of food based upon their physical ability to detect specific flavours. Nevertheless, as a whole, Gen. 2:4b–3:24 intimates that both humans possess full sensory capacity. Indeed, it is evident in the text that the humans can see (Gen. 3:6), hear (Gen. 3:8), touch (3:3), taste (Gen. 3:6), and smell (there is no explicit depiction of the humans’ ability to smell, but this is inferred through their ability to taste).

¹⁷ It is also possible that the trees exert similar sensory and physiological impacts upon the animals when they appear in the garden in Gen. 2:17, though there is no textual data to support this conjecture any further. Indeed, as I acknowledged above it is unclear whether the animals even remain in the garden once it is established that no animal can serve as a counterpart to the human.

¹⁸ Jones and Cloke, *Tree Cultures*, pp. 63-66.

5. Matter in Text

There is insufficient textual data in Gen. 2:4b–3:24 to facilitate a discussion around how the material-botanical attributes of the trees in the garden of Yhwh affect the two humans at individual physiological levels. However, it is still possible to discuss the agentic processes by which trees impact the humans in the garden through sensory and physiological mechanisms at a more general level. I shall proceed to do this next, though I shall discuss the sensory and physiological impacts of the tree of life and tree of knowledge separately, in the following section.

5.3.1 Visual impact

In Gen. 2:7, Yhwh creates the first person, who initially experiences the primordial earth as nothing but a vast expanse of soil. Gen. 2:8 then details the process of Yhwh planting a garden. It is not clear from Gen. 2:7–9 whether the first human witnesses this act of planting visually, which would dramatically change the appearance of the physical world known to him at this narrative juncture, or whether he is moved by Yhwh from the plain of soil into the tree plantation. Either way, this significant change in physical environment would constitute a major sensory and emotional experience for the human.

This is especially true considering that the human encounters the trees before Yhwh explains what they are! In Gen. 2:8–9, Yhwh places the first human amongst the trees and the anonymous narrator explains to the reader that the trees in the garden have been intentionally selected on the basis of two criteria that will affect this person in sensory and physiological

Trees and Text

capacities; the trees are both beautiful to look at and good to eat. It is not until Gen. 2:15–17 that the purpose of the trees is explained to the first human by Yhwh, though these verses seem to function as a parallel to Gen. 2:8–9 as they repeat the introduction of the first human to the garden. I discussed above that Gen. 2:9 reveals that *all* trees in the garden of Yhwh are both visually appealing *and* good for food, and I observed that Gen. 2:4b–3:24 does not explain what specific species of tree or particularly botanical characteristics are regarded as aesthetically pleasing (or those that are good to eat). Nevertheless, this verse intimates that the trees in the garden of Yhwh offer a variety of different visual properties. This selection may include, for example, varying heights and spreads of trees, colours and shapes of leaf, colours and textures of bark, colours and shapes of blossom, and a variety of visually distinctive edible produce including nuts, seeds, berries, and fruits.¹⁹ At this narrative juncture, then, the world that the human knows began as an expanse of soil and sky, but is now filled with a vast selection of shapes, colours, and visual textures, visible at varying ‘depths’ of distance throughout the tree plantation in which he lives. The first human lives within this visually stimulating environment until he is exiled from the garden of Yhwh.

The visual experience of the first woman is slightly different in that she is seemingly created within the garden of Yhwh (Gen. 2:22). Whilst she too lives amongst a visually vibrant plantation of trees, unlike the first human, the first woman never sees the world before the planting of the trees.

¹⁹ Jones and Cloke, *Tree Cultures*, p. 91.

5. Matter in Text

Consequently, her visual experience of being exiled outside the garden must be more of a contrast for her as she has only ever lived within the trees.

5.3.2 Taste

Just as there is no explanation of what constitutes visually appealing trees in Gen. 2:4b–3:24, there is no explanation of what species of tree yield produce that is ‘good to eat’. As I established above, Gen. 3:6 suggests that the phrase refers to visually appetising foods. Produce from trees in the garden of Yhwh is presumably ready to eat directly from each tree as there is no mention of the domestic processing of food in the pericopé. It therefore seems that the trees must provide a continuously available variety of immediately edible produce (an example of ‘agency as routine action’ by Jones and Cloke). Real-world botany suggests that this selection would include nuts, seeds, berries, and fruits, providing the humans with a range of tastes, but also textures, aromas, colours, and shapes of food, though there are no explicit textual indicators in Gen. 2:4b–3:24 to support this definitively.

In addition to the immediate sensory stimuli associated with the taste of food, the produce of the trees exhibits a crucial physiological agency. It is apparent from Gen. 2:4b–3:24 that human life in the garden is sustained exclusively by eating from trees. Through the process of trees living, growing, and reproducing in the garden of Yhwh, a variety of food/energy sources are available to the humans and it is from these sources of nutrition that the bodies of the humans are sustained. In short, without trees as a source of food in the garden of Yhwh, human life could not exist.

Trees and Text

5.3.3 Sound

Whilst it is not explicitly mentioned in Gen. 2:4b–3:24, the trees seemingly make a significant contribution to the ambient soundscape of the garden in which the humans live. In the early stages of the narrative, the first human is alone in a vast plantation of trees. There are no animals in the garden and, whilst the text does not explicitly describe any sounds, the running water of the four rivers (Gen. 2:10), and the leaves and branches of the trees moved by breeze that blows through the garden (Gen. 3:8) would presumably cause the main sounds that are audible to the human. Assuming real-world environmental conditions apply, the trees, the breeze, and the human are in an agentic relationship with each other. The breeze moves branches and leaves on the trees, creating sounds and potentially dislodging botanical matter such as petals and fruit. The kinetic energy evident in the breeze is reduced and redirected by this interaction, and the human may be stimulated by the variety of sounds caused by these movements. It is, of course, possible that other weather conditions affecting the trees and other botanical processes contribute to the soundscape of the garden, but these are not detailed in Gen. 2:4b–3:24. For example, leaves and flowers on the trees might move in response to diurnal variations in the position of the sun, creating sounds as they brush against each other. Rain falling upon the many trees throughout the garden would create a range of sounds at different heights and distances from the human listener. It is also possible that sounds may be caused by botanical matter from trees falling to the floor, or the snapping of branches and twigs. Overall, then, trees seem to make a

5. Matter in Text

significant contribution to the soundscape of the garden of Yhwh. This is particularly clear at the start of the narrative before the introduction of animals and the second human to the garden, but also in Gen. 3:8 where the sound of Yhwh walking through the garden provides a notable and dramatic plot point.

5.3.4 Touch

Whilst it is not explicitly stated in Gen. 2:4b–3:24, trees apparently play an important role in providing haptic stimulation for the humans. Along with soil and water, trees are the only non-human elements depicted in the pericopé that the humans can physically touch in the garden of Yhwh. The range of tree species alluded to in Gen. 2:9 presumably offers a variety of textures to stimulate the human senses. For example, different types of bark, the softness, waxiness, and stickiness of leaves and petals, and the contrast between the produce from trees; nuts in hard shells, soft fruits, and fruits encased by hard skins.

In Gen. 3:3, the first woman claims that touching the produce of the tree of knowledge will cause death. This assertion alludes to the agentic potency of this tree. This is the first and only mention of the sense of touch and its corresponding consequence in the whole of Gen. 2:4b–3:24 and this verse seemingly functions as an embellishment of the earlier hyperbolic prohibition in Gen. 2:16–17. Crucially, however, the remainder of the narrative of Gen. 2:4b–3:24 reveals that touching the produce of this tree does not lead to death, or at least not an immediate death.

Trees and Text

The leaves of the fig are the only other parts of a tree that the humans are depicted as touching in the pericopé, but there is no description of how this affects the humans in terms of sensory stimulation (Gen. 3:7). Given that the humans sew these leaves into loincloths suggests that they are aware of the tactile agency of fig leaves over against other available leaves in the garden.²⁰ This leaf must be sufficiently durable, in terms of being resistant to stitching and subsequent usage, and non-abrasive to be fit for purpose. The use of fig leaves as clothing highlights a further agentic capacity of trees in Gen. 2:4b–3:24. The agency of trees as a natural resource, a non-human commodity adapted and utilised by humans, is overlooked by Jones and Cloke, but is of course wholly consistent with the model of distributive agency, which acknowledges the material, social, and economic agencies bound up in the consumption of natural resources.²¹

5.3.5 Scent

There is no mention of any of the scents associated with the trees in Gen. 2:4b–3:24. The agentic effects of the trees in respect to scent can only be speculated from a combination of textual details and real-world botanical knowledge. If the trees in the garden of Yhwh resemble a range of real-world species, they would produce a wide range of woody, citrus, sweet, and floral aromas from their bark, leaves, fruit, and pollen. All of these aromas would

²⁰ This knowledge may have been gained experientially by the humans from their time in the garden or it may be part of the wide-ranging knowledge gained through from eating from the tree of knowledge.

²¹ On the definition of the term 'natural resource' see Steven C. Hackett, *Environmental and Natural Resources Economics: Theory, Policy and the Sustainable Society* (4th edn.; New York: M. E. Sharpe, 2011), p. 79.

5. Matter in Text

be detectable to the humans and would be capable of precipitating sensory and emotional responses. Scents from trees may also help to guide the humans towards edible produce. Contemporary physiology acknowledges the connection between scents and memory, so the longer the humans reside in the garden, the longer they may come to associate certain tree aromas with particular memories and locations within the garden.

5.3.6 Cover and shade

The trees are large enough in size relation to the humans to conceal them completely. Indeed, the humans are fully aware of this property and they use the trees to hide from Yhwh (Gen. 3:8). Whilst the sun does not feature in Gen. 2:4b–3:24, if we assume that the sun does exist within the physical world of this text and that real-world environmental conditions apply the trees in the garden would perform an important physiological function in offering shade to the humans. The garden of Yhwh has a high ambient temperature; high enough that the humans can live there comfortably without any need for clothing (Gen. 2:25). Presumably, the ultimate source of this heat is the sun, but the level of ambient temperature needed for humans to survive comfortably without clothing is associated with risks of over-exposure to ultraviolet light and dehydration. Shade from the trees would counter these risks, hence in this scenario the agency of these trees might extend to protecting and sustaining human life.

With no explicit textual indicators referring to the presence of the sun, or to the real-world environmental conditions associated with the presence of

Trees and Text

solar radiation, the agentic role of trees in providing shade is only an interpretive possibility based on textual ambiguity. Indeed, alternatively, the physical world of Gen. 2:4b–3:24 may be illuminated with the kind of divine light featuring in Gen. 1:3, though again, this is only an interpretive possibility. Nevertheless, the agentic role of trees in providing visual cover for the humans is evident within this passage.

5.3.7 The porous sensory boundary

I observed above that trees seemingly mark the border between the garden of Yhwh and the land that surrounds it in a ‘porous’ manner. Botanical matter such as leaves, seeds, and pollen from the trees may pass beyond the limits of the perimeter of the garden, and some animals would be able to pass through its dense vegetal perimeter. In addition to these kinds of porosity, the sensory and physiological impacts of the trees would also be capable of transcending this boundary.²² The sight of the trees from outside the garden, the taste of nuts, fruits, seeds, and other edible produce falling in the land outside the garden, the sounds of the trees as they are moved by breeze, the scent of pollen, and the touch of their bark; all of these might also transcend the physical boundary delineated by the trees. It is true that there are no humans explicitly depicted outside the garden of Yhwh for the majority of Gen. 2:4b–3:24, but these sensory and physiological impacts

²² This observation is inspired by the work of Dominika Kurek-Chomycz who proposes that the aroma of incense created by the altar of incense in Exod. 30:1–10 transcends the boundary of this sacred space; Dominika Kurek-Chomycz, ‘Ritual, Senses, and Emotions’, paper presented at the Religious Experience at the Intersection of Body and Cognition Cluster Group, University of Sheffield, 28 April 2017.

5. Matter in Text

seemingly apply to the humans once they have left the garden, as evinced by the measures taken by Yhwh to prevent the humans from re-entering this space (Gen. 3:24).²³

5.3.8 Sensory and physiological impacts over scale

In terms of reconciling these observations and speculations about the sensory and physiological impacts of the trees on the humans in Gen. 2:4b–3:24 with the model of distributive agency, according to Bennett sensory stimuli work on both conscious and subconscious levels.²⁴ In respect to Gen. 2:4b–3:24, then, the human may see a tree and be conscious of his acknowledgment of its beauty and edibility, or similarly, smell the blossom of a tree and be conscious of its aromatic profile. But it is also possible that the sight, smell, and touch of the trees and their produce will also elicit unconscious hormonal responses in the humans, making them experience emotions, memories, or feel hungry at the sight, smell or touch of a tree.

The agency of the trees in Gen. 2:4b–3:24 is therefore presumably apparent at differing levels of scale. On a macroscopic or bodily level, the humans can interact with the trees, seeing, tasting, touching, hearing, and smelling them, whilst at microscopic levels of scale interactions with the trees might elicit conscious and subconscious electrochemical and/or hormonal responses within the bodies of the humans. This is perhaps exemplified in Gen. 3:6, where the woman consciously observes the beauty and edibility of

²³ These sensory impacts may also apply to any animals outside the garden.

²⁴ Bennett, 'The Agency of Assemblages', p. 456.

Trees and Text

the tree of knowledge, but her reaction to the tree and desire to eat from it is possibly heightened by subconscious physiological mechanisms.

5.3.9 Summary

The emergence of trees in the physical environment of Gen. 2:7–9 would constitute a major sensory and emotional experience for the first human as he transitions from being alone in the vast expanse of soil to being surrounded by a wide variety of trees. The trees in the garden of Yhwh are intentionally selected on the basis of two criteria that will affect the first human in sensory and physiological capacities; the trees are both beautiful to look at and good to eat. Trees therefore exhibit agency through exerting a significant visual impact upon the humans and the edible produce of the trees exert a crucial physiological agency upon the humans given that their lives are exclusively sustained by eating from trees.

Aside from the sound of water coursing through the four rivers, the only other sounds in the garden would originate from the interaction of trees with their environment, providing a range of aural stimuli for the humans.

Gen. 3:3 reveals that the first woman believes that touching the tree of knowledge brings death, intimating that humans are experiencing trees in the garden of Yhwh through the sense of touch. Given that the humans sew the leaves of the fig into loincloths in Gen. 3:7, it seems that they are aware of the tactile agency of fig leaves over against other available leaves in the garden. The use of fig leaves as clothing highlights a further agentic capacity of trees in Gen. 2:4b–3:24.

5. Matter in Text

According to Bennett, the sensory and physiological agency of the trees is evident on both conscious and subconscious levels, across macroscopic and microscopic scales of distance, across the garden of Yhwh and the land outside it, and between ranges of timescale from immediate sensory stimulation to the longer-term sustenance of human life through the provision of nutrition.

5.4 The tree of life and the tree of knowledge

The tree of life and the tree of knowledge are unrecognisable to contemporary botany and these trees are apparently capable of imparting eternal life and a wide-ranging knowledge of the physical world in the text; attributes that transcend real-world botany. Whilst these trees exist outside real-world botany, it is still possible to explore the agencies that they exhibit within Gen. 2:4b–3:24 using the principles of distributive agency (conversely it is not clear how the ‘supernatural’ agencies of these trees would correlate with the categories of agency proposed by Jones and Cloke). I shall discuss the agency of these distinctive trees individually.

5.4.1 The tree of life

The tree of life possesses an agency associated with divine prerogative; it is capable of imparting eternal life. However, this tree is never explicitly identified to the humans in Gen. 2:4b–3:24; its presence in the garden of Yhwh is made known only to the reader by the anonymous narrator of the

Trees and Text

narrative, where its name alone suggests its agentic potential (Gen. 2:9). Nothing in the text suggests that the humans are initially aware of this tree or that they even see it in the garden, and there is no mention of the humans eating the produce of this tree. Furthermore, at no point in Gen. 2:4b–3:24 does this tree explicitly demonstrate its ability to impart eternal life, and the significant and unique agentic capacity of this tree is apparent only in the final verses of Gen. 2:4b–3:24 where Yhwh takes measures to restrict the humans from accessing it.

In Gen. 3:22–24, it is revealed that it is undesirable to Yhwh that the humans eat from the tree of life having previously eaten from the tree of knowledge.²⁵ Instead of issuing a prohibition on eating from the tree of life, Yhwh precipitates a series of irreversible actions to ensure that the humans will never gain access to this tree. Yhwh expels the first human from his garden home, (according to Gen. 4:1 the first woman is also expelled) and Yhwh enlists a cherub and places a flaming sword to guard the entrance that leads to this tree from the outside of the garden. These extraordinary measures are all taken as a result of the agentic *potential* of the tree of life. The tree itself has not yet exhibited any agentic actions within the physical world of Gen. 2:4b–3:24, but its very presence and the possibility that the humans may eat from it is enough to prompt Yhwh to bring about these changes.

Furthermore, examining Gen. 3:14–24, it becomes clear that the humans are not expelled from their garden home as a punishment for

²⁵ As discussed above, this contrasts to the view of Stordalen, who proposes that the humans ate freely from the tree of life before eating from the tree of knowledge; Stordalen, *Echoes of Eden*, pp. 230-231.

5. Matter in Text

disobeying Yhwh but specifically in order to prevent them eating from the tree of life. Whilst Gen. 3:17–19 outlines the new agricultural lifestyle that the humans will have to adopt, and that this will involve cultivating ‘plants of the field’ outside the garden, this lifestyle does not necessarily require that the humans are banished from the garden; Gen. 3:22–24 states that banishment is to prevent the humans eating from the tree of life.

5.4.2 The tree of knowledge

The anonymous narrator of Gen. 2:4b–3:24 introduces the tree of knowledge in Gen. 2:9. Like the tree of life, the name of this tree is suggestive of its distinctive agentic capacity, though, as I discussed above, the precise kind of knowledge that this tree imparts is never explicitly explained in the pericopé. One of the agentic properties of the tree of knowledge is elucidated in Gen. 2:16–17, when Yhwh issues an explicit prohibition upon eating from this tree, warning that this causes death. The prohibition issued by Yhwh itself lends this tree agency in that it distinguishes it from every other tree in the garden. As I observed above, this tree must somehow be identified to the humans to prevent them eating from it accidentally. The humans therefore apparently know the location of this tree. The humans have also been told that eating from the tree of knowledge causes death, but also that the name of this tree suggests that it is somehow associated with the attainment of knowledge.

As a reader, one imagines that these facts exert an agentic effect upon the humans, inspiring feelings of curiosity and temptation, and this is confirmed in Gen. 3:1–6. In these verses, the tree of knowledge, the woman,

Trees and Text

and the earlier words of both Yhwh and the snake function as an assemblage. That is to say that the information that eating from this tree does not cause death, but brings wisdom, the material-botanical features of the tree, and the physiological recognition of these alluring features by the woman all contribute towards compelling the woman to eat from the tree. Whilst the woman consciously chooses to eat from the tree, the sensory and physiological impacts of the tree upon the woman contribute to this decision and this effect may be described as a kind of agency according to Bennett.

Acknowledging the agency of the tree of knowledge in this respect diminishes the role of the snake in this episode somewhat. The snake has traditionally been understood as a personification of Satan, tempting the first woman to eat from the forbidden tree.²⁶ Gen. 3:1–5 confirms that the chief role of the snake in persuading the woman to eat from the tree is offering the knowledge that this action does not actually cause death. However, the explicit words of Gen. 3:6 state that the reason that the woman actually eats from the tree is not exclusively because of what the snake has said, but also because of the sensory impact of the tree; it is beautiful, its produce looks good to eat, and the wisdom it promises is desirable. Indeed, given the potency of the agency exhibited by this tree in this respect it seems probable that the humans would have eventually eaten from the tree without any encouragement from the snake. The words of Yhwh in Gen. 2:16–17 might also contribute to the allure of the tree of knowledge, as the name of this tree and the prohibition delineate it from all the other trees in the garden. It is

²⁶ James H. Charlesworth, *The Good and Evil Serpent: How a Universal Symbol Became Christianized* (The Anchor Yale Bible Reference Library; New Haven, CT: Yale University Press, 2010), pp. 278-279.

5. Matter in Text

possible that this stimulates the humans' curiosity about the tree, though this is not stated explicitly.

The agency of the tree of knowledge is also evident in the physiological change that it instils in the humans, who gain an awareness of their nudity as a result of eating from the tree (Gen. 3:7). This physiological consequence is notable in that it does not obviously reflect the attainment of wide-ranging knowledge that is suggested by the name of the tree, or indeed the words of the snake in Gen. 3:4. However, in Gen. 3:22 Yhwh states that eating from the tree of knowledge has imparted a knowledge of good and evil to the first human, confirming the unique agentic function of this tree. As a secondary consequence of eating from the tree of knowledge, Yhwh precipitates a series of irreversible actions that impact the snake, the two humans, and the wider environment of Gen. 2:4b–3:24 (Gen. 3:14–24). These actions are surprising to the reader given that the consequence of eating from the tree of knowledge is supposedly death (Gen. 2:17). It therefore seems that the words of Yhwh were intended to function as a deterrent rather than an accurate account of the consequences of eating from the tree. Whilst the consequences of Gen. 3:14–24 are directly brought about by Yhwh, these actions are only happening at all because the tree of knowledge was placed in the garden alongside the humans. Indeed, it is striking that the snake and the humans are held accountable for their actions, whilst the tree of knowledge is not punished in any way, despite its alluring material-botanical properties contributing to the actions of the humans.

Trees and Text

Nevertheless, the cataclysmic events of Gen. 3:14–24 may be traced back to the agency of the tree of knowledge. Just as Bennett acknowledges that the 2013 North American blackout can be traced back to generator withdrawals in Ohio and Michigan in her foundational study of non-human agency, the root cause of these consequences in Gen. 3:14–24 can be traced back to the tree of knowledge; the agency that arose from Yhwh warning the humans about the tree, and the highly alluring visual impact of the tree.²⁷

5.4.3 Summary

The tree of life possesses an agency associated with divine prerogative; it is capable of imparting eternal life. However, at no point in Gen. 2:4b–3:24 does this tree explicitly demonstrate this unique agency or indeed any other agentic action. Crucially, Gen. 3:14–24 reveals that the humans are expelled from their garden home not as punishment, but exclusively because the agentic *potential* of the tree of life is so great that Yhwh takes a series of extraordinary measures to prevent the humans eating from the tree.

The name of the tree of knowledge suggests its distinctive agentic capacity, though the precise kind of knowledge that this tree imparts is never explicitly explained in the pericopé. In Gen. 2:16–17, Yhwh issues an explicit prohibition upon eating from this tree, warning that this causes death. This prohibition distinguishes the tree of knowledge from every other tree in the garden, and along with the name of the tree seems to exert an agentic effect

²⁷ Bennett, 'The Agency of Assemblages', p. 449.

5. Matter in Text

upon the humans, inspiring feelings of curiosity and temptation. In Gen. 3:1–6 the tree of knowledge, the woman, and the earlier words of both Yhwh and the snake function as an assemblage with the agency of each individual element compelling the woman to eat from the tree. Contrary to the popular understanding of the snake as the deceiver who persuades the woman to eat from the tree, the explicit words of Gen. 3:6 state that the sensory impact of the tree plays a significant role in persuading her. Indeed, given the potency of the sensory impact of the tree on the first woman in Gen. 3:6 it seems probable that the humans would have eventually eaten from the tree without any encouragement from the snake.

The agency of the tree of knowledge is also evident in the physiological change that it instills in the humans, who gain an awareness of their nudity as a result of eating from the tree (Gen. 3:7). This physiological consequence does not obviously reflect the attainment of wide-ranging knowledge that is suggested by the name of the tree, or the words of the snake in Gen. 3:4. However, Gen. 3:22 confirms that eating from the tree has imparted knowledge of good and evil to the first human.

As a secondary consequence of eating from the tree of knowledge, Yhwh precipitates a series of irreversible punishments which impact the snake, the two humans, and the wider environment of Gen. 2:4b–3:24 (Gen. 3:14–24). These consequences are directly brought about by Yhwh, but they are only happening at all because the tree of knowledge was placed in the garden alongside the humans. Notably, despite the visual allure of the tree of knowledge, it is not punished for its part in tempting the humans to eat its

Trees and Text

produce. In this way, the cataclysmic events of Gen. 3:14–24 may, in part, be traced back to the agency of this tree.

The text of Gen. 2:4b–3:24 and the subsequent interpretation of this text in Christian theological tradition has therefore failed to acknowledge the agency of the tree of knowledge in this respect. Indeed, Christian theological tradition has held the snake of Genesis 3 responsible for the temptation of the humans.

6. Matter as Text: Gen. 2:4b–3:24 and the *Green Bible* as a material-discursive object

6.1 Introduction

As I discussed above, according to material ecocritical theory the concept of 'matter as text' is based upon the notion of a material-discursive world in which configurations of meanings and discourses are produced through the interaction of the things around us, and that these interactions can be interpreted as stories. Consistent with this mode of thought, then, the *Green Bible* as a material object, the meanings that might be derived through the interpretation of its text, the human labour and non-human elements that have combined to produce the Bible, and the cultural systems that have marketed, distributed, and sold the Bible are all interconnected. Furthermore, material ecocritical theory proposes that each individual element associated with the *Green Bible*, whether this is a footnote to a Bible verse or the wood of a tree from which its pages are made, possesses agency, and the combinations of these agencies may be interpreted as narratives.¹

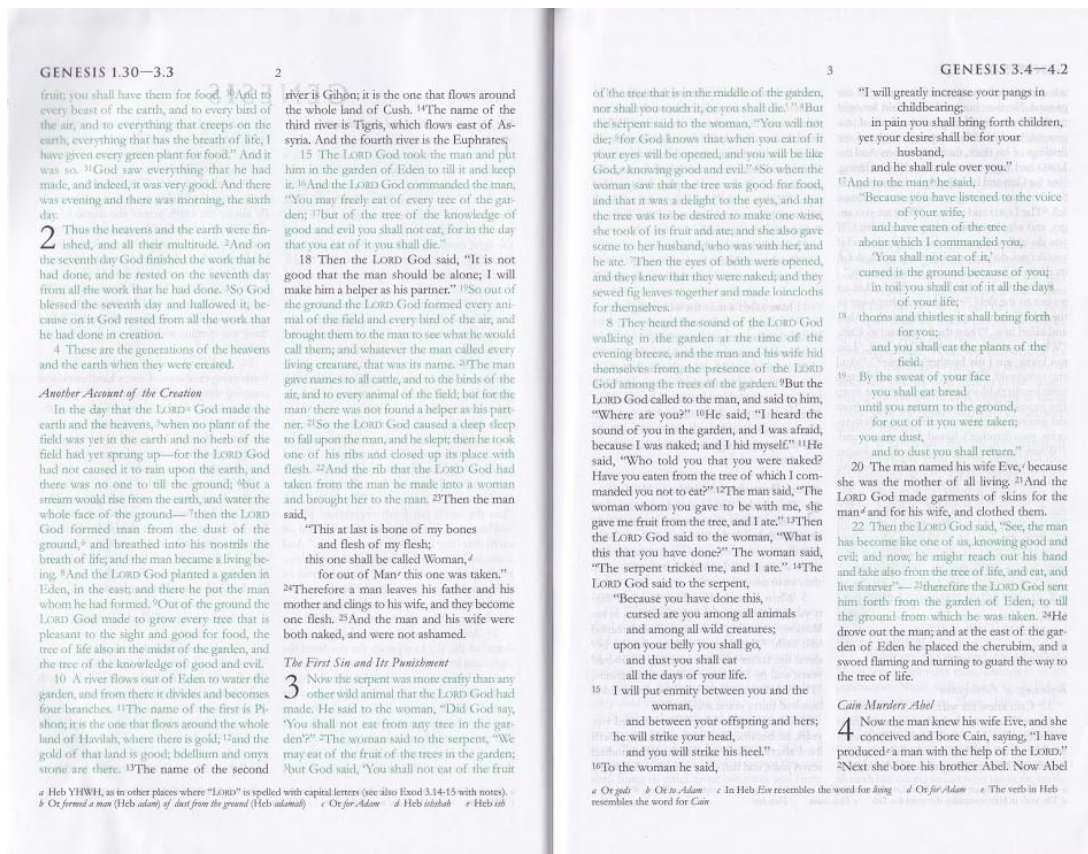
In this chapter, I am concerned with two narratives that are connected to the *Green Bible* as a material-discursive object. (1) The relationship between the material form of the *Green Bible*, that is to say both its physicality and its textual content, and the manner in which this materiality might influence the interpretation of Gen. 2:4b–3:24. (2) The *Green Bible* as

¹ Oppermann, 'From Ecological Postmodernism to Material Ecocriticism', p. 30.

Trees and Text

a material-discursive object and its relationship to wider environmental and socio-cultural spheres. Whilst these two analytical approaches are distinct in focus, in terms of material ecocritical theory they are understood as interrelated. To elucidate this point, I discuss the extent to which these two narratives can be reconciled in the concluding chapter of this study. Consistent with the format of the previous two chapters, each sub-section concludes with a summary.

6.2 Gen. 2:4b–3:24 in the *Green Bible*



Pages 2-3 of the *Green Bible*. Reprinted by permission of HarperCollins Publishers Ltd © 2008.

I shall begin by looking at the formatting, design, and placement of the specific pericopé Gen. 2:4b–3:24 as it appears in the *Green Bible*. In the

6. Matter as Text

course of examining these material features of the text, I shall also comment upon how they might influence readers to interpret the text. The image above is a facsimile of Gen. 2:4b–3:24 as it is rendered in the *Green Bible* (pp. 2-3).

The formatting may be described as follows:

Book, chapter, verse range and page number in the header.

Text rendered in double columns.

An 'initial', or 'drop cap', number marks the start of each chapter.

Verse numbers are rendered in superscript.

Italicised headings mark the start of narrative units (the division of the text into paragraphs, poetic verses, and narrative units is the product of its NRSV translation. As such, these divisions are an interpretive act rather than a precise reproduction of the structure of the original text).

The word Yhwh is rendered as 'LORD' using small capitals.

Footnotes are rendered in superscript using lowercase alphabetical characters that restart at the beginning of each individual page. Footnotes are used to highlight alternative translations of words, explanations of particular words, some parallel verses, and textual differences between ancient manuscripts.

In these respects, the formatting of the *Green Bible* follows many of the conventions that are used widely in the reproduction of biblical text in book formats.² For example, the formatting of *The New Oxford Annotated Bible*

² On the origins and development of the double-column format commonly used in printed Bibles, see D. C. Parker, *The Living Text of the Gospels* (Cambridge: Cambridge University Press, 1997), pp. 184-185.

Trees and Text

and the *NIV Study Bible*, are very similar.³ Indeed, the formatting conventions that have come to be associated with Bibles printed in a book format are likely to signal ‘Bibleness’, the property of resembling a Bible, to the contemporary Western reader.⁴ As such, ‘Bibleness’ itself may contribute towards the manner in which a reader interprets the textual content of the *Green Bible*. However, the *Green Bible* has one distinct formatting, or material, feature that sets it apart from all other printed Bibles; its use of green text. Inspired by ‘red-letter editions’ of the Bible that render the direct words of Jesus in red ink, the *Green Bible* is presented as a ‘green-letter edition’, which renders biblical passages relating to ‘creation care’ in green ink.⁵ I shall return to discuss the use of green text in the Bible separately below; this is perhaps the most controversial feature of the *Green Bible* and deserves detailed attention.

The pericopé Gen. 2:4b–3:24 in the *Green Bible* is printed across two pages so that it is visible in full when the book is opened; in printing terminology this layout is described as being rendered on the ‘folio 1 verso’ and ‘folio 2 recto’ pages. This layout therefore serendipitously offers a degree of continuity to the narrative as it can be read in full without the reader having to turn a page. The act of turning a page is not necessarily a distraction to the reader, though the physical interruption to the text caused

³ *The New Oxford Annotated Bible with the Apocryphal / Deuterocanonical Books* (New York: Oxford University Press, 1994); *The NIV Study Bible* (London/Sydney/Auckland: Hodder & Stoughton, 2003).

⁴ Katja Rakow discusses the term ‘Bibleness’ and observes that it is undergoing a change in meaning as a result of the increase in use of biblical texts rendered in electronic formats; Katja Rakow, ‘The Bible in the Digital Age: Negotiating the Limits of “Bibleness” of Different Media’ in M. Opas and A. Haapalainen (eds.), *Christianity and the Limits of Materiality* (Bloomsbury Studies in Material Religion, vol. 1; London: Bloomsbury Academic, 2017), pp. 101-121 (103).

⁵ ‘Preface’, pp. I-15-I-16.

6. Matter as Text

by a page division may emphasise a particular portion of narrative to the reader, creating an emphasis that is not apparent without this division.

However, the text of this passage is rendered in double columns and, whilst this is a common formatting feature of many printed Bibles, these columns create more textual interruptions in the narrative than a single column layout, and consequently this creates additional opportunities to interrupt the flow of the narrative for the reader. Gen. 2:13; 3:2, 16 are interrupted by the column formatting of the Bible, causing the reader to pause and move their eyes from the end of one column at the bottom of a page to the start of the next column at the top of the page. As with page breaks, this pause can lead to sentences that span the end of one column and the start of the next becoming emphasised to the reader; the words from the first column have to be retained in the short-term memory of the reader in order that they can be recalled and understood alongside the words of the continuing sentence in the second column. There is no established methodology to quantify the extent to which this kind of formatting might influence a reader, but it is possible that because of the particular column formatting of Gen. 2:4b–3:24, the verses above might be emphasised to the reader of the *Green Bible*.

There are minimal footnotes within the pericopé as a whole. The key points raised by these footnotes are the rendering of the Hebrew word Yhwh as LORD, and the linguistic similarities between the Hebrew words translated as ‘man’ and ‘ground’, ‘woman’ and ‘man’, and ‘Eve’ and ‘living’.⁶ These specific footnotes are a product of the NRSV translation of the text, rather

⁶ *The Green Bible*, pp. 2-3.

Trees and Text

than footnotes produced specifically for the *Green Bible*. Nevertheless, given the environmentalist ideology evident throughout the supplementary materials of the *Green Bible*, by drawing attention to these linguistic connections these footnotes are likely to encourage the reader to think about ecological connections between humans and non-humans. This is especially likely given that Ellen Bernstein argues in her essay in the introduction to the *Green Bible* that the linguistic connection between the Hebrew words אדם and אדמה reflect a wider ecological interdependence between humanity and the non-human.⁷

Gen. 2:4b–2:25 is rendered as a single narrative unit and is given the title ‘Another Account of the Creation’. Again, this is a product of the NRSV translation rather than a title that is unique to the *Green Bible*. This title explicitly distinguishes the narrative of Gen. 2:4b–3:24 from the earlier creation narrative Gen. 1:1–2:4a and this textual division is uncommon in many popular translations (see, for example, Genesis 2 JPS KJV MSG NIV). This textual division and title encourage the reader to interpret Gen. 2:4b–3:24 as a discrete creation narrative, rather than as a continuation of the earlier creation narrative of Gen. 1:1–2:4a. As such, this textual division

⁷ Ellen Bernstein, ‘Creation Theology: A Jewish Perspective’, in *The Green Bible* (London: HarperCollins, 2008), pp. 1-51-1-57 (1-54). Incidentally, I find this interpretation of Gen. 2:4b–3:24 problematic as it is based on the assumption that the linguistic connection between אדם and אדמה evident in this ancient creation narrative is wholly compatible with the notion of interconnectedness in contemporary ecological theory. Whilst both of these perspectives perceive connections between humanity and the non-human, given that they each originate from differing historical contexts and are based on vastly different worldviews it is anachronistic and inaccurate to assert that they are referring to precisely the same kind of connection.

6. Matter as Text

helps the reader to acknowledge the narrative inconsistencies that arise when Genesis 1–3 is read as a single account of creation.⁸

Gen. 3:1–3:24 is rendered as a further single narrative unit and entitled ‘The First Sin and Its Punishment’. This title is, of course, an interpretation of the events of Genesis 3 informed by Christian theological tradition and, once again, it is a product of the NRSV translation. Nowhere in Genesis 3 does the Hebrew word for sin appear. This title therefore encourages the reader to interpret this chapter in terms of the extra-textual concept of sin. Furthermore, the notion of ‘sin’ is not universal, and will have different meanings for different readers depending upon their personal understanding of this theological concept. For example, the disobedience of the humans (Gen. 3:6) may be understood as one singular ‘sinful’ act, or as evidence of ‘original sin’, the intrinsic sinful nature of humanity.

The majority of pages 2-3 of the *Green Bible* are rendered in green ink. The pericopé Gen. 2:4b–3:24 fills most of these two pages and is itself predominantly rendered in green ink. As I shall demonstrate below, however, the use of green ink in this passage is not consistent with the criteria for text rendered in green that are specified earlier in the Bible. Here it shall suffice to note that the use of both green and black text gives the pericopé a visually ‘patchy’ appearance and the darker black text actually stands out more prominently against the cream paper than the lighter green text. This has the unfortunate effect of drawing the attention of the reader away from the green text. Indeed, Gen. 2:18; 3:20–21 are particularly prominent, standing out in

⁸ Most obvious to the reader engaging with an English translation of the text is that the method and order of creation depicted in Gen. 1:1–2:4a is contradicted by Gen. 2:4b–2:25, which presents an alternative method and order of creation.

Trees and Text

black ink against the surrounding lighter green text. As such, it is highly probable that these visually distinct verses will draw the attention of the reader in a way that is unhelpful to understanding the text as a whole.

6.2.1 Summary

The biblical text of the *Green Bible* as a whole follows many of the formatting conventions that have come to be associated with Bibles printed in book form. The title of the pericopé Gen. 2:4b–2:25, ‘Another Account of Creation’, distinguishes the narrative of Gen. 2:4b–3:24 from the earlier creation narrative of Gen. 1:1–2:4a. This precise textual division and title are unique to the NRSV translation and they dissuade the reader from attempting to understand Genesis 1–3 as a single coherent creation narrative. This is helpful in terms of understanding these narratives from an environmental perspective; in Gen. 1:26–30 humans are instructed to subdue the earth and exert dominion over it, whereas this command is not evident in Gen. 2:4b–3:24.

The title ‘The First Sin and its Punishment’ and the corresponding textual division Gen. 3:1–3:24 are also a product of the NRSV translation, though this title is more problematic for the interpretation of Gen. 2:4b–3:24 as it exhibits an understanding of the text that is informed by Christian theological tradition and this interpretive bias is potentially unhelpful to the reader.

The footnotes of Gen. 2:4b–3:24 are not unique to the *Green Bible*, but are the footnotes of the NRSV translation. The footnotes of this pericopé

6. Matter as Text

underscore the linguistic connection in the Hebrew text between 'human' and 'ground'. Given the environmentalist focus of the *Green Bible*, it is likely that readers might interpret this linguistic parallel anachronistically as being fully consistent with the contemporary ecological concept of interconnectedness, especially as Bernstein takes this view in her essay in the introduction to the Bible.

Green text is used frequently throughout Gen. 2:4–3:24b. Text rendered in black ink contrasts sharply with the cream paper upon which it is printed, and consequently it is actually more visually striking than the lighter green text; the opposite effect to that intended by the publisher. It is therefore possible that verses in black text will actually be emphasised to the reader, which may hinder their interpretation of Gen. 2:4b–3:24. In some instances the use of green text in Gen. 2:4b–3:24 is inconsistent with the criteria stipulated in its Preface; I shall expand upon this point below.

6.3 The material features of the *Green Bible*

Having examined the materiality of the specific pericopé Gen. 2:4b–3:24 in the *Green Bible*, I shall look at how the overall materiality of this volume might also function in an agential capacity and influence the interpretation of this passage for Western readers. In the following analysis, I offer a systematic exploration of the material features of the *Green Bible*. Crucially for this study, many of these material features exhibit physical design features and textual content that relate to the interpretation of Gen. 2:4b–3:24 in an explicit manner. I describe and discuss each individual material

Trees and Text

feature to provide a comprehensive account of the material features of the *Green Bible*. In the instances in which material features make some direct reference or allusion to Gen. 2:4b–3:24 I discuss the extent to which these features might contribute towards the interpretation of Gen. 2:4b–3:24. I addressed the layout of the biblical text in the *Green Bible* above, so there is no need to repeat this here; I shall proceed to discuss its title, cover design, and supplementary features.

6.3.1 Dimensions and bibliographical details

Before commencing the analysis, some very general information about the dimensions of the *Green Bible* and its bibliographical details offer some context in relation to its materiality:

Size: 13.7 cm (5.5") wide x 21.3 cm (8.4") high x 2.8 cm (1.1") deep.

Font point size: 9.5

Page count : 1312

Weight: 659 grams

Place of publication: London.

Publisher: HarperCollins.

Publication date: 2008.

In addition to this general information, it is also helpful to say something about the physical aspect of holding and reading the *Green Bible*. The *Green Bible* feels relatively light for a book of its size; this is perhaps due to its

6. Matter as Text

paperback cover, which feels relatively thin and flexible and bends under its own weight rather than maintaining a rigid surface like a hardback. Upon opening the *Green Bible*, its pages feel thin to the touch. I have read and looked at many Bibles in a printed book form and from my experience as a reader I know that this is a common material feature of Bibles produced in this format. This is due to the widespread use of the specific kind of paper, actually known as 'Bible paper', which is:

developed for lightweight, thin, strong, opaque sheets for such books as bibles, dictionaries, and encyclopaedias. Bible papers are pigmented (loaded) with such pigments as titanium dioxide and barium sulfate and contain long fibres and artificial bonding agents to maintain strength.⁹

Whilst the *Green Bible* is printed on FSC mixed source paper (this paper is produced according to specific environmental and social welfare guidelines stipulated by the FSC and I discuss this in greater detail below), the Bible itself contains no information about the extent to which this paper has been processed. What chemicals and inks have been used in its production and what are the environmental impacts of using these materials? The pages of the *Green Bible* do have a slight waxy feel to them, which suggests that they have been subjected to some kind of treatment, perhaps to strengthen them. Indeed, in his review of the *Green Bible* Herbert Hofer observed the thinness and resilience of the Bible's paper.¹⁰

⁹ 'Bible Paper' in *Encyclopaedia Britannica*, cited in Elvey, 'A Material Intertextuality', p. 31.

¹⁰ Herbert Hofer, 'A Missiological Review of *The Green Bible*', *Missio Apostolica*, 17.1 (2009), pp. 56-61 (56). This study explored how the *Green Bible* might be employed in group Bible studies in an evangelical Christian context; as such, it was not necessary to discuss this study in my literature review.

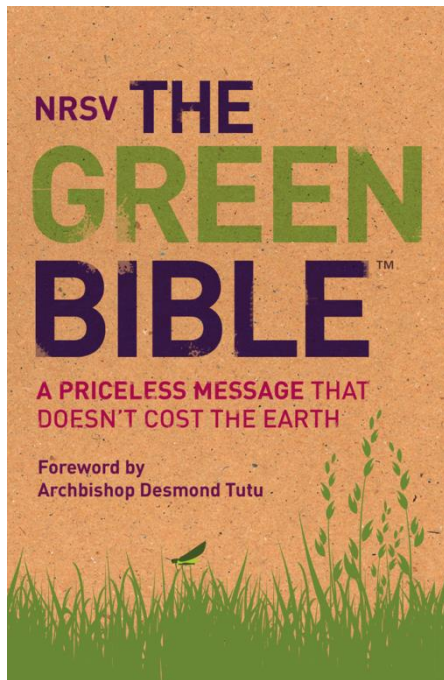
Trees and Text

I contacted HarperCollins to ask if they could share more information about the materials and processes used in the paper of the UK paperback *Green Bible*. They responded to inform me that as the volume was no longer in print and no longer available so they could not help me with any questions in relation to it.¹¹ This response surprised me as on 27 August 2018, the day that they responded, the Bible was still on sale through their website and through nrsv.net; presumably, these copies were the last in stock. Furthermore, the *Green Bible* was still available in ebook formats on this date, suggesting that the publisher should have some information relating to this volume. Nevertheless, on the basis of this information one might assume that it is no longer commercially viable for HarperCollins to keep physical editions of the *Green Bible* in print, whilst the small costs of selling various ebook formats online make these versions profitable. I return to discuss the *Green Bible* being phased out of print below.

¹¹ HarperCollins via email, 27 August 2018. I first contacted HarperCollins via the email address provided on their website, NRSVBibles@harpercollins.com, on 28 March 2018. After chasing this initial email, I received a response some five months later.

6. Matter as Text

6.3.2 Title and cover design



The front cover of the *Green Bible*. Image provided by HarperCollins and reprinted by permission of HarperCollins Publishers Ltd © 2008.

The title of the *Green Bible* itself is significant in that in contemporary Western culture, the word 'green' has become synonymous with environmentalist ideology.¹² Indeed, in some contexts the word 'green' is clearer in meaning than the word 'bible', which may connote not just the canonical texts of the Jewish and Christian faiths, but a definitive book on a particular subject. In illustration of this point, type 'The Green Bible' into an internet search engine and you will find a range of titles exploiting this latter

¹² This is best demonstrated by the definitions of 'green' in the Oxford English Dictionary which in the context of environmentalism are defined as: (1) concern with or supporting protection of the environment as a political principle, (2) (of a product or service) not harmful to the environment, (3) (as a verb) make less harmful to the environment; Oxford English Dictionary, 'Green', <<https://en.oxforddictionaries.com/definition/green>> (2018) [accessed 2 February 2018].

Trees and Text

meaning including *The Green Beauty Bible* and *The Green Food Bible*.¹³ So before the Western reader has even seen a physical copy or an image of the *Green Bible*, the name of the volume alone is likely to suggest its environmentalist agenda, and perhaps that it is a speciality Bible with an environmentalist agenda.

The cover of the *Green Bible* features a design aesthetic (or one could even describe this as a brand aesthetic) that is consistent with its environmentalist ideology. This observation requires some further explanation so I shall expand upon this as I discuss the design features of the cover.

(1) The cover features a skeuomorphic design that gives the appearance that it is constructed from recycled paper; it has a light brown colour with a fibrous pattern in which darker flecks of brown and green create the effect of the grainy texture associated with this material.

(2) The text on the front cover and its image are also skeuomorphic; designed to look screen printed on top of the 'recycled paper' background. Just five colours are utilised in this screen printing effect: three shades of green (dark, light, and mid-green), maroon, and crimson. The text bearing the title of the volume dominates the front cover and features a slightly distressed effect, which suggests a homemade screen print aesthetic. Underneath the title are the capitalised words 'A PRICELESS MESSAGE

¹³ Sarah Stacey and Josephine Fairley, *The Green Beauty Bible* (London: Kyle Cathie, 2009); Judith Wills, *The Green Food Bible* (London: Transworld Publishers, 2008).

6. Matter as Text

‘THAT DOESN’T COST THE EARTH’; this serves as an unofficial sub-title to the volume and the prominence of these words on the cover of the Bible underscores its environmentalist perspective. The front cover image is a minimalist design featuring the silhouette of grass, one single plant, and one butterfly; excepting the light green body of the butterfly, all of this image is rendered in the single mid-green colour.

(3) The design of the spine is consistent with the front cover, where the words ‘NRSV THE GREEN BIBLE’ dominate in large text. Indeed, it was this large writing that first caught my eye when I first discovered the Bible in a bookshop, where I found the Bible amongst a selection of books on the topic of the environment rather than in a dedicated Bible section. HarperCollins were not able to confirm whether they had stipulated that the *Green Bible* should be marketed in book shops under the category of environmental interest rather than as a Bible so I was unable to establish if this was a standardised marketing technique initiated by the publisher.

(4) The minimalist design continues on the rear cover. The text of Gen. 1:31 NRSV is quoted (‘God saw everything that he had made, and indeed, it was very good’) and serves as a title for the rear cover. Six short sentences in smaller text follow, listing some of the features of the *Green Bible*. The rear cover features two FSC labels; one relates to the wider relationship of the publisher with the FSC, whilst the other relates to the provenance of the paper from which the *Green Bible* is constructed. Consistent with the screen-

Trees and Text

printed style of the front cover, a small grass, plant, and butterfly design features at the bottom of the rear cover.

Screen printing is a manual process that can be executed with relatively cheap materials in comparison to other printing methods; indeed, according to the ecobranding project, industry standard printer ink costs twice as much as Chanel No. 5.¹⁴ Consequently, in terms of design and branding aesthetics, a minimalist screen-printed effect has become associated with products that are attempting to communicate messages such as small scale and/or hand-made production in contrast to mechanised mass-production, DIY ethics in contrast to corporate ethics, and a frugal or sustainable, rather than extravagant, use of materials. In illustration of this, the cover of the *Green Bible* is very similar in design to other products that are marketed on the basis of these attributes; Abel and Cole fruit and veg boxes, Graze boxes, and *The Vegetarian*, the magazine of The Vegetarian Society.¹⁵ Furthermore, by evoking the distinctive material appearance of screen printed recycled paper, the cover suggests the prioritisation of environmental sustainability and frugality of resource consumption. This stands in contrast to the leather binding and gilded edging common to traditional Bibles and now associated with deluxe bibles, and also in contrast to the style of recent speciality Bibles such as the *NIV Couple's Devotional Bible* and the *NIV Men's Devotional Bible* whose covers feature high

¹⁴ Ecobranding, 'Ecobranding', <<https://ecobranding-design.com/>> (2018) [accessed 7 February 2018].

¹⁵ Examples of this branding may be found at <https://www.abelandcole.co.uk/>; <https://www.graze.com/uk/>; <https://www.vegsoc.org/>.

6. Matter as Text

resolution photographic images integrated with contemporary design trends.¹⁶

Finally, nothing in the design on the cover of the *Green Bible* relates explicitly to Gen. 2:4b–3:24. However, the environmentalist ethic suggested by the cover design of the Bible could easily influence a reader to interpret Gen. 2:4b–3:24 with the physical world in mind. The reader may recall the image of the grass and butterfly on the cover as they engage with the imagery of the primordial world depicted in Gen. 2:5 or the agrarian imagery of Gen. 3:17–19. The words ‘A PRICELESS MESSAGE THAT DOESN’T COST THE EARTH’ may encourage the reader to think about Gen. 2:4b–3:24 in the context of the current resource consumption and pollution.

6.3.2.1 Summary

Using the word ‘green’, the title of the *Green Bible* immediately suggests the environmentalist focus of the volume to the contemporary Western reader. This is reinforced by its cover design, which follows established design trends that are associated with products that are marketed on the basis of their environmental credentials. As such, the cover of the *Green Bible* is highly distinctive amongst other printed Bibles and the reader familiar with the design aesthetic that it employs will start to make assumptions about the ideological focus of the Bible before they have engaged with its contents.

¹⁶ *NIV Couple’s Devotional Bible* (London: Hodder & Stoughton, 2012); *NIV Men’s Devotional Bible* (Grand Rapids, MI: Zondervan, 2012).

Trees and Text

6.3.3 Supplementary features

Whilst the NRSV biblical text of the *Green Bible* is, of course, its central feature the volume also includes a range of supplementary materials related to its specialist focus. Together, these supplementary features make an important contribution to the materiality of the *Green Bible* as a whole. At the very least, this content, which represents approximately one twelfth of the total page count of the Bible, would have an effect upon the reader in terms of the way in which they navigate the pages of the volume.

This supplementary content is located at both the front and end of the *Green Bible*, so to locate the biblical text in this volume requires flicking through numerous pages of supplementary content. Even without reading their content, the titles of these supplementary features rendered in bold green text on the green canvas-effect header of each page, key words in section headings, or the view of a quote would convey something of the environmentalist agenda of the *Green Bible* to the reader. These features alone hold the agentic potential to influence the manner in which the reader subsequently interprets the biblical text in the volume and this level of influence is likely to increase with the amount of time and attention that the reader spends engaging with the visual design and textual content of these materials. In the discussion that follows, I explore the materiality of these supplementary features and, where relevant, the manner in which they might influence the interpretation of Gen. 2:4b–3:24.

6. Matter as Text

6.3.3.1 Introductory matter

The first 121 pages of the *Green Bible* form its introduction. A green canvas-effect header featuring green text and a small version of the green tree logo used on the cover of the fabric edition of the Bible is present throughout these introductory materials, with an extended header and larger tree logo featuring at the start of each sub-sections. This design format is used for all supplementary materials throughout the volume, preserving design consistency with its cover.

The first two pages of the *Green Bible* feature two poems; ‘Canticle of the Creatures’, by Francis of Assisi, and ‘The Clearing Rests in Song and Shade’, by Wendell Berry respectively.¹⁷ If, as a reader, you are familiar with the lives and writings of either of these authors, their very presence and prominence here at the start of the *Green Bible* serves to underscore the environmentalist focus of the volume. Whilst these authors and their poetic styles are very different, the theme of reverence for the non-human world is evident in both of their poems. Indeed, even for the ‘casual’ reader browsing through the *Green Bible*, this theme would be obvious as both poems consistently refer to the non-human world and its beauty, with phrases such as ‘Brother Sun’, ‘Brother Fire’, and ‘Imagine Paradise’ arranged in visually prominent positions.¹⁸ Assisi refers to ‘mortal sin’ and Berry refers to

¹⁷ Francis of Assisi, ‘Canticle of the Creatures’, in *The Green Bible* (London: HarperCollins, 2008), p. I-3; Wendell Berry, ‘The Clearing Rests in Song and Shade’, in *The Green Bible* (London: HarperCollins, 2008), p. I-4.

¹⁸ Francis of Assisi, ‘Canticle of the Creatures’, p. I-3; Berry, ‘The Clearing Rests in Song and Shade’, p. I-4.

Trees and Text

'[p]aradise'.¹⁹ Hence, both poems allude to the interpretation of Gen. 2:4b–3:24 in Christian theological tradition and it is possible that these allusions might encourage readers of Gen. 2:4b–3:24 in the *Green Bible* to interpret this passage in a manner that accords with this tradition.

These first two pages are distinctive in terms of their materiality as they are designed to give the appearance of being printed on green canvas. In the context of the wider design of the *Green Bible*, this green canvas effect reinforces the aesthetic of the Bible's cover design and again suggests handmade, frugal, anti-corporate, and environmentally friendly values over against slick, mass-produced contemporary design. On these two pages then, the authors, their poems, and the visual design act together to underscore the theme of 'creation care' that is central to the *Green Bible*. Furthermore, the first two pages of the *Green Bible* are visually distinctive amongst the pages of many other contemporary printed Bibles, which tend to feature black ink on plain white paper, and reserve colour for maps and diagrams.

Following these poems are features common to many contemporary printed Bibles; contents pages, a table of abbreviations, and a list of the editors, advisory board, and contributors to the Bible. A foreword to the Bible, written by Desmond Tutu, follows these materials.²⁰ Tutu is, of course, an internationally known figure, and, as one might expect given the focus of his life's work, his short essay frames the notion of 'creation care' within the wider context of social justice. This is important to note as the rear cover of

¹⁹ Francis of Assisi, 'Canticle of the Creatures', p. 1-3; Berry, 'The Clearing Rests in Song and Shade', p. 1-4.

²⁰ Desmond Tutu, 'Foreword', in *The Green Bible* (London: HarperCollins, 2008), pp. 1-13-1-14.

6. Matter as Text

the *Green Bible* hints towards an environmentalist ideology that acknowledges a connection between environmental and social wellbeing, and this notion is developed further in the supplementary features of the Bible, as I shall discuss below.

6.3.3.2 Preface

The Preface of the Bible serves to explain its use of green text and the criteria by which green Bible verses were selected (I return to the use of green text throughout the Bible in detail below), it also signposts the reader to the remainder of its supplementary features.²¹ It is through the body of essays that follow this preface that the environmentalist ideology of the *Green Bible* becomes clearer. It is helpful to discuss this ideology of the *Green Bible* here as it is reflected in the design of the Bible and also holds the potential to influence the manner in which the reader interprets Gen. 2:4b–3:24 and its biblical text as a whole. The essays included in the volume are as follows:

‘Introduction’, Dave Bookless.²²

‘Reading the Bible through a Green Lens’, Calvin B. DeWitt.²³

‘Peace with God the Creator, Peace with All of Creation’, Pope John Paul II.²⁴

²¹ ‘Preface’, pp. I-15-I-16.

²² Dave Bookless, ‘Introduction’, in *The Green Bible* (London: HarperCollins, 2008), pp. I-17-I-24.

²³ Calvin B. DeWitt, ‘Reading the Bible through a Green Lens’, in *The Green Bible* (London: HarperCollins, 2008), pp. I-25-I-34.

Trees and Text

'Why I Am Green', Brian McLaren.²⁵

'Creation Theology: A Jewish Perspective', Ellen Bernstein.²⁶

'Knowing Our Place on Earth; Learning Environmental Responsibility from the Old Testament', Ellen F. Davis.²⁷

'Jesus: Saviour of the Earth', James Jones.²⁸

'Jesus is Coming – Plant a Tree', N. T. Wright.²⁹

'The Dominion of Love', Barbara Brown Taylor.³⁰

'Loving the Earth is Loving the Poor', Gordon Aeschliman.³¹

6.3.3.3 Introductory essays

Rosell offers a brief summary of each of the introductory essays in her review of the *Green Bible*, so there is no need to repeat this here.³² In the context of this study it is helpful to acknowledge that whilst the authors of these studies represent a range of backgrounds and religious affiliations, the essays that they have contributed are largely consistent in their environmentalist ideology and indeed their (eco)theology.

²⁴ John Paul II, 'Peace with God the Creator, Peace with All of Creation', in *The Green Bible* (London: HarperCollins, 2008), pp. 1-35-1-42.

²⁵ Brian McLaren, 'Why I Am Green', in *The Green Bible* (London: HarperCollins, 2008), pp. 1-43-1-50.

²⁶ Bernstein, 'Creation Theology: A Jewish Perspective'.

²⁷ Ellen F. Davis, 'Knowing Our Place on Earth; Learning Environmental Responsibility from the Old Testament', in *The Green Bible* (London: HarperCollins, 2008), pp. 1-58-1-64.

²⁸ James Jones, 'Jesus: Saviour of the Earth', in *The Green Bible* (London: HarperCollins, 2008), pp. 1-65-1-71.

²⁹ N. T. Wright, 'Jesus is Coming – Plant a Tree', in *The Green Bible* (London: HarperCollins, 2008), pp. 1-72-1-85.

³⁰ Barbara Brown Taylor, 'The Dominion of Love', in *The Green Bible* (London: HarperCollins, 2008), pp. 1-86-1-90.

³¹ Gordon Aeschliman, 'Loving the Earth is Loving the Poor', in *The Green Bible* (London: HarperCollins, 2008), pp. 1-91-1-97.

³² Rosell, '*The Green Bible* New Revised Standard Version', p. 114.

6. Matter as Text

Crucially, however, the *Green Bible* never explicitly states the precise ideological principles upon which it is founded and neither does the volume provide a glossary of the specialist terms that it uses. This is surprising given that environmentalist thought and ideology represents a range of views rather than a universal set of principles. This raises a number of questions about the environmentalist ideology of the volume. For example, to what extent can humanity and nature be understood as distinct categories over against being understood as an interconnected whole? To what extent are environmental and social wellbeing connected, and are both of equal value? Should one be prioritised over the other? Why in the *Green Bible* is there a focus on the actions of individuals and households rather than corporations or governments? Are the authors and editors of the *Green Bible* aware of the diversity of environmentalist theory? These questions remain unanswered in the *Green Bible*, leaving the reader to draw their own conclusions from its supplementary materials and, of course, the biblical text itself. By way of exploring the environmentalist ideology evident in the *Green Bible* further, it is helpful to examine the key themes exhibited in its introductory essays. In the corpus of introductory essays to the *Green Bible*, the following three themes are the most prevalent:

(1) Stewardship (also referred to as ‘creation care’): there is a biblical basis for humans to care for the non-human world as divinely appointed stewards.³³

³³ Bookless, ‘Introduction’, p. 1-18; DeWitt, ‘Reading the Bible through a Green Lens’, p. 1-28, John Paul II, ‘Peace with God the Creator’, pp. 1-36-1-37; Davis, ‘Knowing Our Place on

Trees and Text

(2) Activism: there is a biblical basis for humanity to engage proactively in caring for the environment.³⁴

(3) Social justice: the poorest and the most vulnerable people are the most severely affected by environmental degradation. Caring for the environment is therefore an expression of caring for these people.³⁵

Given the frequency with which these themes occur throughout the introductory essays of the *Green Bible*, it seems that the concepts of environmental stewardship, environmental activism, and social justice are key to the environmentalist ideology of the *Green Bible*. These findings are therefore largely consistent with Frohlich's study of the *Green Bible* discussed above.

However, it should be remembered that Frohlich categorised 'anti-dominion theology' and 'stewardship' as two distinct themes, and I argued that the 'anti-dominion theology' identified by Frohlich was synonymous with the concept of stewardship. Frohlich also identified the themes of Sabbath and Jesus as saviour of the non-human, though they feature in these introductory essays with much less frequency than the primary themes of stewardship, activism, and social justice.³⁶ It follows, then, that the

Earth', p. 1-59; Wright, 'Jesus Is Coming', p. 1-75, Brown Taylor, 'The Dominion of Love', pp. 1-88-1-89.

³⁴ DeWitt, 'Reading the Bible through a Green Lens', p. 1-33, John Paul II, 'Peace with God the Creator', p. 1-41; McLaren, 'Why I Am Green', p. 1-49; Wright, 'Jesus Is Coming', p. 1-79.

³⁵ Desmond Tutu, 'Foreword', p. 1-13; John Paul II, 'Peace with God the Creator', p. 1-40; McLaren, 'Why I Am Green', p. 1-47; Aeschliman, 'Loving the Earth Is Loving the Poor', p. 1-91.

³⁶ Examples of these two themes are largely restricted to the following studies; DeWitt, 'Reading the Bible through a Green Lens', pp. 1-30-1-31; Bernstein, 'Creation Theology: A Jewish Perspective', p. 1-56; Jones, 'Jesus: Saviour of the Earth'; Wright, 'Jesus is Coming'.

6. Matter as Text

prevalence of these three dominant themes in the introductory essays of the *Green Bible* might influence the reader when they proceed to read the biblical text of the volume, causing them to interpret specific passages through the lenses of stewardship, activism, and social justice.

Indeed, even if a 'casual' reader were just to flick through these introductory essays, the prominence of these themes is suggested in some of their titles and the headings of sections. For example, 'Knowing Our Place on Earth' and 'The Dominion of Love' (stewardship), 'Jesus Is Coming – Plant a Tree' (activism), and 'Loving the Earth is Loving the Poor' (social justice). This influence is especially likely given that the titles are rendered in bold green text in the green canvas effect header of the introductory section, and the headings of sections are rendered in bold text, so are particularly prominent on the pages.

This kind of influence is not necessarily detrimental to the reader in terms of how they might interpret the Bible and how they might apply this interpretation practically. Indeed, the very purpose of the speciality Bible is to facilitate the interpretation of the Bible from a specific perspective (one could propose more cynically that the purpose of the speciality Bible was to appeal to a specific niche market and to sell more Bibles). However, there is a possibility that the prominence of these themes may cause readers to apply them to biblical passages anachronistically or in places where they are contrary to the explicit meaning of the text itself. Crucially, the *Green Bible* does not address the difficulties of reconciling biblical texts with contemporary ecological theory. Indeed, on some occasions the use of

Trees and Text

green text in the bible encourages these kinds of interpretations, as I shall show below.

In respect to the interpretation of Gen. 2:4b–3:24, then, how might the prominence of the themes of stewardship, activism, and social justice in the introductory essays of the *Green Bible* influence readers? Firstly, and most obviously, there are no verses in Gen. 2:4b–3:24 that might readily be interpreted in light of the theme of social justice and none of the introductory essays in the *Green Bible* make this connection. Secondly, nothing in Gen. 2:4b–3:24 explicitly refers to stewardship or activism; however, DeWitt and Davis both interpret Gen. 2:15 in a stewardship context that also implies the importance of environmentalist activism.³⁷

Indeed, within the supplementary materials of the *Green Bible* as a whole, Gen. 2:15 is presented as a key verse advocating the responsibility of humanity as stewards of the non-human (more on this below). This thesis is founded upon an interpretation of the Hebrew words rendered as ‘till’ and ‘keep’ (Gen. 2:15 NRSV), which is informed by stewardship theology. DeWitt and Davis propose that this verse applies not only to the first human of Gen. 2:4b–3:24, but to the whole of humanity, which they believe has an equivalent duty to look after the world. DeWitt argues that ‘keep’ should be understood as a continuing act of ‘loving, caring and keeping’, whilst Davis proposes that ‘till’ and ‘keep’ may be translated instead as ‘serve’ and ‘preserve’ respectively.³⁸

³⁷ DeWitt, ‘Reading the Bible through a Green Lens’, pp. 1-28-1-29; Davis, ‘Knowing Our Place on Earth’, p. 1-60.

³⁸ DeWitt, ‘Reading the Bible through a Green Lens’, pp. 1-28-1-29; Davis, ‘Knowing Our Place on Earth’, p. 1-60.

6. Matter as Text

Regardless of how one translates ‘till’ and ‘keep’, the methodology of extracting a command issued to the first man by Yhwh within the ancient creation narrative of Gen. 2:4b–3:24 and applying it in a present-day environmentalist context needs to be addressed. The *Green Bible* is silent on this issue and seemingly sees no problem with using Bible verses to support contemporary environmentalist ideology, despite their vastly different contexts and worldviews.

6.3.3.4 ‘Teachings on Creation Throughout the Ages’

Following the introductory essays is the section ‘Teachings on Creation Throughout the Ages’. This is a collection of quotes from a diverse range of authors, and Christian and Jewish writings throughout history curated by Sleeth and listed in chronological order. According to Sleeth, these quotes are a collection of writings on the commissioning in Mk. 16:15 where Jesus declares to his disciples ‘Go into the entire world and proclaim the good news to the whole creation’.³⁹ However, none of these quotes are actually related to Mk. 16:15 directly. Instead, the majority of the quotes relate to the beauty of the non-human world, the connection between the non-human and the divine, and the notion of environmental stewardship.⁴⁰ As such, this section loosely attempts to demonstrate the historical origins of the environmentalist ideology proposed within the introductory essays of the *Green Bible*.

³⁹ J. Matthew Sleeth (ed.), ‘Teachings on Creation Throughout the Ages’, in *The Green Bible* (London: HarperCollins, 2008), pp. 1-98-1-114 (1-98).

⁴⁰ McLaren, ‘Why I Am Green,’ p. 1-42; Jones, ‘Jesus: Saviour of the Earth’, p. 1-70; DeWitt, ‘Reading the Bible through a Green Lens’, p. 1-28.

Trees and Text

Crucially, however, the section does not address the issue of anachronism in respect to the vast majority of quotes reproduced in this section which predate contemporary environmentalist thinking. Whilst these quotes are largely consistent with contemporary environmentalist thought, they should be understood as products of their proto-environmentalist context. Only a small number of quotes originate from the period of contemporary environmentalist thought and whilst the remainder of quotes are largely consistent with contemporary environmentalist thought, they predate the emergence of this specific kind of thinking and should be understood within this context. The presentation of quotes in this section attempts to galvanise the influence of the introductory essays on the reader, encouraging the interpretation of biblical texts in terms of the themes of the beauty of the non-human, the connection between the non-human and the divine, and environmental stewardship.⁴¹ In respect to the interpretation of Gen. 2:4b–3:24, none of the quotes in this section refer to this text explicitly. However, a quote from Genesis Rabbah 13:3: ‘Without earth, there is no rain, and without rain, the earth cannot endure, and without either, humans cannot exist’ may encourage the reader to interpret Gen. 2:4b–6 in literal biological terms.⁴²

⁴¹ Note that the themes of the beauty of the non-human and the relationship between the non-human and divine are present, but less prominent, in the earlier introductory essays in the volume.

⁴² ‘Teachings on Creation Through the Ages’, p. I-100.

6. Matter as Text

6.3.3.5 'To the Reader'

Finally in the introductory materials of the *Green Bible* is a section entitled 'To the Reader', which explains the principles behind the NRSV translation.⁴³ This feature is not unique to the *Green Bible*; indeed most contemporary printed Bibles devote some space to addressing the principles that underpin the translation of biblical text that they employ. This section is helpful to the reader as it underscores some of the challenges of translating ancient biblical texts into the contemporary English language, acknowledging that some ancient manuscripts are incomplete, some contain textual errors, and some contradict each other.⁴⁴ The section also outlines the specific style of English used in the NRSV translation.⁴⁵ The acknowledgement of these issues disputes the theological notion of biblical inerrancy and whilst this may challenge some readers, it might encourage those engaging with the Bible to interpret its text with these textual limitations in mind.

6.3.3.6 Green text

The use of green text in the *Green Bible* is arguably its most controversial material feature; indeed, as I demonstrated above, academic reviews of the volume by Habel, Horrell, Rosell, Hong, Pattemore, and Frohlich all find

⁴³ Bruce M. Metzger, 'To the Reader', in *The Green Bible* (London: HarperCollins, 2008), pp. I-115-I-121.

⁴⁴ Metzger, 'To the Reader', pp. I-116-I-118.

⁴⁵ Metzger, 'To the Reader', pp. I-118-I-121.

Trees and Text

issues with this feature.⁴⁶ In this section, I offer a more detailed examination of green text in the *Green Bible* than in any of the previous reviews; I discuss the criteria for the selection of green text outlined in the *Green Bible* and compare these criteria with biblical texts actually rendered in green throughout the volume.

The Preface of the Bible explains how its editorial team chose which verses were rendered in green:

[T]he strongest and most direct passages [of the Bible] were selected based on how well they demonstrate:

- (1) How God and Jesus interact with, care for, and are intimately involved with all of creation [note that this approach is therefore based upon explicitly Christian, rather than Jewish, theological assumptions about the Bible, though the absence of the Holy Spirit is conspicuous in this context.]
- (2) How all elements of creation – land, water, air, plants, animals, humans – are interdependent.
- (3) How nature responds to God.
- (4) How we are called to care for creation.⁴⁷

⁴⁶ Habel, 'When Earth Reads *The Green Bible*', pp. 421-422; Horrell, '*The Green Bible*: A Timely Idea Deeply Flawed', p. 181; Rosell, '*The Green Bible*: New Revised Standard Version', p. 114; Frohlich, 'Let There Be Highlights', pp. 216-225; Hong, '*The Green Bible*: A Model For the Asian Context?', p. 213; Pattermore, 'Green Bibles, Justice, and Translation', pp. 218-219.

⁴⁷ 'Preface', p. I-16.

6. Matter as Text

These criteria for the selection of Bible verses are largely consistent with the prevailing themes in the introductory essays of the volume. However, upon examining the verses rendered in green throughout the Bible, the application of these criteria appears to be inconsistent. In illustration of this point, I have identified four categories of green text in the *Green Bible*:

(1) Verses that explicitly fulfil one or more of the above criteria. For example, Deut. 22:6–7 gives instructions for the hunting of birds, Ps. 104:10–22 depicts the relationship between Yhwh and the non-human world, and Lk. 8:22–25 depicts the authority of Jesus over the natural world as he calms a storm.⁴⁸ Each of these verses is clearly consistent with the criteria above.

(2) Verses that implicitly fulfil one or more of the above criteria. For example, Ps. 84:3; Prov. 30:24–28 are both rendered in green text and describe particular attributes of wild animals. These verses *intimate* a connection between these animals and the wider natural world, but they say nothing explicit about this connection.

(3) Ambiguous verses. See, for example, Exod. 35:2 NRSV: '[s]ix days shall work be done, but on the seventh day you shall have a holy Sabbath of solemn rest to the Lord; whoever does any work on it shall be put to death', Isa. 57:21 NRSV: '[t]here is no peace, says my God, for the wicked', and 2 Pet. 1:3 NRSV: '[h]is divine power has given us everything needed for life

⁴⁸ The highlighting of Lk. 8:22–25 in green text holds an important ecotheological implication; might the authority of Jesus over the physical world in this verse encourage contemporary Christians to presume their own authority over the non-human world?

Trees and Text

and godliness, through the knowledge of him who called us by his own glory and goodness'. None of these verses say anything explicit in relation to the criteria for green text listed above and it is difficult to see how these verses might even imply anything about these criteria.

(4) Verses that contradict these criteria. Read and understood literally, Gen. 1:26–30 NRSV depicts a hierarchical relationship between God, humanity, animals, and plants, where humans are divinely appointed to 'fill the earth and subdue it' and to exercise 'dominion' over it. Similarly, Rev. 21:1 NRSV, if read and understood literally, declares the destruction of the entire earth: '[t]hen I saw a new heaven and a new earth; for the first heaven and the first earth had passed away, and the sea was no more'. In the *Green Bible* these verses are highlighted in green, indicating that they should be understood in terms of 'creation care', despite this contradicting their literal meaning. It is only through an engagement with scholarship external to the biblical canon that these verses can be understood as upholding environmentally benign values, as demonstrated by the interpretations of these verses offered by DeWitt and Wright in the introductory essays of the *Green Bible*.⁴⁹ It is not necessary to discuss these particular interpretations here, but rather to make the point that in these cases the use of green text suggests meanings that are apparently contradictory to the literal meaning of the biblical text. This issue is compounded in that there are no footnotes to explain why these problematic verses should be interpreted this way. Unless the reader can

⁴⁹ DeWitt, 'Reading the Bible through a Green Lens', p. I-26; Wright, 'Jesus Is Coming – Plant a Tree', pp. I-81, I-84-I-85.

6. Matter as Text

recall the relevant introductory essays by DeWitt and Wright, or has engaged with relevant sources external to the volume, it is completely unclear how these verses may be understood as fulfilling any of the criteria for green text.

In addition to these inconsistencies, the use of green text might serve as a distraction to readers of the *Green Bible*. For example, the reader might place emphasis and/or importance on green text over against the regular black text of the *Green Bible*; this might distract the reader from reading Bible passages as a whole and may diminish the importance of biblical text rendered in black ink. Alternatively, green text might cause the reader to reflect on why specific verses have been highlighted in green, as opposed to considering their actual meaning, or their meaning within the context of the wider passages to which they belong. In these cases, the materiality of the *Green Bible* influences the manner in which it is interpreted.

In respect to the interpretation of Gen. 2:4b–3:24, as I identified above, there is frequent use of green text throughout this pericopé to the extent that the text rendered in black ink is actually more visually prominent. Crucially, the green text used in this pericopé does not always satisfy the criteria for green text specified in the introduction to the Bible. For example, Gen. 2:10–14 depicts the wider region of Eden and, as such, it is not clear how this passage is relevant to any of the criteria for green text. It is therefore surprising that Gen. 2:10–12 is rendered in green ink with Gen. 2:13–14 in black; how do these verses differ in terms of the criteria for green

Trees and Text

text?⁵⁰ Similarly, Gen. 3:17–19, the cursing of the first man, is rendered in green ink. Whilst this is understandable given that this passage depicts a relationship between humanity and nature, Gen. 3:14–15, a similar passage that depicts the cursing of the snake, is rendered in black. The inconsistent use of green text is likely to leave the reader questioning why specific passages have been highlighted in green in contrast to the others. Indeed, even if the reader has read and understood the criteria for green text stated in the *Green Bible* it would still not be clear how these criteria have been applied to this pericopé.

6.3.3.7 'The *Green Bible* Trail Guide'

Immediately following the biblical text in the *Green Bible*, 'The *Green Bible* Trail Guide' is a study resource based upon six 'green themes' identified by the editors of the *Green Bible* as being present throughout the corpus of the Bible as a whole.⁵¹ Corresponding with each theme are a selection of relevant Bible passages for the reader to engage with, a series of questions to consider alongside these passages, and some suggestions for practical actions to take in respect to the theme. The content of the 'The *Green Bible* Trail Guide' therefore holds the potential to greatly influence the manner in which the reader of the volume navigates through its biblical text and interprets specific verses according to these themes and the questions.

⁵⁰ Pattemore also observes this inconsistent use of green text; Pattemore, 'Green Bibles, Justice, and Translation', p. 219.

⁵¹ 'The *Green Bible* Trail Guide', p. 1221.

6. Matter as Text

However, the placement of this feature towards the end of the *Green Bible* reduces its visibility to the reader, particularly in comparison to the more prominent features that are included within the 121 pages of introductory materials to the Bible. Given the potential of 'The Green Bible Trail Guide' to guide the reader to interpret specific biblical texts from an ecological perspective, it is unclear why this feature appears towards the end of the Bible. Furthermore, there is no explanation about how the six themes in this section were selected by the editors of the *Green Bible*. Are these the only themes in the Bible that relate to the environment? Are these the most frequently occurring themes in the Bible that relate to the environment? Did the editors of the *Green Bible* choose these themes because they are compatible with the environmentalist ideology of the introductory essays of the Bible? How might these themes be reconciled with Bible passages such as Gen. 6:7; Mk. 11:12–14 that portray destruction of the non-human world? Whilst these questions remain unanswered, these six specific themes make an important contribution to the environmentalist ideology evident within the *Green Bible*. The six themes are as follows:

(1) 'And it Was Good': the non-human world was, and is, created by God and as such is intrinsically 'good' (note that the definition of 'good' is not explained in this context).⁵²

(2) 'Finding God': there is an intrinsic connection between God and the non-human.⁵³

⁵² 'The Green Bible Trail Guide', pp. 1222-1223.

Trees and Text

(3) 'Connected to Creation': humanity and the non-human are interconnected.⁵⁴

(4) 'Creation Care as Justice': the relationship between environmental stewardship and social justice.⁵⁵

(5) 'The Full Impact of Sin': human sin damages the natural world (note that the *Green Bible* does not explain how this notion fits with the first theme that perceives the non-human as 'good').⁵⁶

(6) 'The New Earth': the earth will be restored as part of the 'new heaven and new earth of God's Kingdom'.⁵⁷

These themes are therefore largely compatible with the themes featuring in the introductory essays to the *Green Bible*. Note, however, that the themes of stewardship, praxis, Sabbath, and the role of Jesus in the context of ecotheology, which were evident in the introductory essays, are presented here as components of these six themes, with the role of environmentalist praxis underscored as an essential response to each of these single themes.⁵⁸ Furthermore, it is evident that these six themes are based upon theological assumptions that are not common to all Christians. For example, the theme 'The Full Impact of Sin' alludes to the doctrine of the fall, whilst the

⁵³ 'The Green Bible Trail Guide', pp. 1223-1226.

⁵⁴ 'The Green Bible Trail Guide', pp. 1226-1228.

⁵⁵ 'The Green Bible Trail Guide', pp. 1229-1231.

⁵⁶ 'The Green Bible Trail Guide', pp. 1231-1233.

⁵⁷ 'The Green Bible Trail Guide', pp. 1233-1235.

⁵⁸ 'The Green Bible Trail Guide', p. 1221.

6. Matter as Text

theme ‘The New Earth’ is based upon a literalist interpretation of Rev. 21:1.⁵⁹ These themes therefore limit the extent to which readers might engage with ‘The Green Bible Trail Guide’ given that there are no instructions relating to how readers disagreeing with any of the theological assumptions upon which these themes are based might use this resource.

‘The Green Bible Trail Guide’ discusses Gen. 2:4b–3:24 in relation to the themes ‘Connected to Creation’ and ‘The Full Impact of Sin’.⁶⁰ One might expect the linguistic connection between אדם and אדמה to form the basis of the theme ‘Connected to Creation’. However, this is ignored and instead it is argued that:

God doesn’t give human beings any other role in creation but the stewardship of the earth—“to till and keep it”. ...The stewardship role is important enough that it is mentioned several times in the creation narrative. It seems to be an essential part of what God intended for human beings.⁶¹

Nowhere are the specific verses related to ‘tilling’ and ‘keeping’ cited, and the claim that stewardship is mentioned ‘several times’ needs to be clarified as the word ‘stewardship’ is not explicitly stated in Gen. 2:4b–3:24. Rather than encouraging the reader to reflect on the explicit linguistic connection between אדם and אדמה, then, the *Green Bible* instead encourages the reader to interpret Gen. 2:4b–3:24 in terms of the contemporary notion of environmental stewardship, which is not explicitly clear in the text.

The theme ‘The Full Impact of Sin’ is based upon an interpretation of Gen. 2:4b–3:24 that is informed by Christian theological tradition:

⁵⁹ ‘The Green Bible Trail Guide’, pp. 1231, 1233.

⁶⁰ ‘The Green Bible Trail Guide’, pp. 1226, 1231.

⁶¹ ‘The Green Bible Trail Guide’, p. 1226.

Trees and Text

Creation is harmed by human sin. Because our sin disconnects us from God, it distorts our relationship with God's creation as well. The result is a world out of sync with itself... The consequences of Adam and Eve's disobedience ripple throughout all of creation. The serpent is cursed to move on its belly—the ultimate humiliation—and eat from the dust. The relationship between humans and animals is broken... The man and woman are cursed with lives of pain and fruitless harvests. The earth itself is cursed. The harmony God embedded in creation is distorted by human sin.⁶²

This interpretation is perhaps understandable given that the *Green Bible* is aimed at a Christian audience, but it is surprising that there is no acknowledgement that this interpretation is founded upon the theology of Augustine. Indeed, there is no mention of 'sin' anywhere in Gen. 2:4b–3:24. Furthermore, the claims that the relationship between humans and animals is compromised and that creation is distorted by human sin are not explicitly evident in the text either. As I argued in 'Garden and "Wilderness"', only the relationship between humanity and the snake becomes adversarial as a result of the actions of the humans (Gen. 3:15).⁶³ And whilst Yhwh curses the ground, this curse has no explicitly negative repercussions for the non-human world of the text. It is only the humans who suffer the consequences of this curse as they will have to obtain food from arduous agricultural and domestic processing (Gen. 3:17–19).⁶⁴ This interpretation of Gen. 2:4b–3:24 within the *Green Bible* may therefore influence readers of this pericopé to understand it in terms of sin and the corruption of the non-human world despite these two themes not being explicitly evident in the text itself.

⁶² 'The Green Bible Trail Guide', p. 1231.

⁶³ Hamon, 'Garden and "Wilderness"', pp. 79-80.

⁶⁴ Hamon, 'Garden and "Wilderness"', pp. 79-80.

6. Matter as Text

Furthermore, this theme does not address the wider issue of how understanding the non-human world as being corrupted by sin is relevant to a contemporary environmentalist context; if one believes that the physical world is already compromised as a result of human actions then why is it important to care for it? And neither does this theme address how the notion of a corrupted world fits with the earlier, and apparently contradicting theme, 'And it Was Good', which celebrates the 'goodness' of the non-human world.

6.3.3.8 'Where Do You Go from Here?'

This section is exclusively devoted to environmentalist praxis. It opens by arguing that '[w]e cannot have a theology of responsible care for creation without actions that are integrated with that theology'.⁶⁵ This is a reasonable claim, and one that recurs throughout the supplementary features of the *Green Bible*, but again it assumes that all readers will agree with the theology presented in the *Green Bible*.

The section provides a series of suggested 'action ideas' for individuals and families that is divided into specific target areas; there is a 'General' category, then categories for 'Oceans', 'Health', 'Endangered Creatures', 'Land Conservation', 'How to Be a Deep Green Family', 'Action Ideas for Churches', and finally 50 practical tips on environmentally friendly living.⁶⁶ Crucially, there is no explanation of how the editors of the *Green Bible* decided upon these categories. To what extent are they founded upon

⁶⁵ 'Where Do You Go from Here?', in *The Green Bible* (London: HarperCollins, 2008), pp. 1236-1251 (1236).

⁶⁶ 'Where Do You Go from Here?', pp. 1236-1243.

Trees and Text

biblical instruction about the environment over against priorities for action based upon insight from contemporary environmental needs? Why is there a focus on oceans over against freshwater? Why is there a focus on endangered animal species over against the mistreatment of animals in modern agricultural practices? As it is, the identification of these categories as key areas for environmentalist praxis holds the potential to influence readers of the *Green Bible* as they encounter its biblical text and potentially interpret it with these priorities for environmental action in mind.

Furthermore, the term 'Deep Green Family' is not self-explanatory and requires explanation. The label 'deep green' is related to radical, and sometimes controversial, ecological theory and praxis often targeted towards protesting against corporations and governments.⁶⁷ This does not seem to be consistent with the environmentalist message of the *Green Bible* that, in this section, advocates actions to be undertaken at individual and family levels, through church congregations and in line with local laws and political structures.⁶⁸

This section is followed by a directory of organisations, starting with a list of contact details for a range of Christian denominations, and then followed with an extensive directory of mostly Christian, with some secular, organisations whose work is concerned with a range of environmental causes.⁶⁹ Crucially, the criteria by which these organisations have been selected for inclusion in this section is not stated. Is the directory intended to be comprehensive? Does it feature organisations whose work has a specific

⁶⁷ Liam Leonard, 'Deep Green Theory', in J. Newman (ed.), *Green Ethics and Philosophy: An A-to-Z Guide* (London: SAGE, 2011), pp. 105-108.

⁶⁸ 'Where Do You Go from Here?', pp. 40, 42.

⁶⁹ 'Where Do You Go from Here?', pp. 1243-1251.

6. Matter as Text

focus or fulfils specific aims that are consistent with the environmentalist ideology evident within the *Green Bible*? It is clear, however, that the organisations are predominantly based in the USA, with only a few organisations outside this territory are mentioned. This limitation reduces the relevance of this section to readers outside the USA, consistent with Hong's observation that the *Green Bible* has a predominantly Western focus.⁷⁰ Finally, nothing in this section relates to Gen. 2:4b–3:24 explicitly.

6.3.3.9 'Green Subject Index' and concordance

The *Green Bible* concludes with two indexing features: the 'Green Subject Index' and a concordance. The concordance in the *Green Bible* appears to be an abridged version of the concordance in the NRSV *New Oxford Annotated Bible*; as such, the concordance simply lists alphabetically key words that feature throughout the NRSV translation of the Bible and provides the corresponding Bible verses that contain these words.⁷¹ The concordance therefore places no emphasis on words relating to the environment or to themes evident in the supplementary materials of the *Green Bible*.

In contrast, the 'Green Subject Index' comprises a compilation of Bible verses rendered in green throughout the volume and arranged alphabetically into subjects.⁷² Not all Bible verses rendered in green ink feature in this index and the process by which green verses were selected for this feature is not detailed. The majority of the subjects in this index relate to the non-human

⁷⁰ Hong, 'The Green Bible: A Model For the Asian Context?', pp. 213-214 .

⁷¹ *The New Oxford Annotated Bible with the Apocryphal / Deuterocanonical Books*.

⁷² 'Preface', p. 1-16; 'The Green Subject Index', in *The Green Bible* (London: HarperCollins, 2008), pp. 1252-1270.

Trees and Text

world; for example, 'Birds', 'Creatures', 'Grass', and 'Seasons', though some subjects are related to social issues such as 'Community' and 'Poor', and a final category of subjects including 'Bless' and 'Covenant' relate to the relationship between God and the physical world.⁷³ On some occasions, however, the subject does not reflect any words that feature in the corresponding verse itself; I shall discuss this in respect to Gen. 2:15 below.

Whilst the 'Green Bible Subject Index' helps readers to navigate the specific material format of the *Green Bible* by locating a selection of its green verses, it is sometimes difficult to see how the verses identified might aid a reader in understanding a subject more clearly and why some of these verses were even highlighted in green. This is due to both the inconsistency of the Bible as a whole in respect to its depiction of the physical world and its elements, and the inconsistency of the use of green text in this specific Bible. For example, listed under 'Fire', is Ps. 78:14, where the presence, provision, and protection of God is denoted by a pillar of fire, and Rev. 21:8, which, in contradistinction, depicts the punishment of specific groups of people in a lake of fire. Both of these verses are highlighted in green, but applying the selection criteria for green text to these verses it is clear that they feature completely different illustrations of God using fire, and completely different theological applications of fire. Other than demonstrating to the reader that there is no single function of fire in the Bible, the *Green Bible* does not explain how these verses contribute to understanding fire from an environmental or ecotheological perspective.

⁷³ 'The Green Subject Index', pp. 1253, 1255, 1260, 1267, 1254, 1266, 1253-1254.

6. Matter as Text

There are frequent entries referring to Gen. 2:4b–3:24 throughout the ‘Green Subject Index.’ The majority of these entries reflect the events of the narrative accurately, though two entries relating to Gen. 2:15 could cause the reader to understand the text in a manner that differs to its literal meaning. Under the topic of ‘Creation’, Gen. 2:15 is listed and explained as ‘God charges humans with keeping creation’.⁷⁴ This interpretation is inaccurate as in this verse it is the first human, rather than *all* humans, who is appointed to ‘till’ and ‘keep’ only the garden of Yhwh, as distinct from caring for the entirety of the physical world in a manner that is consistent with contemporary ecological praxis. This verse explicitly addresses the role of the first human in the narrative of Gen. 2:4b–3:24 and as such it says nothing of the wider role of humanity in the context of environmental stewardship. A similar interpretation of Gen. 2:15 can be found under the topic of ‘Steward/Stewardship’.⁷⁵ In both instances, this understanding of Gen. 2:15 brings a meaning to the text that is not explicitly evident in the text itself, encouraging the reader to interpret Gen. 2:4b–3:24 within the context of stewardship.

6.3.3.10 Summary

The *Green Bible* never explicitly states the precise environmentalist theory or principles upon which it is founded. I examined the contents of the introductory essays featuring in the Bible in order to establish if any particular

⁷⁴ ‘The Green Subject Index’, p. 1255.

⁷⁵ ‘The Green Subject Index’, p. 1268.

Trees and Text

environmentalist theories or principles recurred throughout this material. I found that the themes of environmental stewardship, activism, and social justice were prevalent. These three themes are evident even in the titles of the essays and, as such, they hold the potential to encourage 'casual' readers of the *Green Bible* browsing through this section to interpret its biblical texts in light of these themes. The issue of how to apply these themes to Bible verses in a manner that considers their context and meaning remains unaddressed in the *Green Bible*. This encourages readers to apply these themes to biblical passages anachronistically or in places where they are contrary to the explicit meaning of the text itself.

In respect to Gen. 2:4b–3:24 essays by DeWitt and Davis exhibit this kind of interpretation. Both studies present Gen. 2:15 as the key verse of this passage, arguing that the appointment of the first human as 'tiller' and 'keeper' of the garden of Yhwh demonstrates the wider duty of present-day humanity to look after the entirety of the non-human world.

The use of green text is both the most distinctive and controversial material feature of the *Green Bible*; academic reviews of the volume by Habel, Horrell, Rosell, Hong, Pattermore, and Frohlich all identify issues with this feature. The Preface of the *Green Bible* outlines the criteria by which biblical text was selected to be highlighted in green. However, my analysis of green text demonstrated that the *Green Bible* fails to distinguish between verses that explicitly meet its criteria for green text and verses that require interpretation in light of contemporary ecotheology before they can be understood as meeting these criteria. Indeed, in some instances there is no clear reason why some biblical texts have been highlighted in green (see, for

6. Matter as Text

example, Exod. 35:2) and in other instances texts highlighted in green actually contradict the criteria stipulated (see, for example, Rev. 21:1).

In respect to the interpretation of Gen. 2:4b–3:24, the majority of this passage is rendered in green ink, though it is unclear how verses such as Gen. 2:10–12 satisfy the criteria for green text stipulated in the Preface of the *Green Bible*. This inconsistent usage of green text is likely to encourage the reader of Gen. 2:4b–3:24 to think about why particular verses are highlighted in green, rather than to focus upon the meaning in the text itself.

Throughout the supplementary materials of the *Green Bible*, Gen. 2:15 is presented as the key verse of Gen. 2:4b–3:24, where the appointment of the first human to ‘till’ and ‘keep’ the garden of Yhwh is interpreted as a commissioning of all humans to act as stewards of the earth. It is both illogical and anachronistic to impose this meaning onto this verse and it causes the reader of Gen. 2:4b–3:24 to interpret this text from a stewardship perspective that is not explicitly evident in the text. Furthermore, the title of Genesis 3 and the ‘Green Bible Trail Guide’ theme ‘The Full Impact of Sin’ encourage the reader to interpret Gen. 2:4b–3:24 in terms of sin, despite the absence of this word from the passage! This perpetuates the traditional Christian understanding that the physical world has been corrupted by human sin and this somewhat undermines the notion of stewardship advocated elsewhere throughout the *Green Bible*; to what extent is it worth caring about a fundamentally ‘corrupted’ world? The *Green Bible* does not address this question in relation to Gen. 2:4b–3:24 and this has the potential to confuse the manner in which the reader understands this pericopé, and indeed the biblical text of the *Green Bible* as a whole.

Trees and Text

6.4 The environmental and socio-cultural impacts of *The Green Bible*

I've seen a statistic that the average American home has four to nine Bibles in their homes. There's always room for more Bibles. The industry has shown us that.⁷⁶

These are the words of Mark Tauber of Harper One (now HarperCollins), the publishing house responsible for the *Green Bible*, and the quote is taken from a CNN interview with him in connection with the launch of the volume. For me, this quote reflects the complexity of the myriad material-discursive interrelationships associated with the production of the *Green Bible*. On the one hand, the textual content of the *Green Bible* seeks to encourage its readers to be more aware of environmental and social justice issues, and to address these issues in practical ways. If readers do take the ideology of the *Green Bible* seriously, it has the potential to be an effective catalyst of positive environmental and social change. On the other hand, however, the Bible has been published by a commercial organisation in order to generate financial profit by addressing a niche in the speciality Bible market, and the manufacture, distribution, and marketing of the Bible is not without negative environmental or socio-cultural impact.

The notion of 'matter as text' offers an appropriate theoretical perspective from which to examine the *Green Bible* as a material artefact that has been produced out of a complex assemblage of natural materials, human labour, manufacturing technologies, logistical networks, financial systems. As such, the *Green Bible* itself represents what Iovino and

⁷⁶ Mark Tauber, speaking in interview; Eric Marrapodi, 'Repackaging the Bible', <<http://edition.cnn.com/2008/LIVING/wayoflife/12/24/repackaging.bible/>> (2008) [accessed 2 February 2018].

6. Matter as Text

Oppermann refer to as 'storied matter', in essence a material entity whose origins, agencies, and impact, both physical and cultural, may be interpreted as a series of narratives.⁷⁷ In the analysis that follows, I examine the environmental and socio-cultural impacts of the production, marketing, distribution, and interpretation of the *Green Bible*. Ultimately, in the conclusion of this study, I shall assess these impacts alongside the environmentalist ideology evident within the *Green Bible*.

6.4.1 Marketing the *Green Bible*

The intended readership of the *Green Bible* may be elucidated by examining its cover design, textual content and marketing; in turn, this is helpful in exploring the socio-cultural impacts of the volume. I discussed the cover of the *Green Bible* above, and found that its design aesthetic was consistent with contemporary products marketed on the basis of their environmental credentials. However, an examination of the textual content and marketing of the *Green Bible* suggests that its intended readership is wider than the relatively niche demographic of readers who may be interested in both the Bible and environmental issues.

As the only speciality Bible devoted to the subject of the environment, the *Green Bible* satisfied a unique niche in the market when it was launched in 2008; indeed, this is still true of the Bible a decade later. As discussed above, there are slight differences in content between the UK and US versions of the *Green Bible*; this is perhaps indicative of HarperCollins'

⁷⁷ Oppermann, 'Ecological Postmodernism to Material Ecocriticism', pp. 30-31.

Trees and Text

intention to target marketing and sales in these two regions. Notably, however, the NRSV translation, which uses US spelling, punctuation, and numbering style, is used in both versions, despite HarperCollins also publishing an 'Anglicized' version of the NRSV.⁷⁸

Similarly, the 'Green Bible Trail Guide' and the 'Where Do You Go from Here?' sections of the UK *Green Bible* refer to US political structures and organisations. It is unclear why HarperCollins did not adapt these sections for their UK readers, and it gives the impression that the Bible is aimed primarily at US readers. Furthermore, as Hong observes, the Bible features a particularly Western perspective on environmentalist issues and this limits its relevance to readers that can relate to the same Western perspective.⁷⁹ Whilst the *Green Bible* promotes both environmentalist praxis and social justice, these concepts are presented in the context of Christian theology, as distinct to secular or multi-faith contexts. Again, this limits the relevance of the Bible to those willing to engage with its materials in a Christian context. The (eco)theology presented in the supplementary features of the Bible originates from a team of authors and editors (mainly church leaders and academics) who represent a variety of denominational backgrounds. The Bible avoids discussing theological differences between denominations and instead attempts to present an (eco)theology that is acceptable to as wide a range of Christian readers as possible. The Bible is not always successful at this though; the most obvious difficulty is the

⁷⁸ The 'Anglicized' version of the NRSV employs UK spelling, grammar and punctuation conventions; New Revised Standard Version Bible Anglicized Edition (London: HarperCollins, 1989). It is not clear why HarperCollins did not use this translation for the UK version of the *Green Bible*; this is possibly due to the additional financial cost of converting the NRSV Anglicized text into the green text format.

⁷⁹ Hong, 'The Green Bible: A Model For the Asian Context?', pp. 213-214.

6. Matter as Text

conflicting assertions that the non-human world is both created by God and inherently 'good', but also corrupted by sin, as identified above. The *Green Bible* also exhibits the assumption that its readers will be practicing Christians; its 'Where Do You Go From Here?' chapter contains a section detailing how the reader can encourage environmentally-friendly practices in their congregation.⁸⁰ In short, then, the textual content of the UK *Green Bible* suggests that its intended readership is practicing Christians in the US; little effort has been made to adapt the volume to a UK audience.

The *Green Bible* is primarily marketed to an English-speaking Western audience through the HarperCollins and nrsv.net websites.⁸¹ Both webpages repeat much of the information found on the cover of the cotton/linen cover edition of the *Green Bible*. That is to say that on these webpages, the Bible is promoted on the basis of the environmentalist message that it conveys and the environmental credentials of the Bible as a material object. The nrsv.net webpage includes the original promotional video released by HarperCollins in 2008, which offers a helpful insight into the marketing of the *Green Bible* around the time of its launch. The video begins with a series of interviews with a range of people in the US from a variety of demographics to illustrate that the predominantly Christian population of the country has little understanding about what the Bible says about the environment. The *Green Bible* is then presented as the solution to this problem, both in terms of its environmentally friendly construction and its

⁸⁰ 'Where Do You Go From Here', p. 1240.

⁸¹ <https://www.harpercollins.com/9780062116369/the-green-bible>; <https://www.nrsv.net/harper/the-green-bible/> [accessed 2 February 2018]. As with my earlier disclaimer regarding the HarperCollins website, please be aware that the content of the nrsv.net webpage has also changed throughout the course of my research and may continue to change.

Trees and Text

ecologically conscious message. According to Tauber of HarperCollins in this video:

[The Green Bible] is the first ever speciality Bible that takes the issues of sustainability, stewardship of the earth, what many in the religious community call 'creation care' very seriously. The actual object of the Bible is a sustainable product in terms of recyclable paper, recyclable bindings. The ink is soy-based.⁸²

Crucially, Tauber claims that the Bible is a sustainable product in terms of its recyclability rather than the materials from which it is constructed. This claim surprises me as the *Green Bible* is not different to any other mass-produced paperback Bible in terms of its recyclability; any paperback book can be recycled. Surely, a stronger point would be to emphasise that it has been constructed with environmental and social issues in mind, though the environmental and social impacts of the production of the *Green Bible* are ambiguous, as I shall demonstrate below. Furthermore, according to the HarperCollins website only the cotton/linen cover edition of the *Green Bible* is printed using soy-based ink.⁸³ The kind of ink and binding used in the manufacture of the UK paperback edition of the *Green Bible* are not specified, and so the environmental credentials of these materials are unclear.

⁸² HarperOne, 'The Green Bible' <<https://www.nrsv.net/harper/the-green-bible/>> (2008) [accessed 2 February 2018].

⁸³ Soy-based ink is more environmentally friendly in comparison to the petroleum-based printing inks traditionally used.

6. Matter as Text

6.4.1.1 Summary

As the only speciality Bible devoted to the subject of the environment, the *Green Bible* satisfied a unique niche in the market when it was launched in 2008; this is still true of the Bible a decade later. The cover design of the *Green Bible* suggests that it is a niche product for those with an interest in the Bible and the environment, though its textual content suggests that its intended readership is wider, aimed at practicing Christians in the US. The textual content of the UK *Green Bible* therefore shows little adaptation for its audience; the 'Green Bible Trail Guide' and the 'Where Do You Go from Here?' sections relate to US political structures and organisations. The *Green Bible* is marketed on HarperCollins and nrsv.net websites on the basis of the environmentalist message that it conveys and its environmental credentials as a material object. The words of Tauber in the 2008 promotional video for the *Green Bible*, are notably different in focus; he draws attention to the *recyclability* of the Bible rather than the environmental credentials of its constituent materials.

6.4.2 The environmental Impacts of producing the *Green Bible*

A prominent single sentence on the rear cover of the paperback *Green Bible* states that it is '[t]he first Bible printed on paper from environmentally and socially well managed forests.'⁸⁴ This is an important claim that is intrinsically

⁸⁴ In contrast, the cardboard wrapper on the front cover of the cotton/linen edition of the *Green Bible* boldly states 'Environmentally friendly – cotton/linen cover, recycled paper, soy-based ink and water-based coating'.

Trees and Text

linked to the ideology of the *Green Bible* itself and it requires further explanation if the environmental and social credentials of the volume are to be taken seriously. For example, how is an environmentally well managed forest or a socially well managed forest defined? Who has defined the meaning of these terms in this context and the standards that are required in order for a forest to be awarded this status? Crucially, other than this bold statement on its rear cover, there is very little further information in support of this claim in the *Green Bible*, and these terms are never elucidated within its pages or on the HarperCollins and nrsv.net websites. The provenance of the materials used in the construction of the *Green Bible* and the wider social impacts of its manufacture become apparent only upon a closer examination of its paratext. In the front matter of the *Green Bible* is a small FSC logo, followed by some smaller print that reads:

Mixed Sources

Product group from well-managed forests, controlled sources and recycled wood or fiber

www.fsc.org Cert no. SCS-COC-00648

© 1996 Forest Stewardship Council

FSC is a non-profit organisation established to promote the responsible management of the world's forests. Products carrying the FSC label are independently certified to assure consumers that they come from forests that are managed to meet the social, economic and ecological needs of present and future generations.⁸⁵

⁸⁵ Front matter of the *Green Bible*; the page is not numbered, but according to the page numbering used it is p. 2.

6. Matter as Text

This is the most detailed information in the whole of the *Green Bible* relating to its production and it raises questions that remain unanswered throughout the volume as a whole. For example, why did the publishers of the *Green Bible* choose to use paper produced in accordance with FSC standards over against other environmentally sustainable and socially equitable sources of paper? What does the FSC mean by ‘responsible management of the world’s forests’? Precisely how does the FSC manage forests to ‘meet the social, economic and ecological needs of present and future generations’? Without any direct engagement with these questions, the *Green Bible* is exclusively reliant upon the reputation, integrity, and stringency of the FSC certification process to fulfil its claims about its environmentally and socially equitable providence.

This is not to say that I wish to call the practice of FSC certification into question here, but rather to argue that the lack of information within the pages of the *Green Bible* relating to its production is conspicuous and, to a certain extent, undermines its ideological focus upon environmental sustainability and social justice. If awareness, stewardship, praxis and social justice are truly of central importance to the ideology of the *Green Bible*, as its introductory essays suggest, then why does the Bible not devote more (any) space to explaining the environmental and social impacts of its own production?⁸⁶

⁸⁶ See Tutu, ‘Foreword’, pp. I-13-I-14; DeWitt, ‘Reading the Bible through a Green Lens’, pp. I-28, I-33.

Trees and Text

6.4.2.1 The *Green Bible* and its FSC Certification

The environmental credentials of the *Green Bible* can only be understood further through an engagement with the FSC website. On the rear cover of the *Green Bible* are two FSC labels. The first label relates to the wider relationship between the publisher HarperCollins and the FSC, and includes an internet address that, upon visiting, provides general information about the publisher's procurement of paper, its affiliation with the FSC, and its carbon neutral status; in short, it is too general to offer any helpful information in relation to the *Green Bible*.⁸⁷ The second label relates to the *Green Bible* specifically and states 'Mixed Sources[.] Product group from well-managed forests and other controlled sources'.⁸⁸

As there is no explanation of this label within the *Green Bible*, I consulted the FSC website (<https://ic.fsc.org/en>) and read a range of their documents relating to their certification standards and product labelling. I found that the 'mixed sources' label featuring on the rear cover of the *Green Bible* is no longer in use (the FSC simplified their labelling system in 2015) and has been replaced with the 'FSC mix' label.⁸⁹ This label identifies products that contain a minimum of two the following three distinct categories of constituent materials defined by the FSC:

⁸⁷ HarperCollins, 'Environment', <<http://corporate.harpercollins.co.uk/about-us/environment>> (2018) [accessed 8 February 2018].

⁸⁸ Rear cover of *The Green Bible*.

⁸⁹ Forest Stewardship Council, 'FSC Mix and Controlled Wood', <<https://ic.fsc.org/en/what-is-fsc-certification/controlled-wood/controlled-wood-strategy>> (2017) [accessed 11 February 2018], pp. 16-18.

6. Matter as Text

(1) FSC certified materials: these materials originate from FSC certified forests, which adhere to specific environmental and social welfare standards stipulated by the FSC.⁹⁰ The actual process of certification is highly complex, so a summary of the principles relevant to this discussion will suffice here: (i) the forest must be managed in accordance with all applicable laws, regulations, and nationally-ratified international treaties, conventions, and agreements. (ii) The forest must be managed in a manner that maintains or enhances the social and economic wellbeing of its workers and local communities. (iii) The forest must be managed in a manner that identifies and upholds the legal and customary rights of any indigenous peoples associated with it. (iv) Forest management should maintain, conserve, and/or restore forest ecosystems and environmental values, and shall avoid, repair, or mitigate negative environmental impacts.⁹¹ These are the most rigorous forest certification standards in the world.⁹²

(2) Reclaimed materials: these are recycled materials that are manufactured from wood and paper recovered from industrial and domestic waste.⁹³ The reclamation of wood and paper waste is important in terms of sustainability as it reduces the demand for timber from both commercial plantations and illegally harvested sources. However, it is not possible to trace the origins of

⁹⁰ Forest Stewardship Council, 'Forest Management Certification', <<https://ic.fsc.org/en/what-is-fsc-certification/forest-management-certification>> (2018) [accessed 14 February 2018].

⁹¹ Forest Stewardship Council, 'The 10 FSC Principles', <<https://ic.fsc.org/en/what-is-fsc-certification/principles-criteria/fscs-10-principles>> (2018) [accessed 14 February 2018].

⁹² Forest Stewardship Council, '10 Reasons to Choose FSC', <<https://ic.fsc.org/en/choosing-fsc/10-reasons-to-choose-fsc>> (2018) [accessed 15 February 2018].

⁹³ Forest Stewardship Council, 'Sourcing reclaimed material for use in FSC Product Groups or FSC Certified Projects', <<https://ic.fsc.org/en/what-is-fsc-certification/chain-of-custody-certification/reclaimed-material>> (2011) [accessed 13 February 2018], pp. 10-11.

Trees and Text

the waste materials from which reclaimed materials are manufactured. Consequently, it is not possible to quantify the extent to which a reclaimed material contains waste materials that originated from environmentally deleterious and/or socially inequitable sources.⁹⁴

(3) Controlled wood: this wood does not meet FSC certification standards, but does satisfy a range of minimum FSC standards relating to environmental and social impact.⁹⁵ Materials labelled as FSC controlled wood cannot contain: (i) Wood harvested illegally. (ii) Wood harvested in violation of traditional and human rights. (iii) Wood from forests in which high conservation values are threatened by management activities. (iv) Wood from forests being converted to plantations and non-forest use. (v) Wood from forests that contain genetically modified trees.⁹⁶ Notably, then, these standards do not include any requirements for the active maintenance or improvement of either the forest ecosystems from which controlled woods originate, or the communities associated with them. For example, there are no stipulations regarding forest maintenance or conservation, equitable payment for forest workers, or the improvement of local communities.

Having detailed the three categories of wood that may constitute FSC mixed source materials, it is apparent that there are significant differences between the environmental and social impacts of these three categories. FSC certified woods are produced in accordance with the highest standards of

⁹⁴ Forest Stewardship Council, 'Sourcing reclaimed material for use in FSC Product Groups or FSC Certified Projects', pp. 10-11.

⁹⁵ Forest Stewardship Council, 'FSC Mix and Controlled Wood', pp. 4, 22.

⁹⁶ Forest Stewardship Council, 'FSC Mix and Controlled Wood', p. 22.

6. Matter as Text

environmental and social stewardship, whilst reclaimed materials are manufactured from materials whose environmental and social impacts cannot necessarily be traced, and controlled woods meet the minimal FSC standards of environmental and social stewardship. Crucially, the FSC does not state the percentage mixture of these categories of wood on products that bear its mixed source labelling.⁹⁷ There is therefore a lack of clarity surrounding the FSC mixed source label in respect to the extent of its environmental and social impacts. However, the FSC does stipulate that for a product to be labelled as 'FSC mixed source' it should contain no more than 30% of wood from controlled sources, and that the remaining content may be made up of either FSC certified materials, reclaimed materials, or a combination of both.⁹⁸

In respect to determining the environmental and socio-cultural impacts associated with the FSC mixed source paper upon which the *Green Bible* is printed, then, there is no way of establishing the extent to which its pages consist of FSC certified materials over against reclaimed materials or controlled materials. Indeed, according to FSC guidelines, it is possible that the *Green Bible* is not printed on *any* paper that originates from FSC certified sources. For example, the Bible might be printed on paper that comprises 70% recycled materials and 30% controlled woods, and this would still qualify as a FSC mixed source material. In this instance, 70% of the paper upon which the Bible is printed would originate from sources whose environmental and social impact may be unknown, and the remaining 30% of

⁹⁷ Forest Stewardship Council, 'FSC Mix and Controlled Wood', p. 3.

⁹⁸ Forest Stewardship Council, 'FSC Mix and Controlled Wood', pp. 12, 16; note that products containing 100% FSC certified materials and 100% reclaimed materials bear the labels 'FSC Certified' and 'FSC recycled' respectively.

Trees and Text

the paper would originate from sources that meet the minimal standards of the FSC in respect to environmental and social impact. Hence, whilst we cannot know that the paper upon which the *Green Bible* is printed does not contain any FSC certified woods, the claim that the Bible is printed on paper originating from ‘environmentally and socially well managed forests’ is misleading and potentially untrue because it is possible that it is exclusively printed on reclaimed and controlled materials.

Furthermore, there is a lack of transparency about the environmental and social credentials of the *Green Bible* in that the information about the provenance of the paper on which the volume is printed is not detailed in the Bible itself. Indeed, this information can only be found through an extensive engagement with information and documents published on the FSC website. This information is not indexed clearly on the website and the search function on the website is not sophisticated enough to return relevant information. When detailed information can be found on the website, it is not typically written using language that is accessible to the layperson and requires some knowledge of environmental science and/or the commercial forestry industry.

In respect to the paper on which the *Green Bible* is printed, beneath the ‘Mixed Sources’ logo on its rear page is a FSC certificate number, BV-COC-070802. This number relates to the certification of the paper used in the manufacture of the *Green Bible* and can be traced using the public certificate search facility on the FSC website (<https://info.fsc.org/certificate.php>). The FSC website does not explain the code BV, but the code COC refers to ‘chain of custody’ certification; this indicates that any FSC certified

6. Matter as Text

woods used in the production of this paper can be traced back through the supply chain to the forests from which they originated, and that these forests are managed according to FSC guidelines (remember, however, that it is possible that the paper contains no FSC certified wood). The certificate number provided on the rear cover of the *Green Bible* traces its paper to Phoenix Color Corp., a paper manufacturer and printer based in Hagerstown, Maryland.⁹⁹

This information confirms that my copy of the *Green Bible* was printed and manufactured in the USA, then subsequently transported to the UK through a network of road and (most likely) sea transport to the bookshop where I purchased it. HarperCollins has a UK based distribution warehouse in Glasgow, but it is not possible to trace the journey that my *Green Bible* made from manufacturer to shop.¹⁰⁰ Therefore, the precise constituent materials of my copy of the *Green Bible* and the transport route it took to reach my local bookstore cannot be determined. In addition, there is no way of knowing where in the world the trees that make up the pages of my Bible originated from and the journey that they have taken to reach me; in illustration, the approximate distance from Hagerstown to Otley, West Yorkshire, where I bought the book, is 5,600 kilometres. With these points in mind, it is apparent that the assemblage of human labour, fossil fuels, transport infrastructure, manufacturing technologies, marketing, and distribution used to produce and transport my copy of the *Green Bible*

⁹⁹ www.phoenixcolor.com.

¹⁰⁰ Harper Collins, 'Supply Chain & Distribution', <<https://www.harpercollins.co.uk/corporate/business-centre/supply-chain-distribution/>> (2018) [accessed 4 April 2018].

Trees and Text

somewhat undermines the message of environmental stewardship and frugality communicated by its textual content.

6.4.2.2 Summary

I examined the extent to which the environmental credentials of the *Green Bible* as a material object were consistent with its environmentalist message. The providence of the materials used in the construction of the *Green Bible* and the wider social impacts of its manufacture become apparent only upon a closer examination of its FSC certification; this information is not explicitly stated in the Bible or the HarperCollins and nrsv.net websites. Through the FSC labelling on the *Green Bible*, I established that the environmental and social impacts of its production were ambiguous. Whilst it is possible that some of the trees used in the production of my copy of the *Green Bible* originated from environmentally and socially well managed sources, this is not guaranteed. Indeed, it is possible that some of the paper that makes up my *Green Bible* originated from forests whose environmental and social welfare standards are either minimal or untraceable. The claim on the rear cover of the Bible that it is printed on paper originating from 'environmentally and socially well managed forests' is therefore misleading and potentially untrue.

Through the code supplied on the FSC label on my *Green Bible*, I was able to trace its production to the Phoenix Color Corp. in Hagerstown, Maryland. Considering the potentially vast assemblage of human labour, fossil fuels, transport infrastructure, manufacturing technologies, marketing,

6. Matter as Text

and distribution used to produce and transport my copy of the *Green Bible* the use of all these resources seems disproportionate and somewhat undermines the messages of environmental stewardship and frugality communicated by its textual content and visual design.

6.4.3 The socio-cultural impacts of the *Green Bible*

Having examined the potential environmental impacts of the production and distribution of the *Green Bible*, I have started to uncover some of the socio-cultural impacts associated with this process and I will expand upon these below. There are also socio-cultural impacts associated with the interpretation of the *Green Bible* and I shall discuss these too.

6.4.3.1 The socio-cultural impacts of producing and distributing the *Green Bible*

Given that the provenance of the materials used in the manufacture of the ink and binding of the Bible are unclear, I shall explore the process of manufacturing paper, from forest to consumer in illustration. The socio-cultural impact of this process is potentially vast, involving numerous and diverse groups of people, including (1) the commercial forestry workers whose livelihoods are founded upon producing wood. (2) The indigenous peoples dwelling in, or close to, forests that are harvested (remember that FSC certified wood does not originate from sources that deplete the forests of indigenous communities, but some of the wood used in the production of

Trees and Text

the *Green Bible* may do). These indigenous peoples might work and receive income from the harvesting of wood, but might also experience the negative consequences of living amongst diminished forests. (3) The wider communities created or affected by the forestry industry. For example, temporary communities might be created as workers move into areas to harvest wood, or existing communities may be affected by the influx of commercial forestry workers. (4) The staff involved with the processing of raw timber into paper (the location of this process is unclear). (5) The staff at Phoenix Color printing the Bible. (6) The staff involved with the distribution of the Bible; warehouse workers, drivers, merchant sailors. (7) The staff merchandising the Bible in retail outlets. Finally, consider also that some of the paper used in the production of the *Green Bible* may come from recycled materials, which have already gone through at least one cycle of manufacturing, distribution, purchase, consumption, and disposal, before being processed into paper. These stages widen the socio-cultural impact of the Bible even further.

As I outlined above, it is not possible to trace the precise origins of the paper from which the *Green Bible* is produced, and neither is it possible to trace the precise journeys of manufactured *Green Bibles* into retail outlets. Nevertheless, the discussion above highlights the vast potential socio-cultural impact of the production of the *Green Bible* as a material artefact in a manner that is equivalent to Bennett's new materialist analysis of the North American Blackout.¹⁰¹ The production, distribution, and sale of the Bible creates jobs, provides livelihoods, and incomes. In turn, this contributes to

¹⁰¹ Bennett, 'The Agency of Assemblages'; Bennett, *Vibrant Matter*, pp. 20-38.

6. Matter as Text

the building of local communities; wages help to sustain the immediate living costs of individuals and families, paying mortgages, bills, taxes, and pensions. In turn, this flow of capital into wider financial, political, and social structures will have further impacts. Through the FSC, sales of wood generate funds that are used to enrich the communities connected to areas that have been harvested.

But, the *Green Bible* may also contain woods derived from FCA controlled sources or recycled materials that set no minimum requirements for forest maintenance or conservation, equitable payment for forest workers, or the improvement of local communities. In the instances where these woods are used, then, there will likely be negative socio-cultural impacts of producing the *Green Bible*, as forests will not necessarily be maintained or conserved for the communities that dwell in them, and workers are not necessarily paid enough money to support themselves and their dependants. Furthermore, the processes of deforestation and pollution (created from fossil fuels used in transportation and chemicals used in the printing and binding process) result in the loss of biodiversity and indigenous habitats, which may also be linked to further negative socio-cultural impacts of producing the *Green Bible* as communities have to adapt to depleted and degraded natural resources.

Trees and Text

6.4.3.2 The socio-cultural impacts of the interpretation of the *Green Bible*

In addition to the socio-cultural impacts of producing the *Green Bible* as a physical book, there are further socio-cultural impacts associated with the interpretation of the volume as a whole. (I discussed the relationship between the materiality of the *Green Bible* and the manner in which its specific material features might influence the interpretation of its biblical text above.) The socio-cultural impact exerted by the interpretation of the *Green Bible* is difficult to quantify as there is insufficient data available. The annual sales figures for the Bible are not released publicly, so I do not know how many of these Bibles have been sold, where in the world they are being read, and I cannot speculate with any degree of certainty about the specific contexts in which these Bibles are being interpreted.

Furthermore, there is no way to record of the impact of the *Green Bible* on each individual reader, and this will vary tremendously. In illustration, one reader may be convinced by the arguments for environmental stewardship and social justice in the Bible and make practical changes to address these through their lifestyle. In contrast, another reader may simply flick through the Bible whilst browsing in a bookshop, formulating just a brief impression of the content of the Bible and taking no further actions as a result of their engagement with the text. There may be secondary levels at which the text exerts a socio-cultural influence too. For example, those who have engaged with the Bible might discuss their interpretation of its text with a wider audience; church settings, the press,

6. Matter as Text

university lectures, academic reviews, or socially in family and friendship groups. In these examples, the person who has engaged with the Bible initially shares their thoughts about the volume with an audience who may be unfamiliar with the Bible themselves; in such instances the audience is exposed to an interpretation of the text that may in itself exert some kind of influence upon their thoughts and behaviours. Finally, it is important to acknowledge that the interpretation of the text should not be understood as a single event, but as an ongoing process; once the text has been read, it may continue to influence the thoughts and actions of a reader not just at the point of reading, but for years to come.

Examining reviews of the *Green Bible* may provide some insight into its initial cultural impact, though this is not necessarily reliable as the analysis of a reviewer does not necessarily reflect the opinions of the wider public. As I detailed above, academic reviews of the *Green Bible* were largely critical of the volume and identified significant issues with the manner in which its supplementary features attempted to use biblical texts to justify environmentalist ideology and its inconsistent use of green text. Outside the academy, reviews of the Bible exhibited a similar level of scepticism.¹⁰² Yet 37,000 copies of the *Green Bible* were printed in 2008 and the first 25,000 sold within the first few weeks.¹⁰³ This suggests that the intended readership of the Bible were not as sceptical about the volume as its critics. Commercially, then, the *Green Bible* was a success, and presumably it has

¹⁰² See, for example, Alan Jacobs, 'Blessed Are the Green of Heart', *First Things* 5.193 (2009), pp. 19-22; Telford Work, 'Meagre Harvest', *Christianity Today*, 53.2 (2009), pp. 28-31.

¹⁰³ Kara Kaminski, 'Green Bible incorporates environment into religion', *The Heights*, 60.3 (2009), p. 3.

Trees and Text

been commercially viable for most of this time. HarperCollins sales figures are not released to the public, but an email conversation with this publisher on 27 August 2018 revealed that the *Green Bible* is no longer in print.

6.4.3.3 Summary

Due to the ambiguity of the FSC Mixed Source label, the precise socio-cultural impacts of the production of the *Green Bible* cannot be described or measured accurately. In a worst-case scenario, the overall socio-cultural impacts of producing the Bible could be negative, and include inequitable wages and working conditions for forest workers, and minimal regard for indigenous communities.

In addition to the socio-cultural impacts of producing the *Green Bible*, there are further socio-cultural impacts relating to its subsequent interpretation, though these impacts are also difficult to quantify with any degree of accuracy. Whilst reviews of the *Green Bible* in both academic and popular publications were critical of its content, this scepticism does not seem to have been exhibited by the general public, who purchased 25,000 copies of the Bible in the first few weeks of its release in 2008. I learned from HarperCollins on 27 August 2018, that the *Green Bible* is no longer in print; presumably the volume is no longer commercially viable in hard copy format. However, this speciality Bible remains available to purchase in ebook formats, so the remaining demand for this volume must be sufficient to offset the costs of keeping it available for purchase on line.

6. Matter as Text

In this chapter, material ecocritical theory has provided a theoretical framework from which the *Green Bible* can be analysed in a way that considers the environmentalist ideology evident in its textual content and the environmental and socio-cultural impacts of its production. This analysis and its findings are highly distinctive amongst the reviews of the *Green Bible* discussed above, and illustrate the value of material ecocritical theory in facilitating original and innovative analyses of (biblical) texts as material-discursive objects.

7. Conclusion

In this final chapter, I begin by providing a summary of the main findings of this study, and discussing the significance of these findings in the context of current material ecocritical and biblical scholarship. I proceed to offer a critical analysis of the study, which discusses its methodology, application, and findings. Finally, I propose some further applications of the methodologies used in this study and I discuss how the key findings of the study might stimulate further scholarship.

7.1 The main findings of the study

7.1.1 Contribution to material ecocritical theory and methodology

I designed a methodology to facilitate the material ecocritical analysis of Gen. 2:4b–3:24 as it is rendered in the *Green Bible*. In order to correspond with the two distinct strands of material ecocritical analysis, ‘matter in text’ and ‘matter as text’, this methodology comprised two distinct analytical approaches which examined (1) the depiction of trees in Gen. 2:4b–3:24 in the *Green Bible* and (2) the *Green Bible* as a material-discursive object and its interconnections within the wider material-discursive world. This methodology in itself offers an important contribution to material ecocritical scholarship which, to date, has not yet provided any specific methodological guidelines for the analysis of ‘matter in text’ or ‘matter as text’, and neither has material ecocritical discourse employed both of these distinct modes of

7. Conclusion

analysis together in the examination of a single object of study. Furthermore, as material ecocritical theory and methodology have been overlooked in the field of biblical scholarship, this methodology demonstrates one possible way in which material ecocritical analysis may be undertaken in a biblical studies context. Similarly, given that the study of textual materiality across the humanities as a whole is still growing and has yet to develop any established methodologies, my 'matter as text' methodology demonstrates how material ecocritical theory might contribute to the examination of textual materiality. With these gaps in current scholarship in mind, I presented my methodologies for 'matter in text' and 'matter as text' so that they may easily be adapted either together or discretely to examine other texts, both biblical and non-biblical, from a material ecocritical perspective.

As a result of developing this methodology, the study made an important contribution to the conceptualisation of non-human agency in material ecocritical discourse. I acknowledged the readiness of material ecocritical theory to engage with a variety of different theories of non-human agency; in particular the mangle, intra-action, Actor-Network Theory, and distributive agency. I argued that whilst each of these models conceptualises non-human agency differently, material ecocritical discourse fails to distinguish the differences between these models. I demonstrated that because material ecocritical theory itself proposes that all matter is inherently agentic, the only model of non-human agency that is fully compatible with this position is Bennett's theory of distributive agency. As a result, I used distributive agency as the theoretical model of non-human agency throughout my analysis. It would be prudent for future material ecocritical

Trees and Text

analyses to acknowledge the differences between these models of non-human agency and apply them accordingly; indeed, the findings of this study might promote a greater use of Bennett's model of distributive agency in material ecocritical discourse.

7.1.2 The material-botanical features of trees in Gen. 2:4b–3:24

My 'matter in text' analysis of the trees in Gen. 2:4b–3:24 yielded numerous findings relating to the depiction of trees in this text. No previous study of Gen. 2:4b–3:24 in the field of biblical scholarship has devoted this amount of attention to the depiction of its trees; this is true of both ecological readings of the text and narrative critical analyses of the text.¹ The key conclusions from this analysis therefore make an original contribution to current knowledge in the field of biblical studies and are summarised as follows.

7.1.2.1 The effacement of trees in Gen. 2:4b–3:24

I demonstrated that trees feature with relative frequency throughout Gen. 2:4b–3:24. This is true in terms of the physical presence of trees within the world depicted in this passage and the centrality of trees, particularly the tree of life and the tree of knowledge, to this narrative as a whole. Considering the overall importance of trees in Gen. 2:4b–3:24, it is striking that this pericopé tends to omit the names of specific trees and instead implies the

¹ I illustrated this above through an engagement with Walker-Jones, Newsom, Brett, Habel, Stordalen, Mettinger, Zevit, and my own work.

7. Conclusion

presence of trees and refers to trees descriptively. This serves to efface the individuality and diversity of tree species from Gen. 2:4b–3:24. This effacement is also evident throughout the Hebrew text of Gen. 2:4b–3:24, where the plantation of trees created by Yhwh is described using the word גן; the issue with this word is that it is ambiguous and does not unequivocally connote the exclusive presence of trees that is suggested by the text.

7.1.2.2 Elucidating the trees depicted in Gen. 2:4b–3:24

The age of the trees in the garden of Yhwh is never stated in Gen. 2:4b–3:24. Based upon my examination of נטע in Gen. 2:8 and throughout the Hebrew Bible as a whole, I argued that Gen. 2:8 seems to represent the planting of seeds rather than the re-planting of established plants. This would suggest that there is a passage of time between the planting of seeds in Gen. 2:8 and the growth of trees in Gen. 2:9, though the use of the verb צמח in Gen. 2:9 suggests that the process of growth is accelerated by Yhwh. The vast scale of the tree plantation created by Yhwh and the size of its trees are not explicitly detailed in Gen. 2:4b–3:24, but are intimated by numerous textual indicators; this also serves to diminish the presence of trees within the narrated world of the text.

I examined Gen. 2:9 and found that this verse depicts all trees in the garden of Yhwh as both beautiful *and* good for food. I explored the depiction of beautiful trees and trees that are ‘good for food’ throughout the wider text of the Hebrew Bible. Collating this textual data, I found that only the fig tree and the apple tree are described as *both* beautiful *and* edible in the entirety

Trees and Text

of this corpus. Paleo-botanical and archaeological studies suggest that a wide range of tree produce was consumed by Iron Age peoples in Israel-Palestine; olives, dates, figs, pomegranates, pears, peaches, almonds, pistachios, walnuts, and acorns. It is therefore likely that the phrase 'pleasant to the sight and good for food' (Gen. 2:9 NRSV) evoked some of these species to the original recipients of Gen. 2:4b–3:24. Finally, I argued that real-world seasonal variations do not seem to apply to the garden of Yhwh on the basis of its apparently perennially available tree produce in Gen. 2:4b–3:24.

I argued that the appointment of the first human to 'till' and 'keep' seems to be related to the prohibition of Gen. 2:16–17, in that maintaining the garden of requires abstaining from eating the produce of the tree of knowledge. Eating from the tree of knowledge is therefore a contravention of the instruction of Yhwh, but also a failure of the first human to fulfil his appointment. Perhaps this is why the punishment of the first human is connected to the radical change in his working conditions outlined in Gen. 3:17–19.

Looking at the depiction of the physiological consequences of consuming plant species in the wider text of the Hebrew Bible, I argued that consuming the produce of the tree of knowledge brings about some kind of physiological change that results in a wide-ranging knowledge of the physical world (Gen. 3:7, 22). I proposed that an explicit prohibition upon eating from the tree of knowledge was necessary firstly because this was undesirable to Yhwh, but secondly because of the unique material-botanical attributes of this tree. Indeed, Gen 3:6 implies that this tree may have appeared

7. Conclusion

especially beautiful and that its produce looked uniquely inviting to eat (it is capable of imparting wisdom) over against the other trees in the garden.

Gen. 3:7 intimates the presence of the fig (the real-world species *Ficus carica*) in the garden of Yhwh; this tree must be mature enough to allow humans to construct loincloths from its leaves. I proposed that the place of the fig as a fruit commonly acknowledged as 'good to eat' in Israelite culture is perhaps underscored throughout the wider text of the Hebrew Bible, which employs three distinct words to refer to specific types of edible figs produced throughout the agricultural year. I demonstrated that throughout the Hebrew Bible as a whole the fig is connected to the favour of Yhwh and that the presence of the fig in the garden of Yhwh is consistent with this theme. Furthermore, the act of the humans taking the leaves of the fig (Gen. 3:7) might subtly suggest that they are falling out of favour with Yhwh and contravening the appointment of the first human to 'till' and 'keep' the garden.

7.1.2.3 Why is eating from the tree of life not prohibited by Yhwh?

Considering possible material-botanical properties of the tree of life, I proposed that eating from this tree was not prohibited by Yhwh because (1) the tree of life has not yet yielded any produce. (2) The produce of the tree of life is difficult, but not impossible, to access. (3) The produce of the tree itself dissuades the humans from eating it. These possibilities are based upon gaps in the narrative of Gen. 2:4b–3:24. As such, none of these possibilities can be proven as definitive solutions to this problem, but equally nothing in

Trees and Text

the pericopé undermines any of these possibilities. In any of the above scenarios, the humans are never made aware of the tree of life, they never eat from this tree, and once they gain an awareness of the tree they are exiled from the garden to prevent them eating from it.

This solution raises the question of why the tree of life and the tree of knowledge are placed in the garden of Yhwh if consumption of their produce is forbidden. Considering this question from an ecocentric perspective, I proposed that alongside adding beauty to the garden and yielding edible produce (though not produce intended for human consumption), these trees were placed in the garden to be maintained by the human. Whilst this solution to the narrative problem of why there is no prohibition on eating from the tree of life is based upon narrative gaps, this interpretation stands as a credible alternative to the solutions offered by Stordalen and Mettinger.

7.1.3 The agency of the trees in Gen. 2:4b–3:24

Applying material ecocritical theory in this study allowed me to examine the agency of the trees depicted in Gen. 2:4b–3:24. Given that trees and their impacts on the physical world of Gen. 2:4b–3:24 have been overlooked in the majority of ecological and narrative-critical analyses of this passage, my findings offer an important contribution to knowledge.² In addition, this pioneering analysis illustrated how the concept of non-human agency might

² I illustrated this above through an engagement with Walker-Jones, Newsom, Brett, Habel, Stordalen, Mettinger, and Zevit.

7. Conclusion

be applied to a biblical narrative, highlighting the potential of this approach to be used in further biblical texts and I shall discuss further applications below.

7.1.3.1 Changing the environment of the primordial earth

The events of Gen. 2:4b–3:24 occur over a time period that is more consistent with human actions and agencies, rather than the actions and agencies of trees. The agency of the trees in Gen. 2:4b–3:24 is first apparent when considering their impact upon the vast and empty soil plain of Gen. 2:4b–9, which is forever changed by the introduction of its tree plantation. Trees exert a significant spatial agency within the physical world of Gen. 2:4b–3:24, defining and delineating the garden of Yhwh in contrast to the wild space outside it. I argued that the border of the garden of Yhwh consists of densely planted trees, which lends this boundary a certain degree of porosity. The trees at the border of the garden therefore possess a unique agency, serving as ‘gatekeepers’ that limit the flow of vegetal matter, humans, and some larger fauna between the garden and the land outside of it.

Within the garden of Yhwh, trees exhibit spatial agency through shaping the layout of its floor, affecting the path of the humans as they walk through the garden, and even concealing them. The position of trees in the garden also contributes to the aesthetic beauty of the garden as a whole and presumably affects the amount of direct sunlight and shade in the garden.

Trees and Text

7.1.3.2 Sensory and physiological impacts of trees on the humans

Looking at the depiction of human sensory experience in Gen. 2:4b–3:24 as a whole, it is notable that much of this experience originates from interaction with trees. The emergence of trees in the physical environment of Gen. 2:7–9 would constitute a major sensory and emotional experience for the first human as he transitions from being alone in the vast expanse of soil to being surrounded by a wide variety of trees intentionally selected by Yhwh to exert physiological impact (the trees are both beautiful to look at and good to eat). Furthermore, the edible produce of the trees exert a crucial physiological agency upon both humans given that their lives are exclusively sustained by eating from trees.

Trees offer a significant contribution to the ambient soundscape of the garden experienced by the humans; along with the sound of the water coursing through the four rivers, the interaction of trees with their environment would be the main sound audible to the humans. Indeed, the sound of Yhwh walking through the garden intimates the interaction with trees and is a notable plot point in Gen. 2:4b–3:24.

The humans are seemingly aware of the tactile agency of fig leaves over against other available leaves, given that they choose these leaves to make loincloths. The use of fig leaves for clothing highlights the further agentic capacity of trees (Gen. 3:7).

Finally, I argued that applying Bennett's theory of distributive agency to the narrative world of Gen. 2:4b–3:24 the sensory and physiological agency of the trees becomes evident on both conscious and subconscious

7. Conclusion

levels, across macroscopic and microscopic scales of distance, across the garden of Yhwh and the land outside it, and between ranges of timescale from immediate sensory stimulation to the longer-term sustenance of human life through the provision of nutrition.

7.1.3.3 The tree of life

The tree of life apparently possesses an agency associated with divine prerogative; it is capable of imparting eternal life. Whilst at no point in Gen. 2:4b–3:24 does the tree of life demonstrate this ability, the agentic potential of this tree is sufficient to motivate Yhwh to take a series of extraordinary measures to restrict the humans from accessing it. Contrary to Christian theological tradition that maintains that the humans are exiled from the garden as punishment for their behaviour, Gen. 3:14–24, and in particular Gen. 3:23, reveals that the agentic potential of the tree of life is the sole motivator for Yhwh to expel the humans from the garden.

7.1.3.4 The tree of knowledge

In Gen. 3:1–6 the tree of knowledge, the woman, and the earlier words of both Yhwh and the snake function as an assemblage, with the agency of each individual element contributing towards compelling the woman to eat from the tree. In contrast to Christian theological tradition, which perceives the snake as the deceiver who persuades the woman to eat from the tree, the explicit words of Gen. 3:6 state that the sensory impact of the tree plays

Trees and Text

a significant persuasive role in influencing the woman. Indeed, given the potency of the sensory impact of the tree on the first woman in Gen. 3:6 it seems probable that the humans would have eventually eaten from the tree without any encouragement from the snake.

The agency of the tree of knowledge is also evident in the physiological change that it instils in the humans, who gain an awareness of their nudity due to eating from the tree (Gen. 3:7). The precise change undergone by the humans is not elucidated in Gen. 2:4b–3:24, though Gen. 3:22 confirms the unique agency of this tree; eating its produce has imparted the knowledge of good and evil to the first human.

A secondary consequence of eating from the tree of knowledge is the series of irreversible punishments precipitated by Yhwh in Gen. 3:14–24. Notably, despite the visual allure of the tree of knowledge, it is not punished for its significant role in tempting the humans to eat its produce. These consequences are directly brought about by Yhwh, but they are only happening at all because the tree of knowledge was placed in the garden alongside the humans. The text of Gen. 2:4b–3:24 and the subsequent interpretation of this text in Christian theological tradition has therefore failed to acknowledge the agency of the tree of knowledge in this respect. Indeed, Christian theological tradition has held the snake of Genesis 3 responsible for the temptation of the humans.

7. Conclusion

7.1.4 The materiality of the *Green Bible* and the interpretation of Gen. 2:4b–3:24

With the exception of discussing its use of green text, academic reviews of the *Green Bible* have devoted little attention to its material features.³ In this study, I used the material ecocritical principle of ‘matter as text’ as a basis to examine the materiality of the *Green Bible* in respect to how it might influence the interpretation of Gen. 2:4b–3:24. As such, this analysis is the most detailed exploration of the materiality of the *Green Bible*. The findings from this analysis are as follows.

7.1.4.1 Gen. 2:4b–3:24 in the *Green Bible*

The biblical text of the *Green Bible* as a whole follows many of the formatting conventions that have come to be associated with Bibles printed in book form. Uniquely, however, the majority of Gen. 2:4b–3:24 in the *Green Bible* is rendered in green ink. The intention of the publisher is that the green ink highlights specific passages to the reader, though in practice the text rendered in black ink contrasts more sharply with the cream paper upon which the Bible is printed, and consequently it is actually more visually striking than the lighter green text. It is therefore possible that, in opposition to its intended purpose, verses in black text will be emphasised to the reader and this may influence their interpretation of Gen. 2:4b–3:24.

³ I illustrated this above through an engagement with the work of Habel, Horrell, Rosell, Hong, Pattemore, and Frohlich.

Trees and Text

Gen. 2:4b–3:24 is separated into two passages; Gen. 2:4b–2:25, entitled ‘Another Account of Creation’, and Gen. 3:1–3:24 ‘The First Sin and its Punishment’ this presentation is a product of the NRSV translation, rather than a unique feature of the *Green Bible*. The first passage serves to dissuade the reader from understanding Genesis 1–3 as a single coherent creation narrative; this is helpful given the significant narrative differences between these two passages. The title of the second passage is more problematic for the interpretation of Gen. 2:4b–3:24 as it encourages readers to interpret the narrative in terms of sin, a concept that is not explicitly mentioned in the text.

The footnotes of Gen. 2:4b–3:24 are also a product of the NRSV translation. Crucially for the interpretation of this pericopé these footnotes underscore the linguistic connection in the Hebrew text between ‘man’ and ‘ground’. Given the environmentalist focus of the *Green Bible*, it is likely that readers might interpret this linguistic connection anachronistically, viewing it as being fully consistent with the contemporary ecological concept of interconnectedness; especially as Bernstein discusses this connection in her essay in the introduction to the *Green Bible*. This is problematic as the vastly different contexts of these two perspectives must be acknowledged.

7.1.4.2 Title and cover

Both the word ‘green’ in the title of the *Green Bible* and its cover design, which follows established design trends associated with products marketed on the basis of their environmental credentials, suggest the environmentalist

7. Conclusion

focus of the volume to the contemporary Western reader. As such, the cover design of the *Green Bible* is highly distinctive amongst other printed Bibles and the reader familiar with this aesthetic will start to make assumptions about the ideological focus of the Bible before they have engaged with its contents.

7.1.4.3 Green text

The use of green text to highlight specific verses throughout the *Green Bible* is both its most distinctive and controversial material attribute; Habel, Horrell, Rosell, Hong, Pattemore, and Frohlich have each identified issues with this feature. My analysis of green text demonstrated that the editors of the *Green Bible* did not adhere to their own criteria for highlighting text. Distinctively amongst earlier studies of the *Green Bible*, I found that the volume fails to distinguish between verses that explicitly meet its criteria for green text and verses that require interpretation in light of contemporary ecotheology before they can be understood as meeting these criteria; in addition, other verses highlighted in green only meet these criteria implicitly, whilst a final set of verses are highlighted in green with no clear fulfilment of the criteria.

7.1.4.4 The environmental ideology of the *Green Bible*

Crucially, the *Green Bible* never explicitly states the precise environmentalist theory or principles upon which it is founded. This is problematic given that environmentalist theory represents a range of ideas rather than a set of

Trees and Text

universal principles. I established that the introductory essays featuring in the Bible exhibited the recurring themes of environmental stewardship, activism, and social justice. However, the issue of how to apply these themes to Bible verses in a manner that considers their context and meaning remains unaddressed in the *Green Bible*; this encourages readers to apply these themes to biblical passages anachronistically or in places where they are contrary to the explicit meaning of the text itself. I identified three issues relating to Gen. 2:4b–3:24 in respect to the environmentalist ideology evident in the *Green Bible*.

Firstly, throughout the supplementary features of the *Green Bible*, Gen. 2:15 is presented as the key verse of Gen. 2:4b–3:24; the appointment of the first human as ‘tiller’ and ‘keeper’ of the garden of Yhwh is presented as a commissioning of humanity as a whole to look after the entirety of the non-human world. This interpretation is problematic as it is both illogical and anachronistic to impose this contemporary notion of stewardship onto this verse, which, as part of an ancient Western Asian creation narrative, speaks only of the duty of the first human to look after the garden of Yhwh.

Secondly is the issue of sin; the title of Genesis 3 and the theme ‘The Full Impact of Sin’ in the ‘Green Bible trail Guide’ encourage the reader to interpret Gen. 2:4b–3:24 in terms of sin, that is to say in a manner consistent with Christian theological tradition, despite the absence of this word from the passage. This interpretation is in conflict with the notion of stewardship advocated elsewhere in the *Green Bible*; to what extent is it worth caring about a fundamentally ‘corrupted’ world? The *Green Bible* does not address this apparent inconsistency and this has the potential to confuse the manner

7. Conclusion

in which the reader understands Gen. 2:4b–3:24, and the biblical text of the *Green Bible* as a whole.

Thirdly, considering the numerous supplementary features of the *Green Bible* and the frequency with which Gen. 2:4b–3:24 features throughout these materials, it is striking, especially in light of the findings of my ‘matter in text analysis’, that the *Green Bible* fails to acknowledge the prominent and significant role of the trees in this passage.

7.1.5 The environmental and socio-cultural impacts of the *Green Bible*

I used the concept of ‘matter as text’ to explore the environmental and socio-cultural impact of the *Green Bible*. I established that the marketing of the *Green Bible* was somewhat inconsistent; its cover design suggests that it is a niche product for those with an interest in the Bible and the environment, whilst its textual content suggests that its intended readership is wider, aimed at practicing Christians in the US. As such, little has been done by HarperCollins to adapt the UK *Green Bible* for UK readers; its textual content, which refers to US political structures and organisations, suggests that its intended readership is practicing Christians in the US. Furthermore, two contrasting messages are associated with the promotion of the *Green Bible*; on the HarperCollins and nrsv.net websites the Bible is marketed on its environmentalist message and its environmental credentials as a material object, whereas the 2008 promotional video for the Bible draws attention to its recyclability.

Trees and Text

I examined the extent to which the environmental credentials of the *Green Bible* as a material object support or contradict the environmentalist message evident within its text. The *Green Bible* claims to be '[t]he first Bible printed on paper from environmentally and socially well managed forests', though there is no information in the UK paperback edition of the *Green Bible* or the HarperCollins and nrsv.net websites that relates to the provenance of the materials used in its production.

The *Green Bible* bears an FSC 'Mixed Sources' label. Through an engagement with materials on the FSC website I found that the environmental credentials of the paper on which the Bible is printed are in part untraceable and ambiguous. The claim of HarperCollins that the *Green Bible* is printed on paper originating from 'environmentally and socially well managed forests' is therefore misleading and potentially untrue. There is also a lack of transparency about the provenance of the trees from which the *Green Bible* is constructed; this information is not found within the Bible and is only obtainable through an engagement with documents on the FSC website, which are largely written for industry professionals.

Through the code supplied on the FSC label on my edition of the *Green Bible*, I was able to trace its production to the Phoenix Color Corp. in Hagerstown, Maryland. Considering the potentially vast assemblage of human labour, fossil fuels, transport infrastructure, manufacturing technologies, marketing, and distribution used to produce and transport my copy of the *Green Bible* the use of all these resources seems disproportionate and somewhat undermines the messages of environmental

7. Conclusion

stewardship and frugality communicated by its textual content and visual design.

I explored the possible socio-cultural impacts relating to the production and interpretation of the *Green Bible*. I was not able to draw any definitive conclusions from this analysis due in part to a lack of data from HarperCollins and because there was no way to quantify wider interpretive trends relating to the reception of the *Green Bible*. I established that despite critical academic reviews in the academy and popular press the *Green Bible* had been a commercial success on its release in 2008. On 27 August 2018, HarperCollins informed me that the *Green Bible* is no longer in print; presumably, there is no longer a niche in the market for hard copy formats of this speciality Bible, though it remains available in ebook formats.

7.1.6 Reconciling the narratives: the *Green Bible* as a material-discursive object

According to material ecocritical theory, the environmentalist message that is prominent within the textual content of the *Green Bible* and the environmental and socio-cultural impacts of its production, distribution, marketing, and interpretation represent two interconnected narratives associated with the *Green Bible* as a material-discursive object. However, the 'matter as text' analysis above has shown that these two narratives appear to be in conflict with each other. The *Green Bible* presents an environmentalist ideology that is evident in both its visual design and its textual content. The two key elements of this ideology are environmental

Trees and Text

stewardship and social justice, and these themes are prevalent throughout the volume. Given this ideological focus, one might expect that the *Green Bible* is produced using methods that accord to the highest standards of environmental and social wellbeing; especially as the rear cover of the *Green Bible* itself states that it is '[t]he first Bible printed on paper from environmentally and socially well managed forests'.

Crucially, there is no explanation of this manufacturing process in the *Green Bible* itself. Furthermore, the Bible is printed on FSC Mixed Source paper and as such, its environmental and social wellbeing credentials are ambiguous. The *Green Bible* as a material-discursive object is therefore, to some extent, in conflict with itself; its ideological call for environmental and social wellbeing is undermined by its failure to acknowledge the potentially negative environmental and social impacts related to its own production.

To what extent is this contradiction important though? It is clearly not important on a commercial level given that the *Green Bible* has been appealing to consumers and making money for its publisher for over a decade. But what about the overall environmental and socio-cultural impacts of the production, distribution, and interpretation of the *Green Bible*? The analysis of the textual content of the *Green Bible* above suggests that this volume may very well inspire some readers, most likely practicing Christians in the US, to adopt more environmentally friendly and socially equitable lifestyle choices.

However, the extent to which the impacts of individuals taking such positive actions exceeds any negative environmental and social impacts associated with the production of the Bible itself is unclear. Indeed, it is

7. Conclusion

possible that the net environmental and social impacts of producing the *Green Bible* are negative, with its production and distribution creating more environmental damage and social inequality than its readers are offsetting through changes in their behaviours. Whilst it is not possible to quantify the overall environmental and social impacts associated with the *Green Bible*, the very possibility that these impacts *could* be negative is significant and undermines the ideology of the volume as a whole.

There are, of course, two wider material ecocritical 'narratives' associated with this study; the 'matter in text' and 'matter as text' analyses undertaken above. I shall discuss the extent to which they are interconnected in this study below.

7.2 Critical analysis of the study

A helpful starting point for the critical analysis of this study is to refer back to the aims set out in the introductory chapter. In retrospect, these aims now seem rather general in comparison to the more specific findings of the study. This is because these aims reflect the progression of my research; I started out with ambitious, yet relatively general, ideas about what I might be able to accomplish through the course of this analysis and I arrived at the more specific findings detailed above. I am confident that I have achieved the aims set at the start of the study, though there are some more specific issues that I shall discuss below.

Trees and Text

7.2.1 Methodology and its application

Methodology has been a key element of this study. In the existing body of material ecocritical scholarship there has been very little written about methodology, so a significant part of this study involved devising a methodology to facilitate my analysis. I devised this methodology through an engagement with material ecocritical and new materialist theory. This methodology has been largely successful in facilitating an accomplishment of the aims set out in the Introduction to the study, though there are four issues with the methodology that deserve attention here.

Firstly, owing to the absence of any established methodological templates or guidelines in material ecocritical discourse, I decided to present my methodology so that it would be adaptable to facilitate applications of material ecocritical analysis beyond this study. To what extent is this methodology readily adaptable though? The individual methodologies that I proposed for the analysis of 'matter in text' and 'matter as text' are easily adapted for use in a variety of other contexts; to demonstrate this I shall provide some examples of possible further applications of these below. However, the combined 'matter in text' and 'matter as text' methodology that I used in this study is potentially more limited in application. In this study, there was a clear connection between trees as the focus of my textual analysis of Gen. 2:4b–3:24 in the *Green Bible* and trees as the primary natural material from which the *Green Bible* is manufactured. Whilst this degree of connection is not a requirement for the combined methodology proposed in this study, I am aware that there are few examples of other

7. Conclusion

objects of study that exhibit the same degree of connection between textual content and textual materiality. I shall provide some examples of these below to demonstrate further applications of this methodology.

Secondly, in respect to my 'matter as text' analysis are the issues of the lack of established methodology and the availability of data. I set out to explore the textual materiality of Gen. 2:4b–3:24 in the *Green Bible*, to assess how the materiality of this text might influence Western readers, and to discuss the environmental and socio-cultural impacts associated with the production and interpretation of the text.

As I acknowledged above, there is no established methodology for quantifying how the materiality of a text influences its reader(s). Consequently, I based my analysis upon observing and critiquing the materiality of Gen. 2:4b–3:24 in the *Green Bible* and making assumptions about how specific material features might influence Western readers.

I was able to find a reasonable amount of data to inform my exploration of the environmental and socio-cultural impacts of producing and interpreting the *Green Bible*, though not all the data that I had expected to be able to access. HarperCollins could not provide any information about the in-store marketing of the *Green Bible*, the ink and binding used in its production, their specific distribution routes from Phoenix Color Co. (the place where the *Green Bible* was manufactured), the regional sales figures of the volume, or the date that they withdrew it from publication. HarperCollins advised that this data was unavailable owing to the *Green Bible* being withdrawn from publication (presumably 'publication' in this context relates to physical formats, given that it the Bible is still available in

Trees and Text

ebook formats). Had the *Green Bible* still been in publication, I would have presumably had greater access to information from HarperCollins, though it is not clear how much additional information they would have been prepared to share with me. Similarly, owing to the ambiguity of FSC Mixed Source certification it was not possible to determine the provenance of the trees used in the production of volume.

This is not to say that my methodology was inappropriate, that my analysis was inadequate, or that my findings do not make a helpful contribution to current knowledge, but rather to recognise that the analysis that I produced was not as definitive in terms of empirical data as I had hoped at the outset of the study due to the lack of established methodology and the availability of data.

Thirdly, I have discussed the interconnectedness of ‘matter in text’ and ‘matter as text’ in terms of material ecocritical theory. But to what extent are the ‘matter in text’ and ‘matter as text’ analytical approaches applied in this study interconnected, and have they have exerted any degree of influence over each other throughout the course of this analysis? It is my view that there is some degree of interconnection between these two analytical approaches in this study, though there is no established method of quantifying this. As I acknowledged above, whilst there is a growing body of scholarly consensus that acknowledges the connection between textual materiality and interpretation, I cannot establish the precise extent to which the *Green Bible* as a material-discursive object influenced my analysis of Gen. 2:4b–3:24 in chapters four and five.

7. Conclusion

The connection between 'matter in text' and 'matter as text' is perhaps more tangible when considering that my interpretation of Gen. 2:4b–3:24 influenced the manner in which I analysed the *Green Bible* as a material-discursive object. My reading of Gen. 2:4b–3:24 focussed on its textual content as a discrete narrative unit and when I came to examine the supplementary materials of the *Green Bible* I was acutely aware that these materials interpreted this passage from an extra-textual stewardship perspective and this observation had some influence over the way I approached, developed, and ultimately presented my analysis.

Fourthly, there is an issue of ambiguity related to the application of material ecocritical theory in the examination of specific objects of study. Material ecocritical theory acknowledges interconnections between the material and discursive across myriad levels of scale, but this concept can be taken so far that the process of identifying and describing the many things related to any given object of study tends towards the infinite and becomes unmanageable. In this study, I avoided this pitfall by largely limiting my 'matter in text' analysis to the elements depicted in the text, and taking care to identify the occasions when I was speculating about the effects of extra-textual elements. Similarly, in my 'matter as text' analysis, I largely restricted my discussion to the immediate environmental and socio-cultural impacts of the production, distribution, marketing, and interpretation of the *Green Bible*. It would be prudent for future applications of material ecocritical theory to be mindful of this issue.

7.2.2 The historical dimension of the study

My 'matter in text' analysis of Gen. 2:4b–3:24 was primarily a narrative-critical analysis that focussed upon the depiction of trees in this passage through an engagement with material ecocritical theory. However, this analysis was not purely narrative-critical and I elucidated my reading through an engagement with the historical dimensions of text; in particular, I discussed the text in its original Hebrew language and touched upon the wider socio-historical context from which the text originated. In respect to the latter, I am aware that outside of the Hebrew Bible the tree of life features in a diverse corpus of ancient Western Asian literature, iconography, and inscription, as summarised by Lanfer.⁴ I chose not to engage with these materials in order to maintain focus on the specific text of Gen. 2:4b–3:24 in the *Green Bible*. Similarly, my analysis of the fig in Gen. 2:4b–3:24 and the wider text of the Hebrew Bible led me to conclude that this tree, and its produce, appears to have held great significance in ancient Western Asian culture. Again, I chose not to expand upon this socio-historical element of the study in order to retain its focus.

Related to the historical and material dimensions of this study, I am aware that I did not discuss the role of trees and their potential impacts on the original authors, redactors, and recipients of the text. I chose not to take the study in this particular direction for two reasons. Firstly, and again, to maintain focus on the specific text of Gen. 2:4b–3:24 in the *Green Bible*. Secondly, because there is no scholarly consensus on the historical origins

⁴ Lanfer, *Remembering Eden*, pp. 3-7.

7. Conclusion

of this text, this kind of analysis would be largely speculative and I wanted to base my analysis around verifiable data as far as possible.

7.3 Further applications of the methodology and findings of the study

As I identified above, the findings of this study contribute new knowledge to material ecocritical theory and methodology, to current ecological and narrative-critical readings of Gen. 2:4b–3:24, and to the study of textual materiality. These findings are significant in themselves, but they also hold potential to be applied in a variety of further contexts, which I shall proceed to discuss below.

7.3.1 ‘Matter in text’: narrative-critical applications

I intentionally designed my methodology to be adapted for use in a variety of contexts beyond this study. The individual ‘matter in text’ and ‘matter as text’ methodologies that I devised can be applied as discrete methodologies or combined and applied in a single analysis as they were in this study. The ‘matter in text’ methodology that I devised is particularly suited to texts that depict elements of the non-human world in some way. As such, it is my hope that this methodology will inspire future ecological readings of (biblical) texts. The various agents and agencies at work in 1 Kings 18 (Yhwh speaks to Elijah, precipitating a series of events that bring an end to a three year drought); Jon. 1:1–4 (Yhwh ‘hurls’ a wind towards the sea, which creates a storm, and threatens to break up the ship in which Jonah is travelling to

Trees and Text

escape the instruction of Yhwh); Mt. 8:23–27 (Jesus commands a storm to end) are all prime examples of texts suitable for this kind of analysis and material ecocritical analyses of these passages would make a helpful contribution to current knowledge. To date in biblical scholarship there have been no ecological readings of 1 Kgs. 18:1–7, so a material ecocritical reading of this passage would break new ground. This approach would contribute to Alexander Abasili's reading of Jonah, which focuses on its animals, and to Elaine Wainwright's reading of Mt. 8:23–27, which approaches the passage from the perspective of Jesus healing the earth.⁵ Iovino and Oppermann offer examples of non-biblical texts that would be suitable for this kind of analysis.⁶

Furthermore, as I acknowledged above, in the corpus of material ecocritical scholarship, the study of 'matter in text' as a whole is underrepresented. Material ecocritical studies of biblical texts such as those suggested above therefore hold the potential to make important contributions to material ecocritical scholarship. The converse is also true; the application of material ecocritical theory holds the potential to create innovative and original readings of biblical texts.

⁵ Alexander Izuchukwu Abasili, 'The Role of Non-Human Creatures in the Book of Jonah: The Implications for Eco-Justice', *The Scandinavian Journal of Old Testament Studies* 31.2 (2017), pp. 236-253; Elaine M. Wainwright, *Habit, Human, and Holy: An Eco-Rhetorical Reading of the Gospel of Matthew* (The Earth Bible Commentary, vol. 6; Sheffield: Sheffield Phoenix Press, 2017), pp. 104-109.

⁶ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', pp. 80-81.

7. Conclusion

7.3.2 'Matter as text': the study of textual materiality

Similarly, I also devised the 'matter as text' methodology used in this study so that it is adaptable and can be readily applied to explore the materiality and/or the environmental and socio-cultural impacts of a variety of textual media. I gave examples of such texts above including seventeenth century printed books, biblical texts engraved in stone, and illustrated manuscripts. As I identified above, the only limitations on this approach are the accessibility and durability of the text subjected to analysis, and the quality and quantity of data available to inform the analysis. This approach could also contribute to the study of Bibles in a cultural context, continuing the work of Robert Carroll's 'Lower Case Bibles', which discusses the economic aspect of biblical production, including marketing and distribution.⁷

Furthermore, the study of textual materiality has not received any significant attention in material ecocritical discourse, and there is only a small body of relatively disparate studies concerned with the study of textual materiality across the humanities as a whole. My 'matter as text' methodology demonstrates one possible way in which material ecocritical theory might contribute to the development of the wider study of textual materiality in the humanities.

⁷ Robert P. Carroll, 'Lower Case Bibles: Commodity Culture and the Bible' in J. C. Exum and S. D. Moore (eds.), *Biblical Studies / Cultural Studies* (JSOT Supplement Series 266; Gender, Culture, Theory, 7; Sheffield: Sheffield Academic Press, 1998), pp. 46-69.

Trees and Text

7.3.3 Combining ‘matter in text’ and ‘matter as text’

Finally, the combined ‘matter in text’ and ‘matter as text’ methodology used in this study would be particularly suitable for use in the following contexts.

(1) An examination of animals depicted in a text that is (partially) constructed from animal skin. The depiction of animal sacrifice in Lev. 3:1–5:13 rendered in a medieval parchment or contemporary mass-produced leather bound Bible would be highly suited to this approach.

(2) An examination of an illuminated manuscript that compares its illustrations of non-human elements with the depiction of narrated entities such as animals or plants. One could discuss the extent to which these illustrations might influence readers of the text, developing the work of Muers and Elvey.⁸

(3) One might examine a passage such as Mk. 10:17–31 in the *Poverty and Justice Bible*.⁹ Like the *Green Bible*, this speciality Bible has a specific ideological focus (the alleviation of poverty and social inequality), it contains numerous supplementary features, and verses deemed relevant to its ideology are highlighted in coloured (orange) text. One could examine the agency of money and material possessions in this passage, discuss the extent to which this narrative is compatible with the ideology of the *Poverty*

⁸ Elvey, ‘A Material Intertextuality’, p. 39.

⁹ *Poverty and Justice Bible CEV* (Swindon: The Bible Society, 2008).

7. Conclusion

and Justice Bible, and to the extent to which this ideology is compatible with the materiality of the text given its wider connection to commercial publishing and manufacturing assemblages.

7.3.4 Material ecocriticism and moral agency

In my introductory chapter, I observed that there is potential for material ecocritical theory to engage more fully with the concept of moral agency. That is to say that whilst new materialist theory, and by extension material ecocritical theory, calls for a redefinition of the traditional Western understanding of 'agency' the extent to which moral agency may be included in this model is unclear. At present, Iovino and Oppermann propose a 'material ethics' to accompany their material ecocritical theory, which they describe as:

[A]n ethics based on the co-extensive materiality of human and nonhuman subjects, in a perspective which necessarily implies moral horizontality; it is also an ethics focused on the way discursive constructions and material bodies intra-act in given socio-political contexts.¹⁰

Crucially, however, Iovino and Oppermann do not elucidate how their 'material ethics' might be applied within the context of material ecocritical analysis. This raises a variety of questions including; how might moral agency be defined in the context of material ecocritical discourse? What precisely is meant by 'moral horizontality'? What entities exhibit moral agency? How does moral agency relate to particular religious traditions or

¹⁰ Iovino and Oppermann, 'Material Ecocriticism: Materiality, Agency, and Models of Narrativity', p 85.

Trees and Text

specific theological worldviews? How might moral agency be incorporated into 'matter in text' or 'matter as text' analyses? These questions remain unanswered in material ecocritical discourse and as this study was primarily focussed on material-discursive, rather than ethical or theological, analysis, I chose not to explore these lines of enquiry.

From a theoretical perspective, the acknowledgement and incorporation of moral agency into material ecocritical theory would have to be founded upon Lovino and Oppermann's concept of 'moral horizontality'. Lovino and Oppermann never define this term, but I shall speculate what I think it means in order to illustrate how moral agency might be incorporated into material ecocritical theory and analysis.

I think that 'moral horizontality' alludes to a non-anthropocentric model of morality, in which morality is not exclusive to humanity, but spread across wider assemblages which affect, and are affected by, human ethics. For example, human ethics, politics, and decision making contribute to the establishment and enforcement of criminal and civil laws in a society. In turn, through assemblages of things such as community support officers, police horses, juries, computer databases, and media coverage, those same laws will have some influence upon the ethics of the individuals living in the society, who will form their own value judgements on these laws and respond to them in a variety of ways; some may choose to uphold them, others may contravene them, some may protest against them, whilst others may have the means to reform them. In this example, human morality is not exclusively human, but decentralised; expressed through, and influenced by, all manner of non-human entities. Consequently, in this context moral agency cannot be

7. Conclusion

thought of as exclusively human, but the product of interactions between multiple human and non-human entities. This approach to incorporating moral agency into material ecocritical theory is therefore consistent with Barad's notion of ethico-onto-epistemology where value, being, and knowledge are interconnected rather than distinct categories.¹¹

Future developments of this study may explore how the concept of moral agency might be incorporated into material ecocritical theory and methodology, and the questions I raised above in relation to moral agency and material ecocriticism could be starting points for this approach. In respect to Gen. 2:4b–3:24, one might apply the decentralised model of moral agency that I proposed above to this pericopé and then proceed to discuss how this approach contrasts with historical Jewish and Christian interpretations of the text. Traditionally, Jewish and Christian readings of Gen. 2:4b–3:24 have approached the text from moral and theological perspectives, focussing on the themes of disobedience, temptation, and punishment, and identifying the failings of the snake, the woman, and the man.¹² In contrast, the decentralised model of moral agency that I described above would acknowledge the contributions of the visual allure of the tree of knowledge and the culpability of Yhwh in placing the humans in proximity to this highly desirable tree in precipitating the events in this well-known story.

¹¹ Barad, *Meeting the Universe Halfway*, p. 409.

¹² Hanneke Reuling's monograph on the reception of Gen. 3:16–21 in the writings of Rabbinic tradition and the Church Fathers illustrates the prevalence of the themes of disobedience, temptation, and punishment in these interpretations; Hanneke Reuling, *After Eden: Church Fathers and Rabbis on Genesis 3:16–21* (Leiden/Boston: Brill, 2006), pp. 89, 107, 144.

7.3.5 Agency and plant philosophy

Beyond the conceptions of non-human agency discussed in material ecocritical discourse, there is a growing body of work, predominantly in the in the sub-field of plant philosophy, that is compatible with the notion of the agency of trees discussed in this study. I engaged with the work of Hall above, but future material ecocritical analyses exploring textual depictions of trees could enter into a greater dialogue with this area. Examples of this could include the following.

(1) A comparison of biblical texts that depict anthropomorphised trees such as Judg. 9:7–15 (a selection of talking trees attempt to anoint a king amongst themselves); 1 Chron. 16:33 (trees sing for joy at the coming of Yhwh); Ezek. 17:22–24 (a cedar planted by Yhwh serves as a metaphor for Israel, and trees exhibit the ability to ‘know’) alongside John Ryan’s, ‘Tolkien’s Sonic Trees and Perfumed Herbs’, which discusses the agency of trees in the writings of J. R. R. Tolkien.¹³

(2) In *Plants as Persons*, Hall devotes a chapter to exploring the conception of plants in Christian theological tradition.¹⁴ He engages with a selection of texts throughout the Hebrew Bible and argues that overall ‘the biblical exclusion of plants from moral consideration and relationships of respect has

¹³ John Ryan, ‘Tolkien’s Sonic Trees and Perfumed Herbs: Plant Intelligence in Middle Earth’, in P. Vieira, M. Gagliano, J. C. Ryan (eds.), *The Green Thread: Dialogues with the Vegetal World* (London: Lexington Books, 2016), pp. 37-58.

¹⁴ Hall, ‘Passive Plants in Christian Traditions’, pp. 55-72.

7. Conclusion

formed part of the Western world's cultural attitudes to plant life.¹⁵ The 'matter in text' reading approach employed above could be applied to the variety of biblical texts that Hall cites throughout his work, examining the extent to which these texts actually do subjugate plant life, whether through hierarchical status, linguistic technique, or narrative omission. Furthermore, this analysis could build upon Hall's work, discussing whether this effacement of plants can actually be traced back to the text of the Bible or whether it is more a result of the subsequent interpretation of these texts.

(3) Finally, Michael Marder has explored the concepts of plant thinking and plant wisdom; these are consistent with the notion of non-human agency and may be applied in a material ecocritical context to explore the agency of plants depicted in both biblical and non-biblical texts.¹⁶ The biblical texts depicting anthropomorphised trees mentioned above and fictional spaces such as the forests in the tales of the brothers Grimm or the plastic trees of Frances Ya-Chu Cowhig's *Snow in Midsummer* would be particularly suitable for this kind of analysis.¹⁷

¹⁵ Hall, 'Passive Plants in Christian Traditions', p. 71.

¹⁶ Michael Marder, *Plant-Thinking: A Philosophy of Vegetal Life* (New York: Columbia University Press, 2013)

¹⁷ Michelle Poland and Evelyn O'Malley have already begun exploring the anthropomorphised trees in these works; Michelle Poland, "And so we left our worldly goods / to make our home in these deep woods": An ecogothic approach to the forests of the brothers Grimm', paper presented at the biennial conference of the Association for the Study of Literature and the Environment UK and Ireland, Sheffield Hallam University, 8 September 2017; Evelyn O'Malley, 'Transplanted weathering: performing transcorporeal memory in Frances YaChu Cowhig's *Snow in Midsummer*', paper presented at the biennial conference of the Association for the Study of Literature and the Environment UK and Ireland, Sheffield Hallam University, 8 September 2017.

Trees and Text

7.3.6 Theological implications

The findings of this study hold implications for theological scholarship in two ways. Firstly, for the manner in which material ecocritical theory might engage with Jewish and Christian theologies, and secondly for (eco)theological interpretations of Gen. 2:4b–3:24. I shall proceed to discuss each.

Theological interpretations of Gen. 2:4b–3:24 in both Jewish and Christian traditions, have assumed that the world presented in this text (and by extension, the world in which we live) is subject to a hierarchy which may be expressed as: Yhwh > humans > animals > plants. In contrast, the material ecocritical reading approach applied in this study proposes that the world presented in Gen. 2:4b–3:24 is horizontal rather than hierarchical, with each individual entity possessing agency and holding equivalent status to all other entities. This perspective may be expressed as: Yhwh = humans = animals = plants. As such, this view is challenging to traditional Jewish and Christian theological perspectives as it somewhat undermines the notion of Yhwh as an omnipotent and supreme creator, both in the text of Gen. 2:4b–3:24 and by extension to the world in which we live.

Crucially, I am not aware of any studies that discuss material ecocritical theory alongside Jewish and/or Christian theology and I therefore propose that this area of enquiry may be a further development of this study. In particular, as my observations above suggest, work needs to be done in discussing the extent to which the hierarchies and dualisms present in traditional Jewish and Christian theologies such as divine/human,

7. Conclusion

human/nature, body/spirit, can be reconciled with the horizontal and interconnected worldview of material ecocritical theory.

I anticipate that biblical scholarship could play an important role in this discussion, as the biblical corpus holds many examples that challenge these hierarchies and dualisms as absolutes. Gen. 2:4b–3:24 is an obvious example, as it features Yhwh in physical form, a talking snake, and, of course, two trees that demonstrate potent agencies. Another possible starting point in identifying such verses in the Hebrew Bible is through an engagement with dual causality, which emerged out of the historical-critical biblical scholarship of the last century. Y. Kauffman proposed that dual causality is said to be evident in biblical narratives where events occur as a product of both ‘natural causes’ (though he is thinking of human actions, rather than the agency of the non-human) and divine guidance.¹⁸ Passages identified as exhibiting dual causality (for example, the history of the rise of David, 1 Sam. 16:14–2 Sam. 5:12, or the Absalom narrative, 2 Samuel 13–20, identified by von Rad and Michael Avioz respectively) may therefore contribute to the reconciliation of material ecocritical theory with traditional Jewish and Christian theologies as they offer explicit biblical examples of instances in which humans and Yhwh both exhibit forms of agency.¹⁹

There are, however, limitations with dual causality in that it is not fully compatible with material ecocritical ontology; dual causality proposes a hierarchy where humans are subject to the divine and it does not

¹⁸ Yairah Amit, ‘The Dual Causality Principle and its Effects on Biblical Literature’, *Vetus Testamentum*, 37.4 (1987), pp. 385-400 (388). See Amit, ‘The Dual Causality Principle and its Effects on Biblical Literature’, pp. 385-390, for an overview of this scholarship.

¹⁹ Amit, ‘The Dual Causality Principle and its Effects on Biblical Literature’, p. 386; Michael Avioz, ‘Divine Intervention and Human Error in the Absalom Narrative’ *Journal for the Study of the Old Testament*, 37.3 (2013), pp. (339-347).

Trees and Text

acknowledge the agency of non-human things.²⁰ Nevertheless, passages identified as exhibiting dual causality may be a helpful starting point for this kind of exploration.

Secondly, my focus on the materiality and agency of trees in Gen. 2:4b–3:24 highlighted the extent to which the trees in this passage have been overlooked in previous theological interpretations. I argued above that in contrast to Christian theological tradition, which perceives the snake of Genesis 3 as a deceiver who coerces the woman to eat from the tree of knowledge, the alluring material-botanical properties of the tree of knowledge play a significant role in persuading the woman to eat from the tree. Furthermore, whilst the snake is punished by Yhwh for its part in the humans' actions, the tree of knowledge is not held accountable for its role in alluring the humans. Finally, whilst Christian theological tradition sees the expulsion of the humans from the garden of Yhwh as an act of punishment for their disobedience, Gen. 3:23 reveals that their exile is motivated by the presence of the tree of life and its agentic potential.

Together, these observations illustrate the extent to which the tree of life and tree of knowledge have been effaced from the predominantly anthropocentric interpretations of Gen. 2:4b–3:24 in Christian theological tradition. These findings therefore hold potential inform future ecotheological analyses of Gen. 2:4b–3:24; particularly as their unique perspective underscores the agency of the vegetal world depicted in this text and this provokes thought about real-world relationships between humans and plants.

²⁰ Amit, 'The Dual Causality Principle and its Effects on Biblical Literature', p. 391.

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